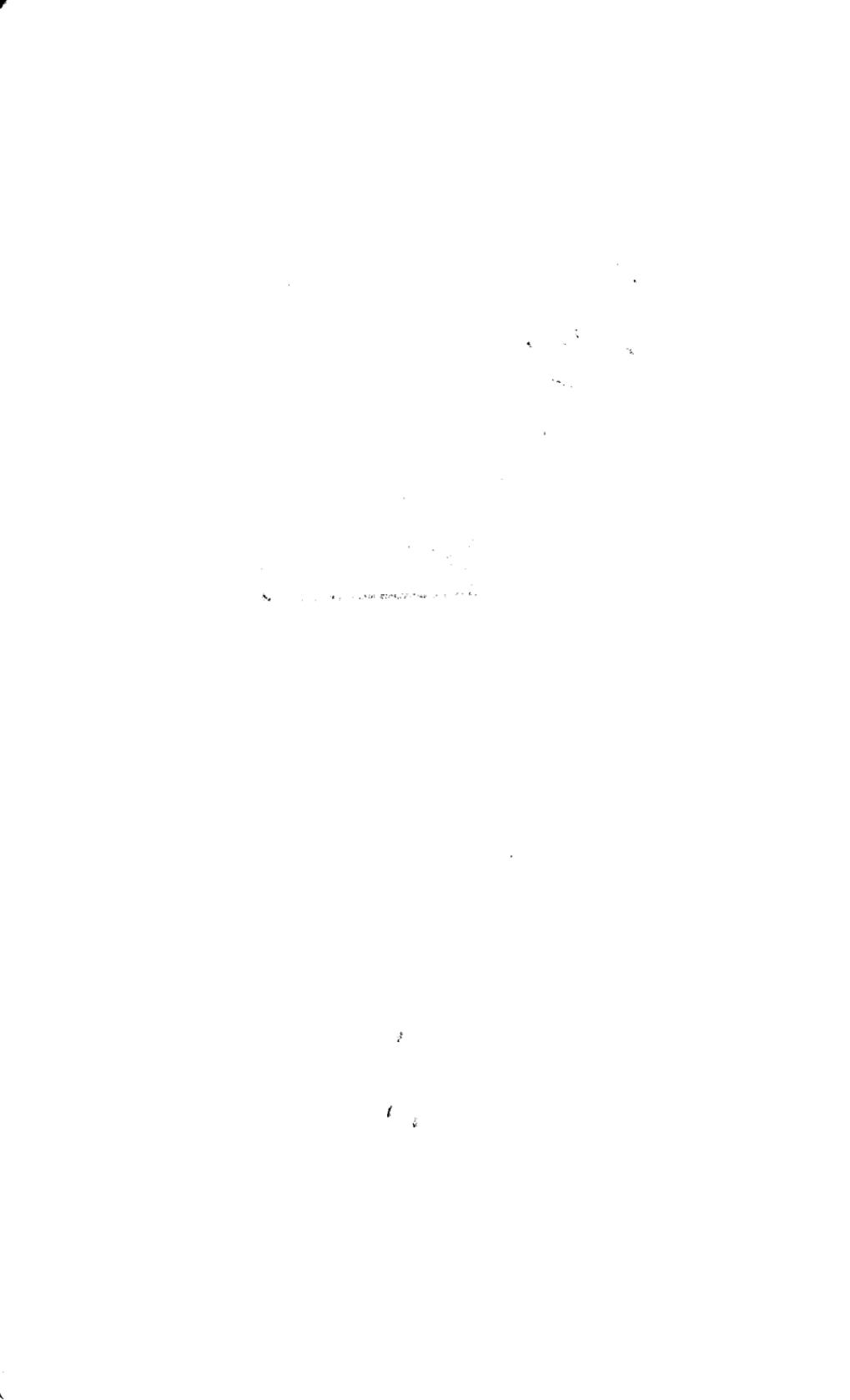


THE **MUSIC**
OF THE **BIBLE**
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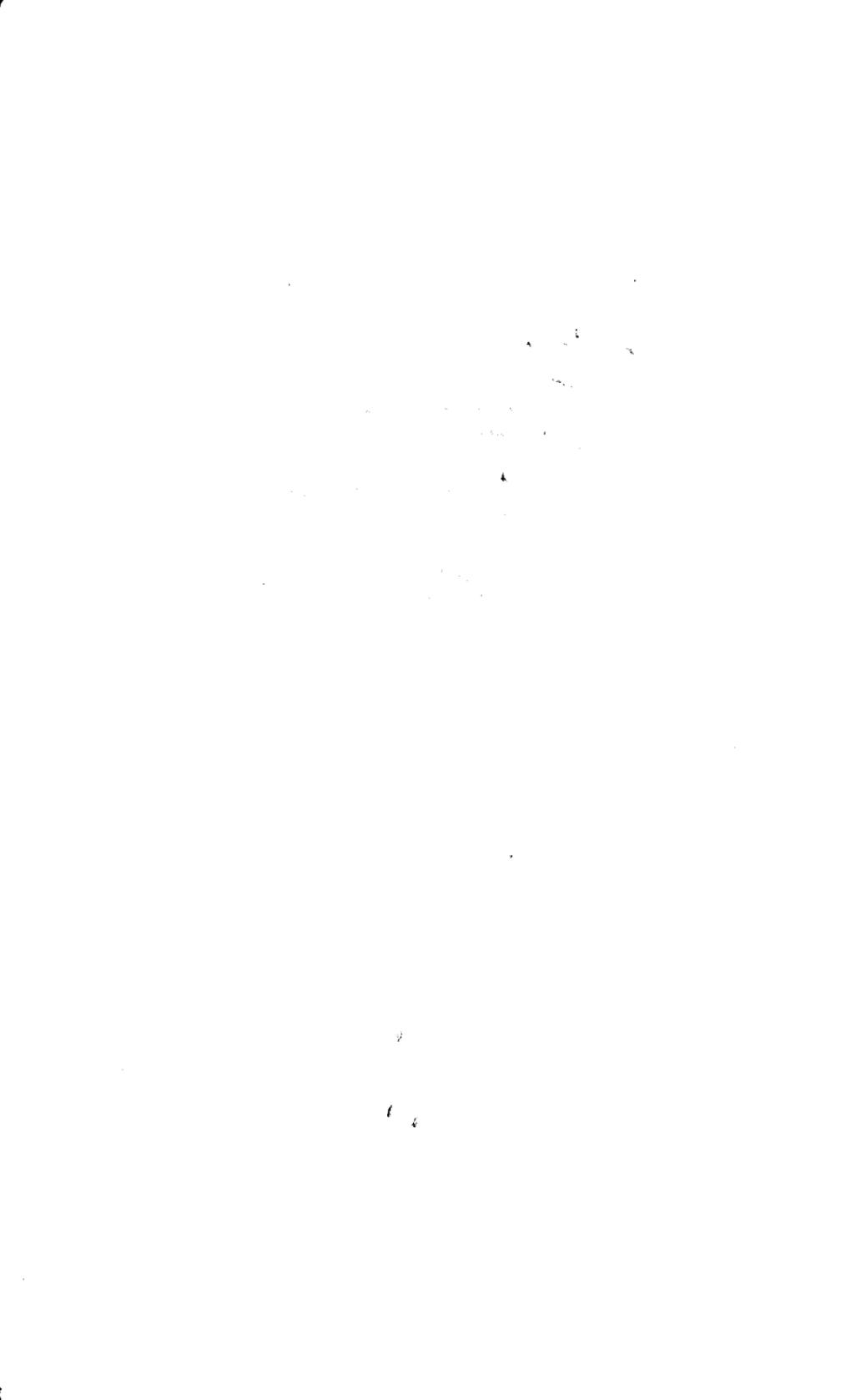


Suzanne Haïk-Vantoura



THE MUSIC OF THE BIBLE REVEALED

ספרייה
רוברט וגולדה
ורמן



Suzanne Haïk-Vantoura

THE MUSIC OF THE BIBLE
REVEALED

The deciphering of a millenary notation

Translated from the
French text of the
Second Edition, Revised,
Dessain et Tolra, Paris
(Recipient of the Prix Bernier
de l'Institut de France)

Translated by Dennis Weber / Edited by John Wheeler

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The mosaic of David playing the harp in the cover photo is from the Synagogue at Gaza (6th century C.E.), which is the property of the Haifa Music Museum. It was discovered in the excavations of 1967 by Dr. Asher Obadiah of the University of Tel Aviv.

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The cantillation signs
of the HEBREW SCRIPTURES
give up their ancient secret.

They represent
a highly artistic MUSIC
which is wedded to the TEXT,
and magnifies it!

They preserve the sacred music of the LEVITES,
which was perpetuated
at the Temple in
J E R U S A L E M
under the impetus of DAVID
and in accordance with
his chironomy.

History, examined in detail, fully confirms this restitution.

This book is dedicated
to the memory of my dear teacher,
Marcel Dupré,

and to all those who,
by their approbation, their aid
and their support
have contributed to the realization
of my work.

SUZANNE HAÏK-VANTOURA

Organist, teacher, composer, Suzanne Haïk-Vantoura studied at the Conservatoire National Supérieur de Paris. She was awarded First Prize in Harmony, First Prize in Fugue, and Honorable Mention in Composition.

After completion of her studies, she composed a number of works, including "Visages d'Adam", "Rhapsodie Israélite", "Un trio instrumental", "Jeu" (for piano and violin), "Poèmes de la Pleiade" (suite for piano), "Témoïnage", "Hymne liturgique pour voix de soprano et quatuor", "Versets des psaumes pour 12 voix a capella", and "Sept motets" for 12 mixed voices (a work commissioned by the French government).

While her studies were interrupted by World War II, Suzanne Haïk-Vantoura first approached the problem of the cantillation signs of the Hebrew Bible, having learned that their real meaning had been lost. After four months of intensive research, including the creation of interminable statistical tables, she became certain (as her intuition had suggested) that only the signs below the text have a fixed meaning (the signs above the text being subordinate in value to those below). She was thus able to roughly reconstruct the "Song of the Red Sea" and was astonished at the early results!

Not until the end of 1970, and her retirement from active work as a composer and performer, was Haïk-Vantoura able to complete her study of the biblical signs; in 1976 she published her results in the first French edition of this book. She has since devoted herself exclusively to the publication and promotion of her decipherings.

This English edition is based on the 2nd French edition published by Dessain et Tolra, Paris (1978).

There is no Preface to the French edition of this book.

Robert Aron, eminent historian of the Institute of France,
spontaneously offered to write one
after reading this work which so impassioned him!

His demise leaves us desolate.

This personal statement remains as testimony of his support.

This lucid historian, approaching her subject without prejudice, was particularly qualified to put together this vast work of research — a work which englobes facts which specialization separates but which reality conjoins. The reader will find at the end of this book the remarkable testimonies of eminent personalities in the various fields which this work concerns.

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TRANSLATOR'S PREFACE

When I first examined a chart setting forth the deciphering key for the biblical accents developed by Suzanne Haik-Vantoura, the correlation between the etymology of the accents' names and the decoded musical meanings of the signs immediately caught my attention. I was impressed by the implications for musical sense hidden in the accents' ancient names. At the same time I understood why theologians had passed them by for centuries. These names are meaningless to a non-musician!

It is with joy and excitement that I undertook to translate *La Musique de la Bible Révélée (The Music of the Bible Revealed)*, bringing to the English-speaking world this ancient sacred music of the Hebrews. We have all wondered what the Psalms sounded like in their original music, and now we can actually take that giant step backward in time and hear once again the various musical settings by the Psalmists as they praise God.

I have highly benefited from the privilege of repeated contact with Suzanne Haik-Vantoura, as fellow musician and esteemed friend. Our many hours of dialogue over the translation were invaluable.

While the literary style may appear heavy, it is nonetheless a faithful representation of the superb classical French of the original text. The non-musician will find the glossary in the back of the book helpful for understanding specific musical vocabulary.

"Oh, give thanks unto the Lord; call upon His name; make known His deeds among the peoples. Sing unto Him, sing praises unto Him; talk of all His wondrous works!" (Psalm 105:1-2)

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PREFACE TO THE AMERICAN EDITION

In my youth, while attending Sunday School, I learned that the Psalms of David (and of other authors) were originally meant to be sung. When I asked what happened to the original melodies, I was told that they had been lost long ago—and that no one now knew what they sounded like. Disappointed, my young mind left the question in abeyance. Yet how often, as a budding composer, did I try to imagine what the colorful and vivid Psalms texts in my Revised Standard Version sounded like in their original musical dress!

Since 1982 I have corresponded with Suzanne Haik-Vantoura and have studied deeply into the background and implications of her thesis. In so doing, I have had opened to me a window into a musical world far exceeding my childhood dreams. I have also gained an insight into the personalities of the authors of the Psalms and prose books, as well as into the Hebrew text—an insight far more intimate than I could have ever hoped for.

The separate worlds of biblical and musical scholarship have remained as ignorant of the real nature of ancient music as was that young child in Sunday School. Most are still unaware of the evidence that in antiquity *every* sacred and epic text was meant to be sung in public reading. The singing of Psalms was but part of a much larger musical liturgy, encompassing the entire Hebrew Bible (in its "psalmic" and "prosodic" texts).

In the nations of the ancient world (notably in Sumeria and Greece, to name but two examples), every sacred author was evidently a *poet-melodist*. Text and melody formed one inspired *gestalt*, a "text-melody" (what the Greeks called *melos*) intended to bring out the meaning of the words. The internal evidence of the Hebrew Bible itself indicates that this was equally the case for the biblical cantillation; that text and melody were created and then transmitted together; and that both are preserved to a high degree of accuracy in our Masoretic Text.

What does this imply for our subject? When we hear or read the melodies preserved in the biblical accentuation (and restituted by Haik-Vantoura), we come face-to-face with the music written by the very authors who wrote the sacred texts they accompany. Moreover, there are indications from the nuances of compositional "style" that the traditional

authorship of every book, song or Psalm of the Bible should be taken seriously. These startling conclusions—which Haïk-Vantoura first began to propose in her book—can now be documented by examining the many chapters and whole books deciphered by the author and her assistants.¹

In this American edition of Mme Haïk-Vantoura's revolutionary book, some minor corrections of the illustrations found in the second French edition have been made, and some explanatory footnotes added (always marked as such). I have taken pains to examine closely both the classical French text (with its figurative and often highly elliptical expressions) and Dennis Weber's English translation (which was originally made for study purposes). I have attempted to retain the literal sense of the French text and of Mr. Weber's translation as much as possible without sacrificing clarity. What editorial alterations I have made of the translation were made with the aim of presenting clearly and faithfully the message of the French book.

My heartfelt thanks goes to Suzanne Haïk-Vantoura for her patience in answering my numerous and penetrating questions over the years, and for her permission to edit this English-language edition. My thanks also to Dennis Weber for the enormous effort his translation represents (without which this edition could not have been made); to Dr. Duane Christensen of BIBAL Press for his encouragement of my studies and of my work on this edition; and to Bill Scott for his preparation of the computerized text upon which this edition is based.

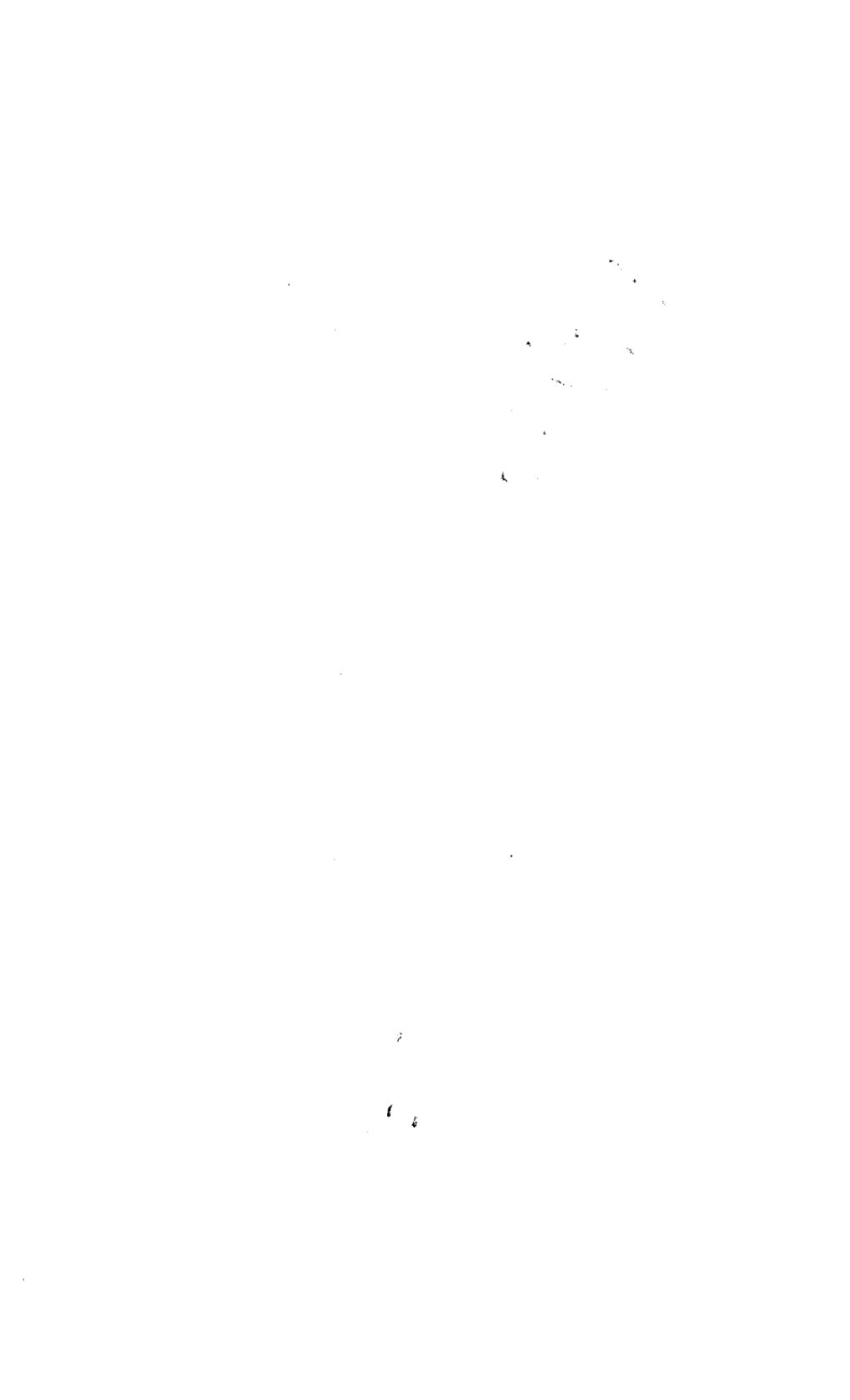
John H. Wheeler

NOTES

¹The published works include *THE 150 PSALMS IN THEIR ANCIENT MELODIES* (Paris: Fondation Roi David, 1985); *THE SONG OF SONGS BY SOLOMON IN ITS ORIGINAL MELODY* (F.R.D., 1986); and *FOUR MEGILLOT: Esther, Ecclesiastes, Lamentations and Ruth* (F.R.D., 1987). Three recordings of Psalms and prose texts (with corresponding scores), a recording of the Song of Songs, and seven Psalms in concert arrangement are also available. A special volume of forty key chapters of prosody is in preparation at this writing. All of the above works may be purchased from Fondation Roi David, 9, rue d'Artois, 75008 Paris, or through KING DAVID'S HARP, INC.

PART ONE:
A MUSICAL DISCOVERY

FACES HISTORY



FOREWORD

Throughout history the message of the Bible has never ceased to interest us. It draws our attention even more today than in the past and this is perfectly understandable.

Indeed, until the beginning of the last century, the oldest references regarding the history of Israel were provided to us only by this unique source: the Bible. In light of recent archaeological discoveries concerning the nations which bordered the land of the Hebrews, these references are clarified, better detailed, often confirmed—which accounts for the increased interest in the history of this people.

There is one facet of their history, however, about which our ignorance has remained total: the liturgical music so vaunted by the Holy Scriptures. Already in the 18th century, Father Lelong cited 1213 authors as having written on the subject of the Psalms and the music of the Hebrews.¹ Who has not tried to imagine what the music of the Song of Songs was like, or that of the Psalms—or regretted not being able to do so? The music of the latter was mentioned with respect and admiration by the biblical chroniclers from the time of David onward. Until now, this music was lost to our hearing—and, seemingly, fated to be so for all time.

The magnitude of the musical institution founded by King David a thousand years before our era, entrusted by him to the Levites (in charge of the priesthood since the days of Moses); the persistence of this vast academy, despite the vicissitudes of the Chosen People as their royalty declined over the centuries—all this has stirred our spirits. Nevertheless, this music remained an abstraction, leaving many of us skeptical of its value.

True enough, the synagogal service conserved (often scrupulously) an archaic tradition of biblical cantillation which some communities date back to antiquity itself.² But very few have dared hold that this "popular" tradition descended directly from the "professional" practice of the Levites, as maintained at the Temple in Jerusalem.

It was the chants of the synagogue, meant to emphasize the public reading of the Old Testament and the Psalms, which the early Christians (considering them as an inseparable heritage of their faith) adapted to

their readings in Greek or Latin. These synagogue chants were tied to local and domestic religious practices which tainted them with empiricism.

The tradition itself makes this very clear. All these chants are only melodic formulae without any relationship, either among themselves or with the words they support. Formulae attached—quite weakly, as we will see³—to the cantillation signs, the *te'amim*; which were disclosed just prior to the 10th century C.E. These signs, which are the subject of this work, accompany the entire text of the Hebrew Bible. According to the savants and pious exegetes of the time, they are the receptacle of the oldest and purest cantillation tradition.

Formulae weakly attached to the cantillation signs, as we were saying, continue for entire chapters. In fact, they repeat themselves verse after verse almost without change, despite the diversity in the arrangement of the signs they supposedly translate. Again, these formulae differ according to the season of the liturgical year and the biblical text they accompany. Moreover, they are devoid of the charm and natural expression of all music worthy of the name.

In no way do these chants evoke the brilliant musical institution at their source. Yet, they are sole vestiges, precious testimonies of the past—which explains why we respect them.

In order to trace them back to the liturgy of the sacred Temple, it must be admitted that they have been profoundly denatured over the ages. Otherwise it must be concluded that in the times when they originated (for which the music alone, perhaps, has remained totally inaccessible to us), the vaunted opinion ancient society held of the beauty (or rather the *expressive effectiveness*) of their melody was without real basis. And this in fact is exactly what has been commonly stated. The reputation of biblical music seemed overrated.

This perplexing question merited the research which I have undertaken; and here, as elsewhere, the results confirm the biblical record. This research necessitated laborious efforts, for I pursued it, not down the path taken by others, but down another route entirely.

It seemed "illusory" to me (to use the word of a recent musicologist interested in the subject⁴) to pretend to be able, under present circumstances, to recover the common denominator of the traditional cantillation formulae (by juxtaposing their varied and contradictory

elements) and thus find their single, pure source: the original melody from which they would have proceeded. Such an attempt would in fact be far too hypothetical.

However, there existed another means of access which seems to have never before been taken:⁵ the systematic deciphering of the cantillation signs of the Old Testament—signs still present today, in every complete edition of the Hebrew Bible.

The traditional synagogue chants deprive them of musical logic. Surely the creators of these signs would have assigned precise meanings to them! This difficult research produced results far surpassing anything I could have hoped for.

Proceeding step by step—with constant returns into the penumbra of the unknown, with occasional glimmers of probability encountered in the clues offered—I was able to outline, then support by inexhaustible experimentation, the basis for a logical deciphering key for this misunderstood notation. The results are devoid of the slightest guesswork and testify that this notation is truly the conscious act of master musicians.⁶

Applied with equal ease to innumerable verses, the deciphering key makes real, authentic music burst forth from these heretofore incomprehensible signs. This is music which is heartfelt, inciting our admiration, enthusiasm and intimate, philosophical reflection as well. This music, artistically fully developed despite its exemplary simplicity, demands an origin in far distant antiquity by reason of its very construction.

It is untouched by the pervasive influence of Hellenism; it shows itself anterior. Not only does it penetrate the very soul of highly diverse texts throughout the Old Testament, it reflects with disarming faithfulness the historical and literary circumstances behind the creation of the biblical narratives and doctrinal texts as related by the Bible itself. In the Psalms, it also reflects the use of choruses, soloists, latent harmony, even instrumentation as practiced in the liturgy.

In discovering this astonishing music, we were justified (barring a flagrant contradiction with history) in identifying these restituted monodies as the original biblical chant of the Temple in Jerusalem, preserved by the meticulous tradition of its consecrated singers (the Levites) during the times of the First Temple,⁷ then of the Second. After the latter's destruction in 70 C.E., nothing more is known of its melodies in practice. And from that time to the ninth century, the lamentable

series of calamities suffered by the Jews in Palestine and the Diaspora alike hardly gives credence to the hypothesis of an ingenious fraud by peerless musicians—the recreation of a lost art in its most minute details as it would have been (cf. pp. 123ff).

Moreover, no echo exists of a famous institution of Hebraic priestly music extant in the Middle Ages (nor yet from 70 C.E. to that time), neither in the shadow of a Talmudic school⁸ nor of any synagogue. Until the sixth century, the Jewish communities did not even maintain musicians specialized in the liturgical cantillation of the Holy Scriptures. As proof, consider all the diverse cantillations, merely simple supports of the text, preserved by the Diaspora.⁹

All things considered, then, this unique efflorescence goes far back into time. It had to have begun at least by the time of David, to be contemporary with the composition of certain books (cf. pp. 109ff, and we know that by the time of Ezra (circa 500 B.C.E.) the essentials of the Bible were definitely constituted.

The problem that remains is the notation which reveals this music. It also could be very old. This is what many commentators of the Middle Ages affirmed, including those who disclosed the notation itself: the *Masoretes*.¹⁰

This notation was disclosed by the School of Tiberias¹¹ shortly before 900 C.E., as we will note later. Certain Jewish exegetes of the medieval period ascribed the origin of this notation to Ezra, when the public reading of the Law was instituted at the reconstructed Temple; others, to Moses himself, at the time of the revelation on Sinai (13th century B.C.E.). Only as late as the 16th century was it suggested that the *Masoretes* were its creators (cf. p. 173).

Certainly the hiatus is profound! From a musical notation propagated during the Middle Ages springs an ancient music. And it accompanies the entire Hebrew text, an immense work. The efficiency of the deciphering key I discovered is consistent and total.

We commonly say that the tradition of the synagogue cantillations, supposedly fixed in writing about 900 C.E. by the scribes of Tiberias, would have been oral in origin. This is incorrect, for two reasons.

First of all, two simpler notations preceded the one which is the subject of our research. They came to light only during this last century. One of them, called the "Palestinian," was used from the 4th (?) century on; the other was created in Babylonia (no one really knows when). They were in use when the revolutionary notation which intrigues us

appeared. One was abandoned, the other became "complicated," when this more complete notation, considered the true tradition, gained credence.

But the specialists state that only the *signs* changed. They were "grafted" onto the ancient cantillations then in use. But history shows that at that epoch, and even earlier, the chants *differed* according to the communities from which they sprang. No musical *rappoport* appears between these signs—considered to be the true tradition—and the traditional biblical chants existing then and persisting afterwards. Despite this, the entire Bible was provided with these "new" signs (at the beginning of the 10th century)—signs *recognized as being musical* receiving no musical interpretation from the very Masters who wrote them down.¹² They were satisfied, in fact, to inventory them and to compare their various arrangements, as one would do with signs of unknown meaning. They then exerted themselves to deduce from these observations rules of pure syntax, intended to clarify the meaning of the texts (in the absence of our customary signs of punctuation in the scrolls of the Bible). In the extant ancient manuscripts, the biblical text appeared as a "long verse," and Hebrew had become, little by little, a dead language.

In reality, this notation was not totally new, at least in its pictographical form. Two or three of its signs were already present in the two earlier notations which we just mentioned. Common roots could have motivated all three of these notations. However, in the first Byzantine "ekphonetic" or "lectionary" notation¹³ (also reserved for the cantillation of the Old Testament, but within the Christian Church) six out of its dozen signs are similar to those found in the "Tiberian" notation. Another branch of the same stock? This is not impossible.

All this concerns pure graphical representation. But independently, between the past and these later notations, the ties do not appear to be purely oral.

What most researchers, captivated by the history of these signs, still do not know is that the first Byzantine notation, just as the other notations in use at that time,¹⁴ was only the pictorial transcription of hand-signs as were used from most distant antiquity. We are referring to the practice of **chironomy***.¹⁵ Widely known in ancient times, in general use in the Greco-Latin world shortly before our era, it was an easy

means of visual representation; but also a mnemotechnical method commonly used in practice, notably in the non-specialized practice of synagogue cantillation where it is still used to this day (cf. p. 81).

To complete this *dossier* of the biblical cantillation of the Hebrews, it is fitting to mention that this traditional gesture system symbolized precise names, one for each accent. Tradition was careful not to forget them, but the diversity of meanings since attributed to them proves that the names alone had been retained (cf. pp. 4, 7).

We have this decisive fact: the Tiberian notation, which supplanted the other two, contained more signs based upon chironomy than either of the others—yet not of greater number than the ancestral names.

We should remember that the Masoretes of Tiberias were only preoccupied with the exegetical syntax. But while they sought to detect it in the order of the signs, they did not deny the musical significance of them.¹⁶ On the contrary, they affirmed it! They even insisted on the precision of this musical significance which they did not at all define, evidently being unable to do so. Moreover, the syntactical rules they deduced from the signs were evasive and contradictory.¹⁷

Does it not appear that this notation, although it was not systematically set forth until the 9th century, reasonably originated much earlier? This hypothesis is already supported by the fact that these signs were enigmatic right from their first appearance, despite the efforts of the exegetes.

Historically speaking, we do not really know when the cantillation accents attributed to the School of Tiberias were created. This did not prevent a humanistic Jew of the 16th century, Elias Levita, from claiming, without demonstrative proofs, that the graphical signs were the work of this famous affiliation, these guardians of the Tradition (yet without denying that the meanings the signs represented were ancestral).

Levita's thesis, which befits the new spirit of calling everything into question, attracted much attention. It was adopted by many scholars although it also provoked famous controversies. It was generally concluded thereafter that these signs had a purely syntactical meaning, to which was added a very secondary musical meaning.

The existence of two anterior notations was totally unknown at the time of the Renaissance. When they were discovered at the end of the 19th century, it was concluded that the Tiberian signs, being more

numerous than those of the earlier notations, were a Masoretic work giving a "more exhaustive" syntax of the ancient texts. Yet for the exegetes the syntax is made no less hermetic by the use of the *te'amim*.

The heart of the historical debate is our deciphering of these mysterious signs, appearing so late in history. So long as their fabulous message was unknown, hypotheses about the probable date of their creation seemed useless, even irrelevant; such would not have enlightened us any further as to their exact meaning.

Examined with scientific rigor, they constitute an extraordinary music, the conception of which, from all points of view, proves to be anterior to our era. As a result, it became necessary to reconsider the history of these signs.

But the two earlier notations (of which we shall speak) require an introduction. Besides, there are curious, marginal signs found in manuscripts discovered in the middle of this century near the bank of the Dead Sea—signs which evoke those of the first Byzantine notation, which is known to have sprung from chironomy.

Specialists believe these manuscripts were hidden in the jars of the caves of Qumran near the time of Christ, the epoch when this now-outmoded practice—chironomy—was literally generalized in the Mediterranean basin. It is therefore possible that these signs also set forth a chironomic practice used by these particular communities (obviously completely different from that of the highly trained Levitical musicians).

Moreover, chironomy is attested in the Talmud in the first century C.E. It flourished in Greece during the Classical Era. Many centuries earlier in the 3rd millennium B.C.E., the Egyptians had already depicted it in their representations of musical scenes found in the funerary chambers of pyramids. Nor did they cease to do so during the three pharaonic empires.

The Bible itself also indirectly mentions chironomy. In fact, the chroniclers state several times that the Levitical choirs were directed by gestures "of two hands"—a practice called "of David."

Are such hand-signs able to transmit sophisticated music? One might wonder. Well, it happens that we have the startling proof right in the cantillation which is reborn from our deciphering! The deciphering key makes it magisterially reappear. A system of gestures corresponding to each sign would symbolize, as easily as the decoded notation, the

music that we have reconstituted. But this brings us to a second, equally important observation: this deciphered music testifies to having been conceived for chironomic practice.

Indeed, one would try in vain to symbolize our elaborate, modern notation (representing fully developed, unrestricted music) by a few gestural figures. Already in the Middle Ages, when music was more evolved than in antiquity, this posed an acute problem.

We see it as a sort of "magic circle," the ensemble forming a whole: the concept of a notation (itself traditional), corresponding to an equivalent chironomy practiced by the Levites, with the restrained construction of the melody so represented corresponding to the demands of these concise means of transmission.

It is not at all unreasonable that these pictographical signs for music could have been created so long ago. The ancient Egyptians and other peoples wrote down their chironomic figures, just as Ptolemy did in the 2nd century C.E. It is just as plausible that these signs would have been sealed up sometime during the post-exilic period—a professional secret, supported by the prescription to keep hidden that which had reference to worship ceremonies.

And this speculation takes shape without ignoring anything from history. On the contrary, it finds itself confirmed in every respect. Most especially, the deciphering key itself, to our very great surprise, sees itself confirmed by the ancestral names of the biblical accents.

Each name, otherwise incomprehensible, corresponds in fact to the musical meaning we have ascribed to each of the signs of the unveiled notation. This is a highly astonishing guarantee of the cogency of the deciphering key;¹⁸ and also (if one goes to the heart of the matter) it is proof of the simultaneous creation of the musical meanings, the written signs, and the hand-signs. For these names legitimatize the very forms of the written signs. How could these signs have evoked the musical meanings they symbolize, if they were drawn after the conception of the names, when the exact musical significance of the names themselves was lost? These written signs themselves, like the music they represent, testify that the entire musical system originated in the distant past.

Upon hearing these surprising monodies, one is convinced of the exactitude of the decoding. Such music could not have come from the simple effects of chance, for the Key is applicable to every verse of the Hebrew Bible. Besides, from the historical point of view, an art of this quality could not have emanated from obscure, unrenowned musicians.

Throughout Jewish history, only the music of the Levitical singers has remained famous!

This music is moving. It exalts the Bible. To use a more modern analogy: who could really believe that by interpreting in a whimsical manner the notation utilized by J.S. Bach, one could give birth to a new series of works of genius?

It is by the correct reading of the notation that these masterpieces are reborn, carrying within them the mark of their own times. This then is the reality behind the "Tiberian" notation and the restitution of its meaning. The inquisitive reader, unfamiliar with its basis, will see the complete elucidation of its mystery in Part Two of this book.

After the Introduction, which places the particular nature of the Hebraic spirit in its ancient context, and notes its attachment to tradition, we will present a brief exposé of the deciphering key, the basis of our discovery. We will then examine the historical record in detail, and it will be seen that, far from opposing our conjectures, it completely supports them. While taking into account the known facts about ancient music, we will document our deciphering step by step, with abundant musical examples as support. Finally, we will analyze the recovered music itself, and the clarity of its syntax will technically prove its indisputable authenticity.

The immense surprise, the overflowing joy of archaeologists who unearth vestiges of a little-known past has often been recounted. Yet music is even more precious—more than the ruins of a temple, an intact work of art, or even at times words themselves; for music is thought itself, under its subtle and transitory covering. Romain Rolland has underlined this well: "To take (music) at its very essence, is not its greatest interest to reveal to us the totally pure expression of the soul, the secrets of the inner life?"¹⁹

In effect, it is the soul of the Bible that the recovered cantillation of the Temple of Jerusalem restores for us. And this unexpected harvest of masterpieces constitutes an extraordinary adventure in itself.

NOTES

¹ In the *Bibliotheca Sacra* published in 1723.

² The Bible was always sung in public reading at sacred services, never recited as a spoken text. The same was true for poetry in antiquity; it was always cantillated.

³ Cf. Supplement II.

⁴ A. Machabey.

⁵ In fact, a number of researchers since the Renaissance have attempted to decode the *te'amim* musically—all without success, because they consistently applied the musical preconceptions of their own time to the problem. The deciphering key set forth here is unique in that the biblical text alone was used as the "sieve" through which the possible interpretations of the signs offered by musical theory could be sifted.—Ed.

⁶ A precise musical value is attributed to each sign.

⁷ Until the Babylonian Captivity of the Hebrews in 586 B.C.E.

⁸ Where one studied the Tradition and the interpretation of the sacred texts.

⁹ Cf. Supplement II.

¹⁰ A special term for the Masters of Tiberias (guardians of the "Tradition", the Massorah) who, in their specialized school, trained future doctors of exegesis and the readers (cantors) of the Holy Scriptures for the synagogues.

¹¹ Founded in Palestine in the first century by Herod Antipas in honor of Emperor Tiberias, this city was the site of several successive academies.

¹² A curious incompetence, if one were to hold that they were indeed the originators of this notation!

¹³ Fully constituted by the 10th century after a gestation period of at least two centuries (cf. p. 51).

¹⁴ The so-called **neumatic*** notations; the two anterior Hebraic notations are classified as such.

¹⁵ We devote an entire chapter to this subject. The asterisks refer the reader to the glossary at the back of the book.

¹⁶ *Te'amim* is the name of this collection of signs and comes from *ta'am*, a word rich in meanings which includes the idea of intonation (cf. pp. 48, 96).

¹⁷ Cf. Supplement I.

¹⁸ In the sense that this correlation is so completely unexpected, unexplainable, if one holds that the deciphering key is the result of pure chance or of a hidden logical flaw in the methodology of its author.—Ed.

¹⁹ Romain Rolland, *Musiciens d'autrefois* (Paris: Hachette, 1908), p. 4.

INTRODUCTION

The spirit of the priestly music of the Hebrews

It could appear vain, in our present state of knowledge, to claim that a particular music is actually the same music that the ancient Hebrews could have known. A statement of this kind can seem deceptive; we do not possess a single concrete vestige from whatever source which would permit a comparison.

We can, on the other hand (even before discussing our subject further), approximately reconstruct what such music would have been like. Keeping in mind the invaluable biblical evidence, backed with the most documented knowledge we have concerning other ancient peoples and their music, we are well-equipped to ask ourselves: Can music bearing the marks of biblical antiquity really be recognized as such? Is it conceivable that the people of God could have heard this same music in the Temple of Solomon, after his time, or even during his reign?

If we choose to situate the music we wish to evoke in this particular period of history, it is because this was the "Golden Age" of the Hebrews, when the music of that people (as the nation itself) was at its zenith. But where and when was this music born, and what were its sources? When Laban (who lived in the land of Aram) reproached Jacob for his secret departure with the words: "I might have sent you away with joy and songs, with timbrel and with lyre..." (Genesis 31:7), does he refer to a regional form of music? Would these songs have seemed strange to Jacob of Canaan? The Patriarchs could not have already created a specific kind of music; a tradition is not established in just a few generations!

As a matter of fact, the Sumerian (or rather the Sumero-Akkadian) influence was making itself felt, along with that of Egypt to a much lesser degree, in all of Western Asia. That region, in the first part of the second

millennium B.C.E., submitted by turns to the yoke of Egypt and Mesopotamia. But there had been a veritable sunburst of Sumero-Akkadian culture which, subjugating all foreign influences, not only imposed itself upon Western Asia for centuries, but spread beyond to Crete, Greece and Rome. So it is not completely true, as Philo claimed, that "Moses would have received all his musical knowledge from the Egyptian teachers."¹ It must be admitted that at the time of Philo little was known about ancient Mesopotamia.

So, would the infant Abraham have been rocked to sleep with the same music that Jacob heard later in Canaan? And is this the same kind of music, perhaps, that Joseph would have found when he was stranded in Egypt? Not really. Based on eternal principles of musical value² (known also to the Egyptians), the music of Sumer imposed itself elsewhere (in matters of structure). But it is obvious that each of these other peoples allowed it to be affected by their tastes and particular tendencies — music being, as we know, a natural language, with nuances both infinitely varied and eminently expressive.

There are, in fact, all sorts of music. They differ in spirit; and similarity of structure does not exclude the widest possible diversity between them.

The most faithful reflection of any civilization is its music. So let us examine the music at the time of the Patriarchs, which will enable us to form an idea (not concrete, of course, but still valid in this context) of the music they heard, even if they did not perform it themselves.

Systematic archaeological excavations carried on since the beginning of the nineteenth century have brought to light, before our astonished eyes, treasures which scientific dating methods have been able to pinpoint in time with high accuracy. As an unexpected complement, the deciphering of hieroglyphics on the one hand and cuneiform characters on the other have placed us (within the last century and a half) in the presence of the genuine history of the peoples who created these treasures — peoples who had, as we now know, an advanced civilization by the end of the fourth millennium B.C.E.

Our predecessors lost themselves in rather fanciful conjectures. The idea that one could know something about the music connected with these almost unknown civilizations suffered because of them; and the opposing viewpoint which arose because of this has changed but little with time.

"Before the seated Gudea, the most famous scribes return to obscurity."

— André Malraux (cf. p. 20)

"The Semitic imprint, made of sensitivity and fantasy, will nuance the Sumerian severity and anterior hieratism."

— André Parrot (cf. p. 14).

**PLATE I**

EGYPTIAN ART — SAQQARA — THE SQUATTING SCRIBE
(second half of 3rd millennium B.C.E.)—Louvre Museum (Photo Giraudon)



PLATE II

TELLO — STATUE OF GUDEA (called "The Small Seated Gudea")
(23rd century B.C.E.)—Louvre Museum (Photo Giraudon)

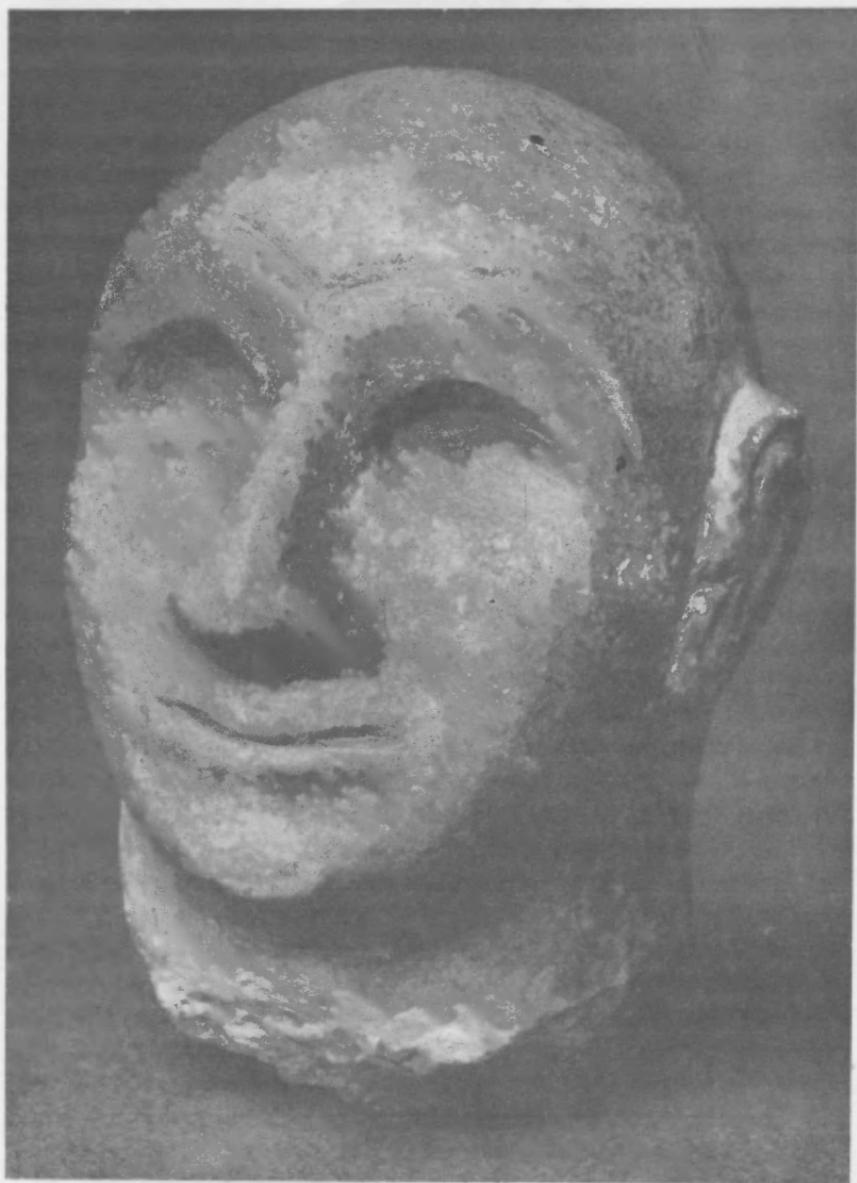


PLATE III

TELLO — HEAD OF A MAN OF DIYALA-UM-EL-AGHAREB
(first half of the 3rd millennium B.C.E.)—Louvre Museum



PLATE IV

NINEVEH — KING SARGON (?)

(second half of 3rd millennium B.C.E.)—Baghdad Museum (Photo Giraudon)

The unearthed treasures speak for themselves. They tell us of art forms more roughed-out than subtle, the noble yet rigid style of the Middle Pharaonic Kingdom (excluding the striking blaze of originality and sensitivity due to Akhenaton, the monotheistic pharaoh nearly the contemporary of Moses [1350 B.C.E.], and whose birth at that time may not have been mere happenstance³); the strictness or hieratic roundness of Sumer. The latter was singularly affected by the Semitic influence of Akkad.⁴ Certain statues discovered only recently seem to have been sculpted yesterday, such as the "Goddess With the Gushing Vase" of Mari, which dates from the third millennium B.C.E.⁵ Equally famous is the "Squatting Scribe" from Egypt,⁶ a realistic, elaborate work of art. Thanks to their particular conceptions, these works of art affect us in different ways.⁷

Like these objective creations, the music of these peoples would have therefore contained various messages—messages more or less accessible to us.

Here and there swarmed life, but it was life as lived by slave societies who were at the mercy of the great, and were cruelly oppressed by them to a greater or lesser degree. The sovereigns themselves, living in refined luxury, were much interested in good art, culture and literature and very little in those who were poor. Epic poems and hymns abounded in Sumer as countless unearthed tablets inform us. Thus Moses was preceded, in this "cradle of civilization", by the narratives of the Creation and the Flood, as well as by the Codes of Life⁸ (which were often simple, rough outlines of ethical principles).

These civilizations were rich in experience but complex in their principles. Some held beliefs which were precursors of the monotheistic faith of the Hebrews, but as complete systems they were far from flawlessness. "It seems," says R. Aron, "that before electing a people to whom He could confide His law, before choosing a man to codify His covenant, God considerably experimented in order to know the possibilities afforded Him by humanity."⁹

In Sumer there was an overabundance of religious rites, but they were performed in luxurious surroundings. We should not ignore the fact that music was the essential element in religious ceremony. What kind of music, then, would have accompanied these obscene practices?

The spiritual monotheism of Abraham had little in common with the mitigated worship of a nation where debauchery and priesthood were intertwined. Nor did he, having exiled himself from his native land, adopt

the execrable practices of the Canaanites (cf. Gen. 27:46). His descendants, faithful to his formal order of purity, sojourned three centuries in Egypt after Joseph,¹⁰ but they remained "foreigners". Living by standards differing from those of the Egyptians, no doubt their musical repertoire included some noble, sweet melodies reflecting their ancestral aspirations.

Priestcraft was not absent in their life, in spite of their eventual enslavement. It is also probable that specific sacerdotal chants were created from the beginning of their stay in Egypt. The song celebrating the crossing of the Red Sea was certainly not their first. But could these songs have resembled those of the Egyptian priests? Certainly not. These priests, members of the ruling caste, performed their religious ceremonies in the secret interiors of their temples.

Egyptian art at that time, excluding the brief spark under Akhenaton (cf. p. 20), was completely isolated and stylized; their hymns and litanies would have reflected this coldness. The people themselves were excluded from these impressive musical ceremonies. It was to popular songs and dance that the people passionately gave themselves. Israel witnessed this, since it lived among them. But Israel itself was oppressed; its melodies must have been marked by a completely different feeling.

Israel experienced its miraculous deliverance and the revelation at Sinai. Succored and tested in the desert throughout forty years of solitude, the nation developed its "soul" in the image of its thrilling destiny and its worship music undoubtedly bore that imprint.

For many succeeding generations, Israel's place of worship was in the outdoors, facing the Ark of the Covenant; its rites were in the presence of all the people. Its religion was not hidden! So it is quite likely that the streams of music Saul heard as he approached the prophets (I Samuel 10:5) were inspiring by nature, and that the harmony that later poured forth from David's lyre (I Samuel 16:23) was sufficiently fascinating to calm the apprehensions of the taciturn monarch.

Why should we doubt this? We are much better informed today than were our predecessors. We know that Abraham did not flee one desert to settle down in another. He left a brilliant and highly developed, yet corrupt society to live among other peoples, themselves just as civilized and corrupt, but separated from each other and less powerful.

These were favorable circumstances for the development of a way of life to which these peoples were unaccustomed—a way of life barely glimpsed by them heretofore.

Music, it seems, was a highly developed art in the land of Canaan¹¹ (thanks to the Sumero-Akkadian influence). The Hebrews, being themselves born musicians, were impregnated by it. This much we can deduce. If this is not so, then how, after the incessant trials the people experienced, could King David have brought together four thousand Levites with aptitudes for vocal and instrumental music, when he founded a veritable Academy of sacerdotal music for the Divine service (I Chron. 23:5)? It was under the influence of this master musician of unique caliber that this Academy, during the course of several decades, was formed, an Academy which was to remain famous for centuries to come.

Because the technical basis of Israel's music was just as solid as that of the great and powerful neighboring peoples who were Israel's contemporaries, its musical resources effectively served the authentic and eminently human faith which made use of them. The music of the Hebrews would have carried the mark of these technical and religious particularities.

All this persuades us that there is no reason to imagine an ultra-primitive kind of music. In his native city of Ur, Abraham probably lived in a house such as those still to be found in the "land of the two rivers."¹² He then emigrated to Canaan where there were other equally developed nations. The brilliant civilization of Egypt, persisting despite its decline, was notably luxurious still in the days of David and Solomon. The texts of the Psalms of David and the inspired singers have always been unanimously admired. Why then would the music to which they were sung not have been stirring and beautiful, and accessible, just as the texts of the Psalms have remained?

Never before the time of David and Solomon would the sacred music of the Hebrews have enjoyed such a perfect set of circumstances for development, nor would it ever again. Under these great kings it received the ultimate impulse which put it at the height of its special destiny.

In the ensuing centuries, the decadence which characterized the nation might have caused the priestly music to decay with it. But history demonstrates that this did not happen. In the promised land there was always a handful of faithful people looking after the preservation of the

sacred heritage (as the Book of Ezekiel alludes¹³), and at the same time, its music (since sacred texts, in ancient Judah as elsewhere at that time, were always sung in public reading).

"If I forget you, O Jerusalem!" With what eloquent grief Psalm 137 testifies to the attachment the deported people of God had for Zion and her songs! It also reveals to us the attraction these songs exerted over their temporary masters: the depraved but highly cultivated Babylonians.

Israel in exile had suspended its lyres on the willows by the river banks (cf. Ps. 137:1-2). Yet the sacred music still retained its prestige, and the book of Ezra numbers 128 cantors, all Levites, who returned to the land of Israel (Ezra 2:41)?

Above all else it was important to thoroughly saturate oneself with the Holy Scriptures and transmit them without alteration to one's descendants.¹⁴ Therefore the music was also preserved, since it and the written text were but two halves of one whole. Moreover, the scriptures state that the Levites always sang "after the manner of David" (cf. p. 131).

New books were added to the sacred heritage, and new music was created for them. But there is one important fact to remember: these melodies were piously conceived according to revered norms. This was a law of art to which artists complied by custom. In this distant era art was still conceived as emanating from God (or from the gods). No one had the individual right to innovate (in this sort of musical conformism there were imperatives which yet escape us, cf. pp. 87ff).

So it was for the Hellenists who in the last centuries preceding our era insisted, in good or bad conscience, on rejuvenating cultic practice, while refusing to alter the cantillation or the rest of the priestly liturgy for that matter. The musical oddities, the sonorous refinements and melodic shapes of later Hellenistic music, which were a departure from the restrained style of the classical heritage (and which were proposed by a country considered by her own as being decadent¹⁵)—these novelties would have charmed the ears of a musical nation, and have been somewhat integrated into the music of entertainment. But nothing permits us to assume that the cantillation of the Law was tainted by them; this would have been a sacrilege! Jesus ben Sira (3rd century B.C.E.) attests to this: the sons of Aaron sounded the trumpets, while the singers praised the Lord with their voices "in a vibrant sound, with sweet melody" (Ecclesiaticus 50:16-18). This does not indicate individual

initiative; most likely tradition was respected. And we all know with what ardor this tradition was defended during the Greek and Roman occupation.

The millennium-old Testament was venerated. Numerous master scholars assembled regularly to comment on it, interpret it and adapt it without any mutilation to their new spirit. It was in such assemblies that the Talmud was born. These assemblies persisted until the fifth century of the Christian era, despite the destruction of Jerusalem and despite the dispersion.

Thus the scattered Hebrews sought only one privilege: to live according to their faith and to save it from oblivion, although for themselves they feared the worst. And their ultimate effort in this sense is precisely the Masoretic undertaking which began shortly after the close of the Talmud.

These last representatives of the School of Tiberias furnished the Bible with vowel-points and cantillation accents. At the time of their appearance, biblical times were more than a thousand years past, and the Levites were dispersed. Can we imagine that the tradition of that period was the faithful reflection of the admired music of a unique source, the Temple? This tradition, as we have already noted, differed from one locality to another, and that which has come down to us here and there is far from being a witness to such famous origins. Besides, it would be most foolhardy to maintain the thesis that the original cantillation persisted in synagogue practice century after century despite the cataclysm which had overtaken the nation.

Meanwhile, the Christian Church was constituted. Thanks to the concerted efforts of the apostles, Christianity spread rapidly. We know that the Church borrowed the cantillated reading of the Hebrew Bible from the Synagogue.¹⁶ But the Church also made numerous converts from other peoples more propitious than Israel for conversion. Thus it became the melting pot of diversified musical contributions.

Did the Church substitute, or create from whole cloth, the message of love, total faith and elevated hope to which its songs testify right from the very beginning? If this had been the case, it would have denigrated the sacerdotal music of the Hebrews. But it did not. On the contrary, the Church exalted it.¹⁷ Is it under the influence of the pagans that it became musically distinguished? History recounts the opposite. The Church banned pagan instruments, notably the flute of which the pagans were so fond. It revolted against their "degrading" modes.¹⁸ Of course,

the Church's inspired hymnists created specifically Christian cantillations; but they were marked by few modifications, in comparison with the common bases of music in antiquity.¹⁹

Israel had benefited from these common roots respected by the Christians. Therefore, if the Church Fathers appreciated this wellspring, it should not be seen, spiritually, as a small trickle of water.

We are left with the enigmatic notation conducting us back to the Masoretes of Tiberias. No one has ever denied that it is the ancient tradition the Masoretes transmitted to us by the *te'amim*.²⁰ On the contrary, every source has confirmed this in every period of history. So we need not imagine that this notation was imitated from music heard in the seventh or eighth century C.E., nor that the Masoretes created the distinct musical components in it and invented the names and pictorial signs symbolizing them.

We have already stated (p. 7) that at least the names were very old at the time the signs appeared; such is the formal opinion of commentators immediately following their appearance.²¹ According to certain commentators, the signs themselves go back to extremely ancient times (cf. p. 6).

Moreover, one particularity requires our attention: the meanings attributed to these denominations may have been distorted with the passage of time, but the names themselves have endured; and the signs prescribe their meanings with such meticulous precision that one appears to be the mirror-image of the other.

Let us explain. Logically, each time a particular sign appears in the text, it should be ascribed by the same meaning. Given some twenty signs whose positions were strictly respected by a scrupulous tradition, if the meanings which one attributes to them are no longer those which justified their respective names, still the underlying relationship which motivates the particular order and placement of the signs remains the same. This relationship, preserved intact in the signs, is the pure and simple reflection of the differentiations from which rises the cantillation behind the accents.

This original cantillation undoubtedly constituted a unified whole. To reconstitute it as a whole, it had to be musically "restructured" with the aid of the meanings attributed to the signs — themselves interpreted according to their respective, specific locations within the verse (this is a providential framework of reference).

Like a chest of precious jewels whose key was lost, the Masoretic notation harbored, in its uncompromised nuances, the treasure of the original cantillation, thus miraculously preserved!

Some will think this a perilous hypothesis! Besides, what treasures are we talking about? We are talking about music more than 2000 years old. Do we really know what music was like during those biblical times? The favorable comments concerning it held by those living before our era hardly seem justified to us after so many centuries of grand evolution.

On this point J. Combarieu has an opinion which is worth emphasizing because it comes from an enlightened musicologist simply overwhelmed by the truth. Basing his conclusions on various considerations (some which have only recently been brought to light), he declared that these facts "suggested the idea of music as rich and brilliant as the very poetry of the Psalms: music in no way mystical in its tendency, associated with the deepest religious feelings but expressing an intense and very outstanding life, yet completely impregnated with naturalism, displaying its resources instead of restraining them, as befitting a young nation, full of strength."²²

To this powerful description, abstract though it is, the resultant music which emanates from the biblical accents of cantillation, according to the systematic deciphering whose details will follow, gives an amazing confirmation. One has only to hear it to be persuaded.

NOTES

¹Combarieu, J., *Histoire de la Musique*, Vol. 1 (Paris: Armand Colin, 1930), p. 55 (citing Philo, *De vita Mosis*, I-I).

²That is, upon the seven-note scale and the inherent physical and tonal relationships within it.—Ed.

³Assuming (as most scholars do) that the Exodus occurred in the 13th century B.C.E., Akhenaton could have been at least a historical precursor for Moses. However, many hold that the biblical chronology itself demands a 15th-century date for Moses and the Exodus.—Ed.

⁴Parrot, Andre, *Sumer* (Paris: Gallimard, 1960), p. 194: "The Semitic imprint, made of sensitivity and fantasy, will nuance the Sumerian severity and the anterior hieratism."

⁵Op. cit., p. 23.

⁶The Louvre Museum, Paris.

⁷Malraux, Andre, in *Sumer* by Andre Parrot, p. xxxi: "Before the seated Gudea the most famous scribes return to obscurity."

⁸Such codes also existed in Egypt.

⁹Aron, Robert, *Histoire de Dieu*, p. 57. He further adds elsewhere: "Israel was not chosen because it was worth more than the others but because historically it alone was in a position to receive the covenant" (p. 152).

¹⁰Here again, some conservative scholars hold to a considerably shorter chronology: 430 years from God's covenant with Abraham (Gen. 17) to the Exodus [cf. Exodus 12:40, where "*completed* four hundred and thirty years" is understood in this light]. Egyptian cultural influence upon Israel, over this length of time, would have been less pronounced.—Ed.

¹¹R. Tournay, *Les Psaumes* (Editions de Cerf, Paris, 1955), p. 49: "Promised land for music, Canaan for a long time furnished artists and instruments for Egypt and Assyria."

¹²Wooley, Sir Leonard, *Abraham* (Paris: Rayot, 1949): "As we began to unearth the houses in Ur dating from 20 centuries before Christ, we were astonished to discover that they corresponded in every detail to modern Arab houses of Bassorah or Baghdad."

¹³Ezekiel 14:1; 20:1.

¹⁴Cf. p. 127.

¹⁵Cf. p. 86.

¹⁶The Church separated itself completely from the Synagogue at the Nicene Council in 325.

¹⁷Cf. p. 141.

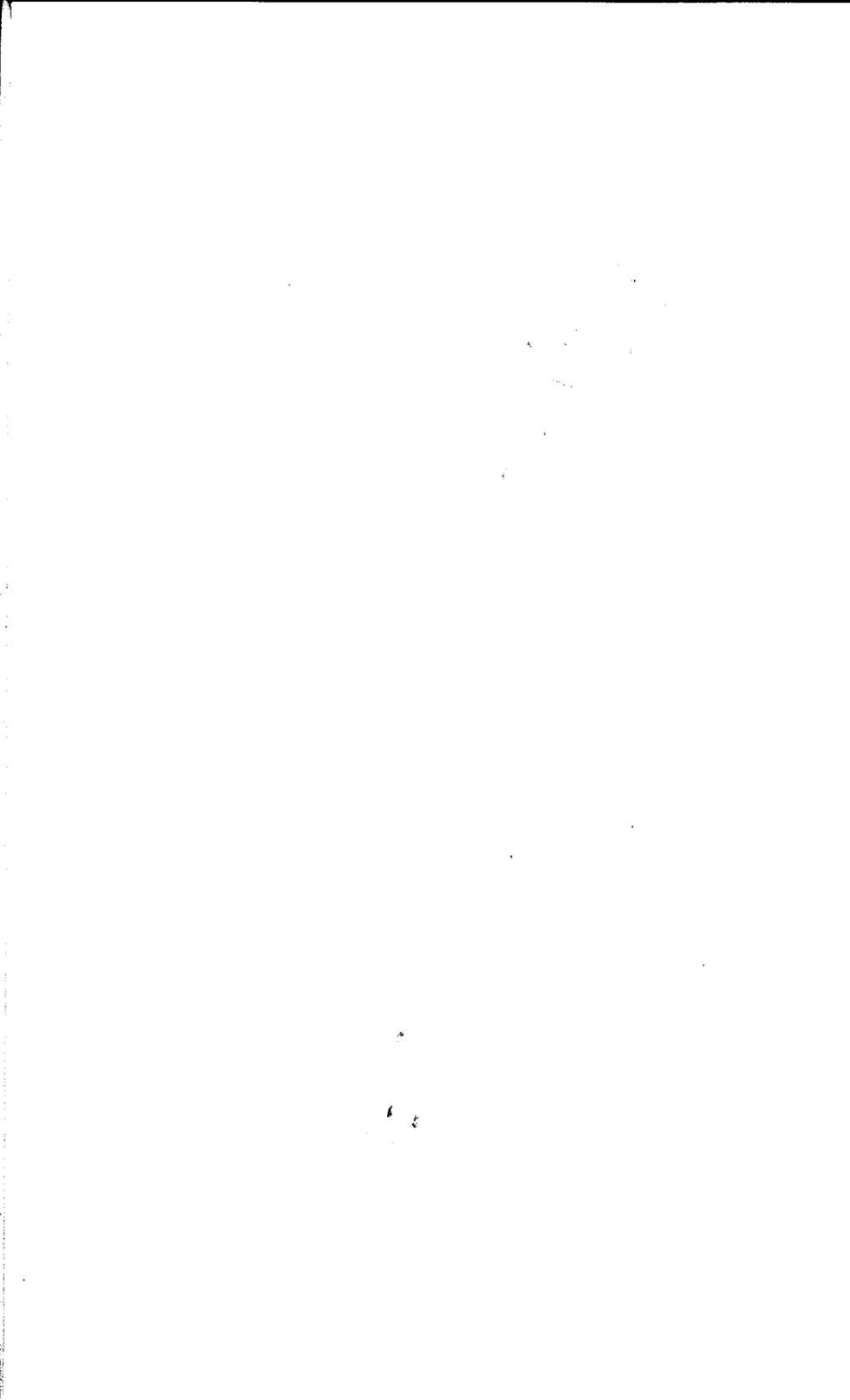
¹⁸Loc. cit.

¹⁹Cf. Introduction II.

²⁰L. Algazi, "Musique Juive," *Dictionnaire de la Musique*, Vol. I (Paris: Larousse), p. 491: "The 'tropes' (accents) must be considered the most ancient part of traditional Jewish music and, without a doubt, the only vestige of the music performed at the Temple of Jerusalem prior to its destruction in 70 C.E."

²¹Moreover, these names also appear in an abbreviated form in the "simple" Babylonian notation, anterior by at least three centuries (cf. p. 70). The sign is the initial letter of the name of the accent itself (cf. A. Bauer and P. Leander, *Historische grammistik der hebräischen Sprache des Alten Testaments*, p. 146).

²²J. Combarieu, *Histoire de la Musique*, vol. I, p. 192.



CHAPTER I

A BRIEF EXPLANATION OF THE DECIPHERING KEY

The Cantillation Signs of the Hebrew Bible Guarded an Unsuspected Music

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Key to the Masoretic Biblical Notation

- I. The Prosodic System
- II. The Psalmodic System

Until the present, the cantillation signs of the Hebrew Scriptures have been given interpretations as diverse as they were evasive.¹ Now, thanks to the systematic deciphering of this notation, a real music arises which demands our attention, in view of its unquestionable life.

This discovery constitutes an undeniable contribution to history. It forces us to reconsider it from a new perspective and calls forth new conclusions which the facts themselves never excluded, despite varying opinions throughout the centuries. It brings to light previously disregarded points which particularly confirm the conclusions suggested by the deciphering.

This discovery itself radically changes our concepts which even yesterday might have seemed legitimate in the light of our limited knowledge. It changes, in fact, the face of history.

1) THE EXCEPTIONAL COHERENCE OF THE ELUCIDATED MUSICAL SYSTEM

Even though it has led to disconcerting interpretations, the system of *te'amim* (that is, the Masoretic "Tiberian" notation) proves to be a creation of exceptional clarity and remarkable economy of means. If it is characterized by a scarcity of signs, it is nevertheless the opposite of a *mnemonic* device. The notation is a graphic representation of the music which it symbolizes (taking into account certain preestablished requirements for all notations).

2) TWO COMPLEMENTARY SYSTEMS

This notation is composed of two systems: the prosodic (for the prose texts) and the psalmodic (for poetic texts).² In reality, these two systems are complementary. The first system, by its own particularities, enhances the narrative accounts and doctrinal passages. It serves the majority of the Hebrew Scriptures: twenty-one books. The second system, with its more reserved style, suits the Psalms and Proverbs.³

— Similarity of presentation —

The prosodic and psalmodic systems present a striking similarity on the whole. The signs in both systems are arranged above and below the words. Moreover, one finds the same signs employed in both systems

with only few exceptions (some signs are present in one system, excluded from the other).

—Identical Meanings—

Confirming these observations of the whole, the signs always retain the same meaning regardless of their use in one system or another.⁴ The basic rules for interpreting these signs remain strictly unchanged for both systems and for all texts. It is this peculiar nonpermutation which permits the entire deciphering process.

Having formulated these considerations, let us observe the simplicity and coherence of the principles of this notation.

3) THE MEANING OF THE SIGNS BELOW THE LETTERS: THEY ARE BASIC SCALE DEGREES

In both systems, the signs underneath the words are basic **degrees*** of a **scale***. These degrees are spaced according to norms still in use today — norms already established at least two millennia before our era.

It will seem strange to learn that in singing our common C major scale we are actually singing the scale degrees of the ancient Lydian mode, upon which is based the fundamental degrees of the prosodic system. In 1968 cuneiform tablets were discovered which unequivocally attest the total similarity between the Babylonian scale (none other than the Lydian mode) and our own C major scale:

—Identifying the Signs—

Upon examination of the biblical texts, it was soon obvious that the lower signs ought to be more consequential than the upper ones because the latter are sometimes absent from an entire verse, whereas the lower signs are always present.

One particular sign | ends nearly every verse. It so happens that this is the primary note of the series of scale degrees, formerly called the **final***; it is known today as the **tonic***. Its function is to *conclude*. This sign can also be found at the beginning of numerous verses or within them.

Certain signs are placed more frequently than others before a **caesura*** of the sentence: ↘ and ↙. There was reason to think that

their musical meaning is analogous, being special scale degrees of temporary rest: our musical **half-cadence***.

The fourth and fifth notes in our modern scale are particularly designated for this function; but in the early stages of research, it was obviously impossible to attribute one or the other to these two signs.

On the other hand, certain groups of signs frequently seen together permitted one to foresee certain customary tonal relationships. For example, a series of contiguous notes or comfortable voice leadings.

All these observations and many others (which we will examine in detail in PART TWO) and the deductions derived from them, bring us to the conclusion that here the **final*** or **tonic*** is not the first note of the series, as the note C is in our modern C major scale; rather, it occupies another place in the midst of the scale. It is in fact the third note of the series (the note E in the C major scale) upon which every verse is musically concluded.⁵

The first and last notes in the series of eight degrees found in prosody give the analogy of the **octave***, as do the first and last notes of our modern scale. The psalmodic scale, by contrast, has only seven fundamental degrees. The "submediant," the 6th degree found two degrees below the tonic, disappears in psalmody (and with it the analogy of the octave). The tonic thus becomes the second degree of the series, but the **mode*** is no longer the same.⁶

4) DETECTING THE "MODE"

One does not make use of a scale without first selecting a **mode*** (a meaningful arrangement of the various intervals or spaces of the contiguous scale degrees). But what mode or modes were used here? Ancient musical notations did not have signs to indicate modality.⁷

After experimentation and testing, it became apparent that certain musical structures coincided with the meaning of the words, while certain others were contrary to it. Here it becomes a question of musical logic, obvious to any music specialist. And we are led to conclude that only certain scale forms are used here (known from time immemorial), and among them a particular mode characterized by a kind of gap between the two notes superseding the tonic in an ascending scale⁸—what musicians call an **augmented*** interval today.

This mode exquisitely becomes the most significant passages of the Mosaic doctrine. We also know that this particular mode was used in

antiquity and, more importantly, it was the specific, favorite mode for traditional Jewish songs, both secular and liturgical.

This arrangement of consecutive degrees (half steps, whole steps, and groups of one-and-a-half steps) matches the musical expression with the textual expression. This is the exigent principle of biblical cantillation, whose music, although fully constituted, does not have a life of its own but is the pure reflection of the meaning of the words. Thus it clothes the text with a second life, a sort of enriching echo. This is why any cantillation worthy of the name dispenses with the habitual signs of modern punctuation. Therefore the ancients, who "cantillated" all declamations, quite easily dispensed with the comma, the period and the semicolon, because the music, performed by experts, truly accomplished this office.

The mode we just mentioned is used only in prosody (narrative accounts and doctrine). In the Psalms, the most frequently employed tonal structure is less conspicuous. Its tonic is not surrounded by the same intervals. The "subtonic" (our seventh degree) is separated from the tonic by a short distance, a half-step.⁹ However, the second degree is a whole step away, the normal distance.¹⁰

This particular intervallic arrangement surrounding the tonic, specific to the Psalms, constitutes a tonal setting favorable to their poetry and the refined form of prayer they express. Naturally, as in prosody, certain other scale forms are detectable, all the more easily since it is particularly in one or the other that each psalm as a whole finds perfection in its cantillated form and the pure musical transcription of its textual expression.

5) THE MEANING OF THE SIGNS ABOVE THE LETTERS: THEY ARE "ADDED" NOTES

The bulk of the musical elements is contained in the signs under the words. We need only glance at a reconstituted text, provided with only these signs, to realize this.

But the fact that two of the lower signs have their analogs above the letters (/ and \) rules out the idea that the upper signs concern anything else but real notes. Actually their function is tonal, but they differ from the lower signs in that they are not basic scale degrees, but subordinate degrees. In fact we have to consider that the pitch of the sound or sounds symbolized by an upper sign is based on the lower sign

preceding it. We do the same for "ornaments" in our modern musical notation.

In the deciphered notation, each "added note" (above the text) bases its resolution on the constituent degree represented by the immediate preceding sign below the text. The degree to which the ornamentation resolves depends upon which constituent degree precedes it. Each sign above the text may represent one, two or three notes at most.¹¹

In spite of the similarity to our modern embellishments, the signs above the text do not symbolize optional notes which can be omitted from the melody without damaging it. These ornaments are tonal inflexions inherent to the melody. Nevertheless they are still secondary notes (which explains their particular location above the text).

Moreover, for the originators of this notational system the economy of signs must have been their major concern. We shall see that this form of figuration for the *appoggiaturas** (added notes) or *melismas** provides one of the means (as varied as they are ingenious) for making this possible.

6) CONVENTIONAL ABBREVIATIONS

In looking at this notation we easily observe that the cantillation signs accompanying the text are infrequent for the most part. They certainly do not surcharge the Hebrew Scriptures with symbols; they are discreet—so much the better, seeing they are not the only signs accompanying the words.¹²

If this is so, it is because important conventional abbreviations are implicit in the notation. We shall enumerate them:

- a) First, the function of a sign placed below the letters extends beyond the end of the syllable and even that of the word it affects. It continues until a new sign replaces it. This explains why there are entire words without signs.
- b) When the first word of a verse does not have a sign, the tonic note, I, is assumed (another appreciable economy of signs).
- c) The signs above the letters represent one, two, or even three added notes. Several notes for one sign is an additional advantage.
- d) Finally, each sign above the letters is only valid for the one syllable it affects. As soon as we move to the next syllable, the preceding lower

sign (which determines the pitch of the ornament represented by the upper sign) resumes its effect.¹³ This means that the constituent degree as represented by a lower sign is never interrupted except during a short part of a syllable when the appoggiatura or melisma is inserted. This additional abbreviation is one of considerable importance (and not least for the intelligibility of the notation itself).

By these original yet reliable means, a minimum of signs can clearly symbolize the melody. These rules are unalterable laws and through their strict application the melodies can be reconstituted.

7) THE NOTATION DOES NOT CONTAIN INDICATIONS OF RHYTHM; PROSODY HAS THE FLEXIBILITY OF VERBAL DISCOURSE

Now that the ensemble of signs for the prosodic system is identified it is clearly apparent that not one of them indicates rhythm. But this does not constitute a lack since, in the manner of other ancient liturgical melodies, Christian hymns, and folk songs of certain peoples transmitted by tradition, the rhythm of biblical prosody does not require specific indications; it is "shaped" by the verbal discourse.

This is the simplest form of rhythm. It makes the length of each sound coincide with the indeterminate length of each succeeding syllable. It slows down for a tonic accent or an expressive accent designed to place special emphasis on certain key words of the text.

If, with the aid of such an elliptical system, we can dream that texts of indescribable beauty can emerge, then we are unquestionably amazed at the simplicity and effectiveness of the means by which this is done.

—The Simplified Rhythm of Psalmody—

One might think that in assigning imprecise speech rhythm to psalmody, as we did for prosody, that the reconstitution would be definitively accomplished. It is nothing of the kind.

The psalmodic melodies are eminently musical (this goes without saying). But, when interpreted rhythmically in the manner of prosody, they produce an undefinable "uneasiness." They seem truncated—which is a sensation that music particularly provokes when its basic micropulse is not faithfully respected.

The rhythm of the Psalms is fundamentally different from that of the prose texts; it is "measured," but in as simple a manner as possible. The syllabic time is of constant duration. When the added notes or melismas (indicated by the upper signs) intervene, their embellishments are inserted within the allotted time for the particular syllable. For such a system special rhythmic notation is unnecessary.

This kind of rhythm provides the clean precision indispensable for choral performance, accompanied as it was by instruments. It is in this manner that the monody espouses the poetry of the Psalms, adding to the efficiency of the words the convincing charm of the tones, in a harmonious relationship.

8) TECHNICAL CRITERIA OF AUTHENTICITY

The first criterion of authenticity that results when putting the deciphering key to the test is that it applies to all musical signs of every biblical text without the slightest alteration. However, it is the Pentateuch that furnishes us with a spectacular proof of the cogency of this deciphering.

The notation of the Decalogue¹⁴ constitutes this proof. In comparison with other texts which are only lightly sprinkled with accents, this text is supersaturated with signs. It has an abundance of intermingled signs, below and above the letters, often even placed one above the other.

The synagogue tradition was most embarrassed by this text, and avoided the difficulty by using only certain lower signs on some words and certain uppersigns on others (cf. p. 279), according to the "solemnity" of the occasion (the juxtaposition of the signs appearing nonsensical).¹⁵

If we carefully follow the dictates of the deciphering key—which resurfaces a majestic, awe-inspiring music, melodically radiant, corresponding perfectly to the transcendence of the verbal text—we are surprised to discover that all the signs retain their proper meanings and they fit together without the least opposition, and making possible this unique realization. Is this not a most significant criterion?

But the greatest technical criterion is given by the musical syntax. It has a consistent logic, never contradictory, no matter what kind of text is being deciphered.

The music which results is expressive and beautiful (adjectives which some people enjoy contesting as being "subjective"). Yet these words are

a just coronation. The beauty which adorns these realizations reinforces the unquestionable musical logic of these interpretations. It attests to a method of procedure without contradictions, and it bears witness to a cadre of trained specialists as the source of the notation. The detailed study of the deciphering process in the following chapters, bringing to light the subtle cogs and workings of the compositional mechanism (with the support of numerous examples of reconstituted music), will clearly demonstrate that this music indisputably presents, a "syntax."¹⁶ And it is this syntax which best confirms the reality of the deciphering key, removing any idea of pure and simple chance.

KEY TO THE MASORETIC BIBLICAL NOTATION
 (still found in current editions)¹⁷

I. THE PROSODIC SYSTEM

SIGNS BELOW THE WORDS:

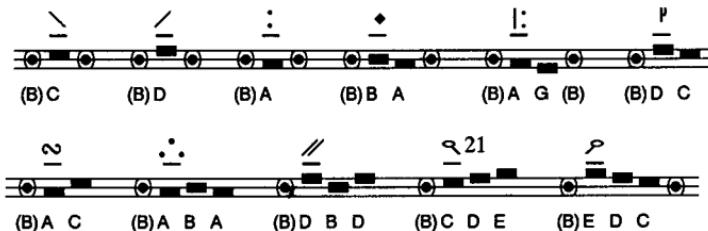
They are **FIXED** pitches
 in a tonal scale.



Their sound continues until a new sign appears below the letters, and is interrupted only by a new sign above the letters.

SIGNS ABOVE THE WORDS:

They are ornaments subordinated
 to the fixed degrees and represent
 one, two or three notes.²⁰



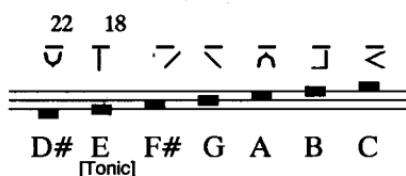
There is one last sign rarely given in the text and which has a "mixed" meaning (cf. p. 278).

KEY TO THE MASORETIC BIBLICAL NOTATION (continued)

II. THE PSALMODIC SYSTEM

SIGNS BELOW THE WORDS:

They are FIXED pitches
in a tonal scale.



Their characteristics are the same as the corresponding signs in the prosodic system. (\vee and \wedge always maintain the same intervallic relationship with the tonic | as portrayed above; if the tonic note were taken as D the degrees below and above it would be C# and E, respectively.)

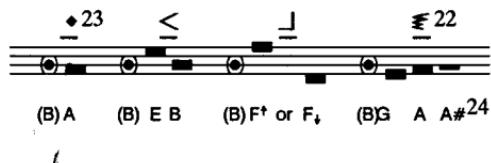
SIGNS ABOVE THE WORDS:

Signs already used:



These signs are also found in the prosodic system. Their meaning is unchanged.

Special signs:



PROSODIC SYSTEM: Exodus 20:2-7 (excerpt of the Decalogue)

זֶה אֱלֹהֵיךְ אֲשֶׁר דִּבֶּרְתָּךְ מֵאַחֲרֵי מִצְרַיִם מִבֵּית עֲבָדִים:
 לֹא תַּעֲשֶׂה כֵּן אֱלֹהִים אֲחֵרִים עַל פָּנֶיךָ: לֹא תַּעֲשֶׂה כֵּן
 פָּסָל וּכְלָחֶם נָגָה אֲשֶׁר בְּשָׁמִים וּמִפְּעָל וְאַשְׁר בְּאָרֶץ
 הַמִּתְּהֻרְתָּה וְאֲשֶׁר בְּמִזְרָחָם מִתְּהֻרְתָּה לְאַרְץ: לֹא תַּעֲשֶׂה
 וְלֹא תַּעֲבֹד כְּי אָכְלִי זֶה אֱלֹהֵיךְ אֲלֹהֵיךְ כַּא פָּקֵד שָׁנָה
 אַבְתָּה עַל שְׁנִים עַל שְׁלֹשִׁים וּעַל דְּבָיעִים לְשָׁנָא: וְעַשֵּׂה
 חֲסֵד לְאַלְפִים לְאַדְבִּי וּלְשְׁמִינִי מִשְׁתָּחִתִּים: ס מְלָא תְּשֵׁא
 אַתְּ שָׁם זֶה אֱלֹהֵיךְ לְשָׁא כְּי לֹא יַקְהֵל זֶה אַתְּ אֲשֶׁר
 יָשָׁא אַתְּ שָׁמוֹ לְשָׁא: פ

PSALMODIC SYSTEM: Psalm 137 ("By the rivers of Babylon. . .")

קָלְ
 אַלְעֲדָרוֹת בְּבָל שֶׁם יְשַׁבֵּנוּ נְמַכְּבִיט בְּוֹכְרֹת אַתְּ צִין:
 עַל־עֲרָבִים בְּתוֹךְ תְּלִיט בְּעוֹרוֹתִים: בְּיַשְׁמָן שְׁאַלְעַן
 שׁוֹבֵיט דְּבָרִי־שָׁד וְתִילְלַעַט שְׁמָה שִׁיר לְעַמְּד צִין:
 אַךְ נִשְׁיר אַתְּ שִׁירֵיךְ עַל אֶדְמָת נִכְרָ: אַם־אַשְׁבַּחַ
 יְרוֹשָׁלָם תִּשְׁבַּח יְמִינִי: תִּדְבַּק לְשׁוֹנִי וְלִחְבֵּי אַם־לְאַ
 אַבְרָכִי אַם־לְאַעֲלָה אַתְּ יְרוֹשָׁלָם עַל רַאשׁ שְׁמָחִתִּי:
 וּכְרֵדֵה לְבָנִי אַזְׁוּם אַתְּ יְם יְרוֹשָׁלָם רְאִמְרִים עַד
 שָׁעָה פְּנֵי הִסְדֵּד בָּהּ: בְּתִיבָּבֵל הַשְׁׁזָה אַשְׁר שְׁיַשְׁלָם
 לְךָ אַתְּ מִילְךָ שְׁגַמְלִת לְעֵז: אַשְׁרִי שִׁיאָחוֹד גַּפְעַז אַתְּ
 עַל־לְאַךְ אַל־דְּפָלָע:

NOTES

¹ Cf. Appendices I and II.

² Hebraists define the "prose" books as those annotated with the prosodic accents, and the "poetic" books (Psalms, Proverbs and Job) as those annotated with the psalmodic accents. Yet there are a number of "poetic" and even "psalm" texts within the prosodic books—and texts in Psalms which (despite their verse structure) are narrative in tone (e.g., several of the Psalms of Asaph). In the light of this discovery, we should no longer divide the Hebrew Bible into "prose" and "poetry" but into "prosody" and "psalmody"—and pay attention to how the two systems are fit to the needs of particular texts and literary genres.—Ed.

³ The prosodic system is used in Job 1:1-3:1 and in 42:7-17. The rest of the book is annotated with the psalmodic system of accents (cf. p. 203). Here, as elsewhere, this reflects the musical requirements of the text and genre.—Ed.

⁴ With only one exception; yet history confirmed what analysis led one to deduce.

⁵ Cf. p. 38.

⁶ Cf. p. 39.

⁷ The Greek musical notation being an exception (cf. p. 62).

⁸ Derived from the Dorian mode.

⁹ Just as the "leading tone*" of our classical minor mode.

¹⁰ Cf. p. 39.

¹¹ Cf. p. 97 (subordinate degrees).

¹² Along with the cantillation signs, the Tiberian school disclosed the vowel-points clarifying the vocalization of the words. These were never indicated in the scrolls used for sacerdotal reading.

¹³ Unless a new sign intervenes. The modalities of this resolution will be clarified in the details that follow.

¹⁴ Cf. p. 40 as well as the Second Recording (Fondation Roi David) and its accompanying score (Editions Choudens) for its transcription.

¹⁵ The traditional interpretation of these signs gives them an equivalent meaning, whether they are located above or below the words.

¹⁶ Later on we will examine every element of this syntax.

¹⁷ The reader can see on p. xx how the signs appear in the Hebrew text (Edition Colbo), cf. p. 444. Certain editions do not have these signs. [Corresponding editions in the English-speaking world include the Letteris Editions produced by Hebrew Publishing Co. (New York) and the British and Foreign Bible Society (London).—Ed.]

¹⁸ The sign | is assumed at the beginning of each verse if no other sign is given.

¹⁹ In some editions, the signs / and \ are slightly curved ↘ and ↙; their meaning remains the same of course (cf. PART TWO, BOOK I, Chap. 4).

²⁰ The fifth fixed degree of the mode, B, is assumed in the example; we have placed it in parentheses. We remind the reader that only the pitch relationship is to be respected. If the first example had assumed the fixed degree to be A, the ornamentation would be sung on B instead of C.

²¹ The design of the sign corresponds well to the shape of the melody, since Hebrew is read from right to left.

²² The signs ψ and Φ are also found in the prosodic system, but are rarely used. Their meaning is unchanged.

²³ This sign alone has a different meaning and also a different name in each system.

²⁴ Or a similar series, differing chromatically, depending on the mode.

CHAPTER II

THE TIBERIAN SYSTEM OF NOTATION

— Summary —

- 1) The surprising efficacy of the Tiberian notation 44
- 2) The misleading circumstances of its appearance (two other Hebraic notations preceded it) 46
- 3) Some trace its origins to the first Byzantine notation (judged a simple *aide-mémoire*) because they share several similar signs 50
- 4) It had more in common with the ancient Greek notation (well-known in the Middle Ages but not used) 52
- 5) Diverse notations appeared during the first centuries of our era. Their common characteristics go by unnoticed. They are inefficient 53
- 6) We are told the common source of the neumatic notations is in the Latin accent of pure syntax. The Tiberian notation refutes this hypothesis because it is essentially musical 59
- 7) Without any notation, the ancient world would have only known oral tradition. Yet the Tiberian notation could not have derived from a strictly oral source 63

1) THE SURPRISING EFFICACY OF THE TIBERIAN NOTATION

The Tiberian musical notation has been deciphered in both of its systems, and it appears in fact (as we will demonstrate after examining the notation in detail) that it is perfectly designed. It allows us, without the least hypothetical suggestion, to reconstruct the biblical cantillation with great faithfulness—a cantillation which amazes us by its originality and expressive power. Although it reveals itself to be archaic, it is perfectly suited to its purpose: the worship service of pure, filial love, so particular to the Hebrew people, and so far removed from the pagan rites of certain other ancient peoples.

Résumé of its indisputable qualities

The economy of signs: This is most welcome in light of the total mass of text in the Hebrew Bible. A different notation would have probably doubled the volume of the Scriptures by thoroughly overloading them in a most regrettable manner. But this notation is hardly noticed.

The concision of symbols: Thanks to this, and despite the difficult obstacles faced in our research, the goal of reconstituting its musical meaning was attained. And this was possible first of all by the distinction between the fundamental degrees and the added notes, so clearly marked by the precise location of the signs above or below the words. The exact interpretation of only the lower signs themselves (of which there is a limited number) can produce inspiring music.¹ This musical resurrection, however, would not have been possible if all the signs had been placed above the words.

Of course, the observed economy of signs could not have been effectively realized except by the stability of meaning inherent both in the choice of symbols and in the conventional means of abbreviation employed by the notation. Clarity of meaning and consistency of function are the primary qualities of this heretofore misunderstood notation.

Again, we see perfection in the actual correlation between the two systems, differentiated just enough from each other to allow themselves to be adapted to the two forms of expression in biblical cantillation (prosody and psalmody).

It is important to examine the circumstances surrounding the birth or disclosure of this notation (which yet remains shrouded in mystery); and to understand the particularities of the other notations which appeared in the same epoch.

The "Tiberian" notation is classified among the **neumatic*** notations (the majority of which appeared during the Middle Ages). On the whole, these notations are considered to be imprecise.

Certain signs of these various notations resemble somewhat those of the notation we are examining here, dating from the same period. Yet the perfection of the Tiberian system, fully attested, sets it apart from the other neumatic notations. This was not understood by musicologists who examined this notation before, because they did not know its real meaning.

One can easily understand how the judgment of musicologists concerning the Hebraic notation could have been influenced. On one hand there was the deeply rooted or traditional bias stating that this biblical notation was imprecise.² On the other, there was the added fact that the other neumatic notations were also judged *inefficient*. This surface correlation easily seemed to link the Tiberian notation with the deficient systems of an outdated epoch, and the question seemed closed.

We now know that this is simply not the case. This Hebraic notation is the mirror-image of the music it translates so marvelously. Historically then, the problem should be reexamined from its very foundation. Certainly, the problem concerns the history of this notation, but it concerns much more besides. It touches upon the history of music itself, and specifically the evolution of its own structure. In fact this music, if it originated as late as the Middle Ages, would be an anachronism. That would have made it conceived according to the norms, concepts and practices of bygone days—a feat hardly imaginable in the light of its "classical" perfection coupled with its spontaneity. If, on the other hand, it really originated much earlier, it proves that the ideas we have held until now concerning ancient music have been false. This is a vital point.

So the question becomes acute: when was this music conceived? After having studied the deciphered cantillation from a technical point of view,³ it was relatively easy to place it in its presumed antique setting.

But it does not suffice that the structure of this music appears to be related to what we presume to be other forms of ancient music; we only know them by imagining what they were like, and it seems we are far from appreciating them as they should be.⁴ It must also be seen that in

spite of its supposedly posterior date of notation, several centuries after its creation, this music was still able to be transmitted with such extraordinary precision that it can finally be translated by the deciphered notation (since it permits its complete restitution). So then, just maybe, all this can be unraveled.

Whatever the case, we must first identify as much as possible the period and circumstances in which the Tiberian notation came into general use and determine what it represented to those living at that time.

2) THE MISLEADING CIRCUMSTANCES OF ITS APPEARANCE (TWO OTHER HEBRAIC NOTATIONS PRECEDED IT)

The notation of Tiberias is the work, as current opinion holds, of the Masoretes, teachers of the famous Academy which operated in that city from the end of the 8th century to the 10th century.⁵ Let us remember that it is only the origin of the signs which are in question; no one has ever contested that this notation was anything but the reflection of the real Tradition (cf. p. 175).

Conjointly, in this ultimate attempt to safeguard the Tradition, the Masoretes of Tiberias also put into written form the vocal interpunctuations—the exact enunciation of the words—by means of signs placed under the words for the most part. We wish to clarify that the scrolls used in the synagogue were totally devoid of vowels,⁶ and Hebrew was no longer used outside the sacred service. Finally, a gloss indicated the forgotten sense of certain words in the sacred text.

In fact, no one knows when this notation actually did appear.⁷ Very likely it was not before the 9th century, claims Paul Kahle, seeing that (as he says) important works written during the 7th and 8th centuries do not mention it. We find the same silence in the 9th century, in view (naturally enough) of the rarity of extant texts from that time.

Yet the expression *piske-te'amim*, from which likely derives the generic term *te'amim* designating the accents of cantillation, was already present in the Talmud (written prior to the 6th century—cf. p. 96).

The oldest manuscript known to contain these cantillation signs is the "Codex of the Prophets" written by Moses ben Asher, which dates from 895 C.E.⁸ There was not the slightest reaction, it seems, to this "innovation". But during the second half of the 9th century *Ga'on Mar*

Natronai reiterated the ancestral interdiction concerning the addition of anything whatsoever to the texts of the biblical scrolls reserved for sacerdotal use; consequently neither vowel-points nor cantillation signs were to be added (cf. p. 173).⁹ This reminder proves that there was nothing about the nature of these signs which provoked surprise.

The first treatise on the *te'amim* that we possess dates only from 930 C.E. It is the work of the last teacher of the Masorah, Aaron ben Asher, whose father had edited the Codex of the Prophets (found in the Cairo Geniza, and about which we will say more) and whose grandfather himself was one of the founders of the celebrated Tiberian school. Basically, the object of the treatise was to aid the student in the correct enunciation of the Holy Scriptures, according to the exegesis derived from the grammatical relationships of these signs with the text.

Afterwards, numerous manuals of grammatical syntax appeared, drawing conclusions from these accents added by the Tiberian school and interpreting them in the same grammatical sense.

This said in passing, there still must have been a peremptory reason for this sort of interpretation, the schools and their divergences being numerous at that time.

In Supplement I we will evoke these various exegetical interpretations of the cantillation signs. In advance we should note that they are obscure and of little importance to the uninitiated. The fact remains that this notational system was not viewed as a latter-day invention somewhat adapted to the manner of reading the texts at that time, thereby fixing a probable oral but still living tradition. On the contrary, it appeared as a graphic representation of values *apparently once known*, but which remained enigmatic in meaning. Right from the first it was never understood why this was so.

That the sources of this notation were ancient, and *musical*, the earliest commentators left no doubt. They dated the origin of the oral tradition of cantillation back to the revelation at Sinai.¹⁰ Some commentators also dated the signs themselves to that ancient era, provoking controversies when they did so.¹¹

It is significant, in the light of our deciphering key, that the first commentators affirm: "Each of the accents... has its own particular melody; each follows its own rules; and no two of them ever resemble each other. Otherwise their number would be considerably less."¹² Nevertheless, music was not the proper object of their research. They even noted—without dwelling on the point—that the tradition of chant

in their day *differed* from one community to another.¹³ Their attention was riveted on the grammatical syntax.

If these melodic differences were minimal and if oral tradition furnished them with approximately the same music which the Key permits us to reconstitute, undoubtedly they would have felt no need to look for indications of a theoretical syntax in the signs themselves. The music itself would have accomplished the real purpose—the initial purpose—of the accent system.

It is evident then that the music we have recovered was so ancient, even at the time when the notation was propagated, that the oral tradition was already greatly corrupted (even given the assumption that the diverse synagogal traditions had a single source). On the other hand, it is equally evident that the teachers of Tiberias—if, as is commonly held today, they were the creators of this notation—did not know themselves the exact musical significance harbored in the signs they fixed in writing in order to transmit, the traditional values they represented. If this was not the case, why would they not have specified the meaning of the signs? Why limit themselves to deduce nothing from them but inconsistent rules of syntax?

As strange and remarkable as this appears, this circumstance already explains, a good many things about history. We believe that the oral musical tradition was seriously tampered with, long centuries before the appearance of the Tiberian notation, because it was preceded by two other notations—the Palestinian and the Babylonian—which contain fewer signs of different shape.

Is it really thinkable that the men of Tiberias arbitrarily added new signs to those which Tradition had handed down? It was certainly not the intention of these teachers to innovate in that sense. They stubbornly restricted themselves in all points to fixing the tradition, and for this purpose developing, (or so it would seem) a number of signs.¹⁴ However, if these new pictographical representations were unrelated to the ancestral names, they would have been rejected by contemporary grammarians—and this never happened.

Moreover, if we have been able to reconstitute the cantillation of the ancient Hebrews, it is only thanks to the signs of the Masoretes of Tiberias. So precise is its expression, not one of these signs could have been omitted without seriously affecting this music.

Nevertheless, the three notations do have certain similarities. First of all, they have three signs in common: I , \wedge , —^{l} ¹⁵ although admittedly, the first two notations use them in a very generalized manner (cf. p. 174).

However, these three differ from the other signs used in the earlier notations. In fact, apart from these three characteristic signs, the archaic Palestinian notation uses only dots, whereas the Babylonian notation uses just simple letters (being the initial letter of the name for each accent represented).

Certainly this basic differentiation is important. We believe that this circumstance did not arise by chance. One should see in this common ground the proof that the musical accents were traditionally ranged in two classes, as the Tiberian notation attests. But the limited number of signs in these earlier notations (one-third as many as in the Tiberian, cf. p. 167) testifies that at the epoch in which they appeared, the musical meanings and functions of the original music were already unknown and consequently forgotten.

These notations would have simply underlined the accepted "disjunctions"¹⁶ of the text (as living tradition attests even today). The melodic design would have been secondary, intervening as an addition, and not *motivating* the punctuation—whereas the reconstituted cantillation dictates the stopping places in the text and determines their relative importance.

When the Palestinian notation appeared, the signs undoubtedly legitimized the tradition then in use.¹⁷ The original tradition, which the signs of forgotten sense (and of greater number) attested, was no longer in current use. This much is evident. Moreover, the Palestinian notation seems to have been only a mnemotechnical means of representing the adopted formulae of a particular epoch. In no way does it have the well-defined character of the Tiberian notation. First of all, it would have consisted of isolated stenographic symbols of a sort. In fact only the accented symbols are presented in the early manuscripts, accompanied by their respective accents.¹⁸

In spite of their differences, the three notations do have common points and this fact should not leave us indifferent. In spite of its later appearance, the Tiberian notation was esteemed by the elite to be the one most perfectly conformed to the ancestral Tradition. It supplanted the archaic Palestinian notation and under its influence the

Babylonian notation became more "complicated" (thanks to those who wished to preserve this written system while yet adopting amendments prescribed by the Tiberian notation).

In summary, the exegetes of that time had good reason to give the Tiberian notation credit; for it skillfully fixed the exact Tradition.

**3) SOME TRACE ITS ORIGINS
TO THE FIRST BYZANTINE NOTATION
(JUDGED A SIMPLE "AIDE-MEMOIRE")
BECAUSE THEY SHARE SEVERAL SIMILAR SIGNS**

It might seem strange that, despite the existence of two Hebraic notations anterior to the Tiberian, musicologists sought a different source for the later notation although certain signs for it had been in use already, notably in Palestine. But it was barely a century ago that we learned of the existence of these anterior notations (cf. p. 8)—a fact worth remembering here.

It was with the first Byzantine notation, called *ekphonetic** (which, like the Hebraic notation, was reserved for the *lectio solemnis*—the formal reading of Holy Scripture) that certain musicologists compared the Tiberian notation deciphered in this book. Because this ekphonetic notation also contained several signs similar to those in the Tiberian notation, it seemed propitious and correct to presume the latter derived from its imposing contemporary. The ekphonetic notation was only what is called an "aide-memoire," a memory aid. Thus the idea that the Hebraic notation was imprecise seemed justified, if the investigation was really not pushed too far.

Upon examination of this ekphonetic notation and its own problems, we realize that nothing justifies the idea that the Hebraic notation derived from it. The hypothesis is unfounded and actually explains nothing at all.

The first Byzantine notation

Let us place it in its historical setting. Curiously, this undertaking is only slightly easier for the Byzantine notation than for the Tiberian. This "neighbor" of the Tiberian notation appears during the same period, but

its appearance is hardly circumscribed. Fully constituted in the ninth century, it had (according to the experts¹⁹) a gestation period of at least two centuries (the Palestinian notation dates back even further).

True enough, we can see that six of the twelve basic signs in the ekphonetic notation have analogs in the Tiberian notation:²⁰ / \ ~ ፩ ፻ ፻. However, it is most risky to rely on this resemblance for support of the idea that the signs have the same meaning in both notations. Attempts to establish correlations between the successive Hebraic notations because of a few similar signs remain problematic. It is equally the case here. Nor is it helpful to learn that the ekphonetic notation remains undeciphered to date. In fact, this notation is virtually a "dead letter." We can only conjecture indirectly about its presumed signification.

Certain mnemotechnical tables of signs for this first Byzantine notation, appended to Byzantine manuscripts of later date, are written in the "Paleobyzantine" notation.²¹ The ekphonetic signs are given an approximate interpretation in these tables for lack of more precise indications, and it finally has been deduced that they really had the meanings assigned to them in this transcription. But nothing proves this.

In the Hebraic tradition alone, we have so many examples of divergent interpretations given to the same Masoretic signs that one may retain a healthy skepticism here as well. This is all the more so since the mnemonic tables in question are not written by the same hand as the rest of the manuscripts to which they are appended. Research specialists estimate they were added some 100 years after the redaction of the manuscripts they append. Such is the conclusion of C. Hoeg who has done a very careful study of the ancient Byzantine manuscripts.²²

The Paleobyzantine interpretation assigns a melismatic meaning to each ekphonetic sign. But these meanings are uncertain since the Paleobyzantine notation itself still has not been thoroughly analyzed.²³ Yet there are those who would wish to impose a precariously based meaning upon the Tiberian notation, because of just such chance correlations.

It turns out that the ekphonetic notation is "verbose" in that the signs, found in great numbers, differ from one manuscript to another. The Tiberian notation, however, remains rigorously the same for the entire Old Testament, in both the prosodic and the psalmodic systems.

It appears that the ekphonetic signs were interpreted (at a later date) as melismas, the meanings of which remain uncertain for us. We know now by experimentation that the Masoretic notation of Tiberias is a model of precision and that the majority of the signs do not represent melismas, at all, but degrees of the scale.

We are forced to conclude that the only analogy between the two notations is the shape of several signs, and there is no basis for believing that the presumably imprecise meaning of the Hebrew notation should be compared to the unknown meaning of the first Byzantine notation. Its source, or that of the two earlier Hebraic notations, as one might imagine, is not to be found there. It will have to be sought elsewhere.

**4) IT HAD MORE IN COMMON
WITH THE ANCIENT GREEK NOTATION
(WELL-KNOWN IN THE MIDDLE AGES BUT NOT USED)**

In the Middle Ages there existed a notation, expounded in treatises, that was taught in music schools nearly everywhere in the lands where the Greco-Roman civilization had flourished. It was the Greek notation. Since it dates back to the fourth century B.C.E., it is only natural to seek out any common points it may have with the "Masoretic" notation we have deciphered here. Such a study, moreover, offers us the opportunity to compare the two systems, since the meaning of its signs is well-known to us (as well-known as that of the Masoretic signs).

The Greek notation offers this particularity not found in the neumatic notations: it represents each musical degree by a distinct sign. Here we are much closer to the real meaning of the Tiberian signs than when we took the Paleobyzantine tables as a testimony of their presumed melismatic value.

True, the Greek notation was alphabetic. Each degree of the scale was represented by a letter of the alphabet.²⁴ This difference is not so great, as we will explain further on.

This is the earliest notation of known meanings (fully described for us in ancient treatises) and was a very concise system, at least for the music it symbolized. It had the ability, several centuries before our era, to specify the mode. So it seems strange that some thousand years later, the ekphonetic notation was merely a vague "aide-memoire." This regression is worth thinking about.

At its origin (presumably in the sixth century B.C.E.), the Greek notation was expressly dedicated to instrumental music.²⁵ (This is not surprising in the light of what we will explain in our next chapter, cf. pp. 72, 74.) Much later, another notation specifically reserved for vocal music appeared; but, curiously, it fell into disuse before its predecessor.²⁶ What a short career for an established means of musical representation, obviously instituted by specialists. No doubt it was defective or insufficient. The instrumental notation (which alone survived) remained only theoretical. It was taught but never practiced, save in rare instances.

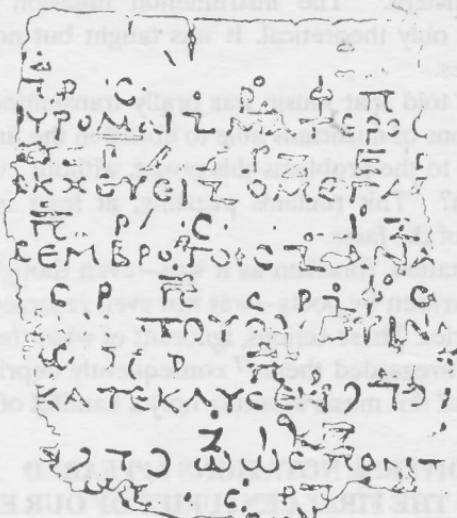
We have been told that music was orally transmitted in antiquity. How were generations of musicians able to abandon the first step toward a desirable solution to the problems this posed, without even attempting to ameliorate them? This remains puzzling, at least in view of our present knowledge of the facts.

And so this notation, forsaken as it was—even though it is given in some manuscripts written by poets—was not even recopied by scribes in the following centuries. These scribes, ignorant of what the letters above the text signified, disregarded them,²⁷ consequently depriving us of the priceless testimony of this music extant in only a handful of manuscripts.

**5) DIVERSE NOTATIONS APPEARED
DURING THE FIRST CENTURIES OF OUR ERA.
THEIR COMMON CHARACTERISTICS GO BY UNNOTICED.
THEY ARE INEFFICIENT**

Allowing the Greek notation to retain (as in the past) its almost exclusively theoretical role within the schools, several notations flourished at the beginning of the Christian era. Their origins lie scattered throughout the Mediterranean basin: in Armenia (4th century), in Syria (5th century), in Palestine and Spain (6th century), in Gaul and other countries.

Different in form as a whole, these notations contain signs which show some similarities with each other. The dots comprising the Syrian notation remind us of those in the Palestinian, which may date from before the 6th century. The *neumes** of the Armenian notation and those of Western Europe closely resemble the Byzantine signs (and therefore those of the Tiberian notation, as we have already stated). Yet these systems remain different although they were created around the same time in widely separated regions.



THEIR COMMON ORIGIN CAN GO TO THE MUSICALITY
DURING THE IRON AGE.

Allowing the Greek notion of music (as in the past) to define the commonality of music between the two cultures, we find that the Ionian alphabet of the Greeks is the same as that of the Hebrews. The first letter of the Greek alphabet is alpha (Α), which corresponds to aleph (א). The second letter of the Greek alphabet is beta (Β), which corresponds to beth (ב). The third letter of the Greek alphabet is gamma (Γ), which corresponds to gimel (ג). The fourth letter of the Greek alphabet is delta (Δ), which corresponds to daleth (ד). The fifth letter of the Greek alphabet is epsilon (Ε), which corresponds to ayin (א). The sixth letter of the Greek alphabet is zeta (Ζ), which corresponds to zayin (ז). The seventh letter of the Greek alphabet is eta (Η), which corresponds to he (ה). The eighth letter of the Greek alphabet is iota (Ι), which corresponds to yod (י). The ninth letter of the Greek alphabet is kappa (Κ), which corresponds to kaph (ק). The tenth letter of the Greek alphabet is lambda (Λ), which corresponds to lamed (ל). The eleventh letter of the Greek alphabet is mu (Μ), which corresponds to mem (מ). The twelfth letter of the Greek alphabet is nu (Ν), which corresponds to nun (נ). The thirteenth letter of the Greek alphabet is xi (Ξ), which corresponds to shin (ש). The fourteenth letter of the Greek alphabet is omicron (Ο), which corresponds to shin (ש). The fifteenth letter of the Greek alphabet is rho (Ρ), which corresponds to shin (ש). The sixteenth letter of the Greek alphabet is sigma (Σ), which corresponds to shin (ש). The seventeenth letter of the Greek alphabet is tau (Τ), which corresponds to shin (ש). The eighteenth letter of the Greek alphabet is phi (Φ), which corresponds to shin (ש). The nineteenth letter of the Greek alphabet is chi (Χ), which corresponds to shin (ש). The twentieth letter of the Greek alphabet is psi (Ψ), which corresponds to shin (ש).

PLATE V

GREEK NOTATION (3rd - 2nd century B.C.E.)

Fragment of a chorus from Orestes by Euripides.

(The music is basically notated by means of letters

taken from the Ionian alphabet.)

The Greek alphabetic notation rationally ranks the sounds,

just as it ranked numbers.(cf. p. 58).

արեգակն՝ . և ընդ հրեշտակս երգէինու
 փառք ՚ի բարձունս ոյ՝ .
 ՚ի հօրէ ծագեցար լուսաւորել զա
 րարածա . ա ՚ ըդա ՚ ըութե արեգակըն
 տէր փառը քեզ . ՚ ընար ՚ի յայրին
 ընծայեցաւ բեթղէհէմ . ա . Հովուաց
 յայտնեցար երկրպագեալդ ՚ի մոգուց .
 ար . ՚ ը մէք երգեսցուք որ ՚ի կու
 սէն մարմնացար . ար .

՚ նըսկիզեն էակից բանըդ հօր .
 որ էիր յառաջ քան զատի տեանս .
 և եկիր ՚ի փրկութի ըստեղծուածոց
 քոյ . ըզ քեզ մընեմք ալծ հարցըն
 մերոց : ՚ ընար ՚ի կուսէ անձառ մի
 տթիւն . անբաժանելի և միշտ գոլով
 ոչ մեկնեցար ՚ի հայրական ծոցոյ . ըզ .
 Յընծութե տօնեսցուք ըզընուդ
 քո աբ . որ յայտնեցար մեզ լըյս ՚ի լու
 սոյ . և լուսովքո լըցեր ըզ տիեզերս .
 ըլքեզօրհ . ՚ ո՞րծըք տեա ոն ըզ
 տէր օրնեցէք . ե՞մ ըզ բարձր ա

PLATE VI
ARMENIAN NOTATION

4th century fragment of the Sharakan in ancient notation.

In the first century C.E. neumatic notations appeared virtually all over the Mediterranean basin (cf. p. 53).

They are characterized by their use of symbols to represent sounds (cf. p. 58).

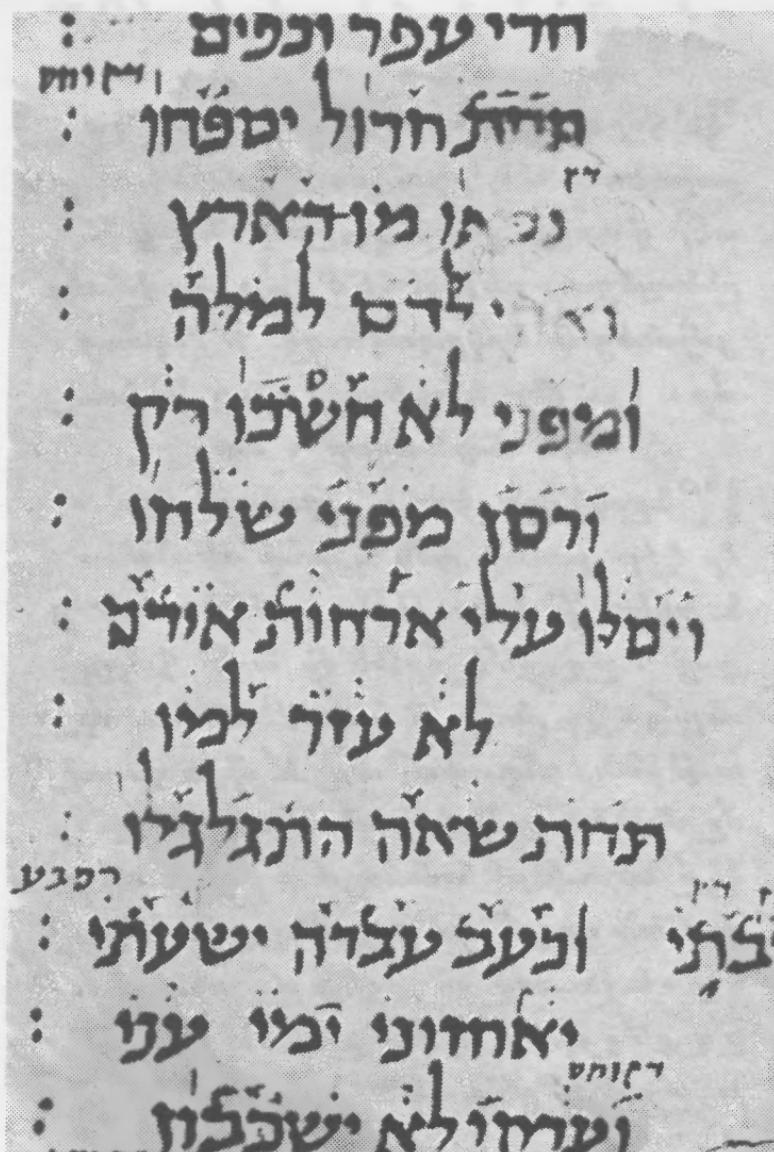


PLATE VII

SIMPLE HEBRAIC BABYLONIAN NOTATION (ca. 6th century?)

Two Hebraic notations of the biblical cantillation existed
prior to the "Tiberian" notation.

Attesting to a severely corrupted musical tradition,
it contained different signs and fewer of them (cf. p. 48).


 Καὶ ὁ θεῖος αἰλούς· ἦ
 πρὸ τοῦ φρέσα ποστοῦ
 ὄρεινος· λαὶ ὑπόρδηθι
 δέ χαράμε + λαὶ ἀπίν
 τησσρ τὸ πώ· λαὶ δ
 κοι μή θη ἔλιξ· οὐδὲ
 γέροντό μοστέλαιτέλαι
 ιερυμάσσταρχίθεο
 τοὺς τὸ πών· λαὶ δέ
 λαὶ πρόστιθεντέλαι
 ειπού· λαὶ δέκι μήθη
 δέ τὸ τὸ πώσκέρη
 λαὶ δέ πωρι ασθητέ
 ιδού λαὶ μαρξ· δέκιρι
 γέρηνη δη τη γη· οὐδὲ
 ιεθαράμφι λέμφτο
 δέ τὸ πώσω οὐτέλαι οἱ
 δέλθοι ποὺ θη· αὖτε
 παρηρηλαὶ λαΐστηναι
 μονθωατηνόδδηκε
 δωδηρί· λαΐσθωατηνό^τ
 δέλθη· δέλθηθετε
 ιραλτούτωποστού

λαὶ οὐθεῖσαλετέλαι
 ιού· λαὶ γηδέλφητέλαι
 θάδητεθωατηνό· οὐδὲ
 στατηνό· λαὶ τὸ πώσρ
 ματίσου· λαὶ δέκιτο
 ασθρηασσυνθετηνό,
 μετηνόγητελαιπολ
 την θησητε· δέλθη
 λαντάμ· λαὶ μεράμ·
 λαὶ μίμα· λαὶ δητη
 λατομάσ· λαὶ δητη
 γηθησητού ται δηση·
 πάσσαι αὐθημητη
 γηστελαιδη πώσρ
 ματίσου τηλαι· ιδού δ
 γημητασσυ· δέλθη
 μάτησητη δη πηόδη
 πασση· οὐ δημηπορη
 θητελαιαποθητη
 σε· δέλθη γητη πάτη
 οὐ πομησθηματηπη
 δησητού πώησαι με
 παμητη· οὐ σαλημη

PLATE VIII

THE FIRST BYZANTINE NOTATION – EKPHONETIC (9th century)

(reserved for the public reading of the Sacred Texts)

This notation contains several signs similar to those of
the "Tiberian" notation (cf. p. 40).

However, to rely on this resemblance to support the claim
that the signs had, in both notations, the same meaning,
was most aleatory (cf. p. 51).

The fact that there are a few similarities between the signs employed by these different notations does not mean they had the identical meanings. Nor does the analogy they may have with certain signs of the ekphonetic notation prove that these notations derive from it, since for the most part they precede it.

Clarifying that the ekphonetic signs are "not without resemblance to the occidental neumes, Dom Sunol and others have shown the weakness of this resemblance and the little reason there is to have Byzantium intervene as a link between Greco-Roman antiquity and the Medieval Occident."²⁸ Yet in principle all of these notations differ from the Greek notation which "ranks" sounds by rational order just as numbers were ranked. The neumatic notations represent them either by suggestive symbols or (even better) **diastematic*** signs. These are the precursors of modern musical notation which perfected this intervallic representation by means of notes and their common support, the staff.

It is truly surprising that such a number of notations of the same type should have appeared almost simultaneously, without really resembling each other. What also amazes us is that the institution of these notations is nowhere mentioned by commentators.²⁹ The novelty of their creation should have brought them flocking to the scene. Yet no one even alludes to them. When the commentaries appeared, says O. Fleisher, they only deplored the inefficiency of the systems in use.³⁰ Fleisher remarks, and rightly so, that it is surprising that the systems appeared and were judged ineffective from the beginning.³¹ But was it the original significance of the signs that was contested? Musical evolution could also have played a role!³²

The resemblance of signs suggests that there is a close relationship between the notations. But can we justify this conclusion seeing the uncertainty of the symbolized meanings? Signs underwent modification through time and geographical location, which explains why these notations remain virtually undeciphered today. So different is the case of the Tiberian notation, the perfection of which is henceforth affirmed. And it is from this solid base that we are able to investigate its history.

The first commentators were there quite early. They had no complaints about the notation (unlike those concerned with other neumatic notations). Nevertheless, they showed themselves to be quite embarrassed about the interrelationships (unknown to them) between the given signs. Moreover, from its first presentation, this notation was adopted *just as it was* without modification. It was totally respected.

Without any doubt, the Tiberian notation—misunderstood, yet adopted—was born on the fringes of sacred service of that period, or even earlier.

**6) WE ARE TOLD THAT THE COMMON SOURCE
OF THE NEUMATIC NOTATIONS
IS IN THE LATIN ACCENT OF PURE SYNTAX.
THE TIBERIAN NOTATION REFUTES THIS HYPOTHESIS;
IT IS ESSENTIALLY MUSICAL**

a) An unfounded statement

If one wishes to believe A. Le Guénan who has painted a particularly tendentious picture on the subject, the neumatic notations derive from the Latin accent. He is not afraid to declare: "Our present neumes are only the pictographical mutation, the *refined reproduction* of two signs which, at the beginning of the Gregorian notation, were borrowed from *Latin grammar*: the acute accent (') and the grave accent (˘)... of grammatical status... fixed to the word as such...and necessary in certain cases for clarification of the meaning."³³ This allegation is all the more serious since he goes on to say: "the truth is that we are brought face to face with an accomplished art, rich in musical substance and rhythmic life, which attained its classical state during the time of St. Gregory (6th century C.E.); having acquired, thanks to the Roman genius, this measure, this logical arrangement, this architectural balance that we are incapable of challenging."³⁴ Obviously, he attaches little importance to music preceding plain-chant. One must concede that he is not alone.

As to the written accent, Le Guénan gives this modest sign a wide range of influence since, according to him, all true music proceeds from it—at least, all music that we know anything about.³⁵ This opinion, even though more shaded, has also been held by other musicologists.

The *etymology* of the word *accent* itself, from *ad cantus*, reveals something else to us, for it designates its proper origin is in song. This is exactly its nature; since the term *ad cantus* means in fact "in the manner of song." This locution does not demonstrate that the accent, highly significant for verbal syntax and grammar, was anterior to song and melody, but rather the opposite.

To relegate to an inflection, a simple verbal nuance, the source of all music represented by neumatic notations—an inflection enlarged little by little (thanks to Roman genius) until it became melody as we know it—is to deny in the same breath all music of antiquity.

b) The history of the Latin accent

Does there exist such a straight line of descent between the accent of the neumatic notations and the verbal accent? We owe it to ourselves to study this pretentious hypothesis. On what is this affirmation really founded which disregards at its base all ancient music? Certainly it is based on the fact that no known musical notation preceded the neumatic, except for the Greek notation (which was different in nature, as we have seen).

When was the birth of the accent—that is, the graphical sign—of verbal character? It seems to have been invented by Aristophanes of Byzantium, three centuries before Christ. This accent, originally of three types—ascending, descending, alternating (circumflex)—permitted the punctuation of numerous Latin poems.

This scenario is quite plausible. And from this strictly verbal practice a particular genre of cantillation must have resulted, described by Cicero as "obscure song."³⁶ Again one must note that it is this resultant music which was judged "obscure" by Cicero. This permits us to think that another kind of music existed then, one which was clearly formulated and owed nothing to the Romans. But let us continue.

Rather coldly received by its contemporaries who were quite capable of dispensing with it (as the tenor of Chapter III explains),³⁷ the accent had only a sporadic evolution in succeeding centuries.

We are grateful for A. Machabey's careful description of this segment of history since (as he himself concedes) few musicologists have taken pains to explain this supposed filiation between the verbal accent and the neumatic notations.³⁸ In the following century (2nd century B.C.E.), Aristarchus of Samothrace resumed and completed the work of his master on the accent. Then it was left to Denis of Thrace (1st century C.E.) to provide a detailed description. Yet there was never any question of its being a musical notation.

A. Machabey deduces from this: "this procedure must have recovered an unexpected favor in the Christian Greek, Syrian, Armenian, Ethiopian, and Hebrew [languages]."³⁹ About the latter

influence, we obviously remain completely skeptical—but also about the others, for the Christian neumatic notations did not appear until much later,⁴⁰ and nothing specifically proves their derivation from a purely vocal syntax.

**c) The Byzantine notations have the same musical foundation
as the Greek and Tiberian notations**

This supposed filiation offers the serious inconvenience of mitigating the "musical" character of the first neumatic notations, making them seem more syntactical than tonal (and this allegation is unverifiable). The biblical cantillation reconstituted with the aid of the signs of Tiberias refutes the idea that this particular notation is of a similar nature. It proves the notation to be essentially "musical."

It appears that the same could have been true for the notation of Byzantium, despite restrictive hypotheses. As R. Verdeil states, "The pictorial configurations of the signs for the 'expressive reading' served as the basis⁴¹ of later notations. The Byzantines constructed their system of chant on the following principle: the neumes do not indicate specific notes but a series of intervals *departing from the first note—tonic, dominant, mediant or whatever (these notes themselves being designated by special key signs⁴²)*—[the phrase then] *ending on the fundamental note of the tonality.*"⁴³

Since the most ancient Byzantine signs served as the basis for those which followed, why should these signs have taken on a musical significance only later? In the light of the notation deciphered here, this would appear a preconceived notion. Thus a correlation—this time constructive—between the Byzantine and Tiberian notations suggests itself. This correlation lies in the fixing of specific, fundamental degrees by special signs, upon which "added notes" (themselves subordinate degrees) are based, and in the conclusion of the melodic phrase on the principal note of the tonality.

This important clarification by R. Verdeil proves that the foundation of the Byzantine notation is neither imprecise nor "atonal," but is strictly musical, as much for this notation as for the Tiberian notation. It is entirely plausible that the melismas translated by the ekphonetic notation, surrendering to later musical fashion then current, would have appeared in ever increasing numbers, being represented by various signs which made their interpretation problematic unless the notated melody

was known beforehand. But that does not keep the cantillation thus notated from being musical by nature (like the cantillation of the Hebrews), and not derived from "obscure chant." It is important to note this.

d) The Tiberian notation seems to be the most ancient

All this links the ekphonetic notation (like the Tiberian notation) with the Greek notation relegated to theoretical study in the schools. It is undeniable fact that the Greek notation was "musical." It is also confirmed that the other two were also musical.

These three notations are based on specific fundamental degrees, members of tonal scales. Each gives prominence to their melismas, which are rather quickly reintegrated to either the note on which the melismas are based (in the Greek and Tiberian notations) or the tonic at the end of the phrase (in the ekphonetic notation)—a principle synonymous with sound music.

On the other hand, the Hebrew notation (as we can assert since we know its meaning today) is distinguished from the Greek notation by its suggestive "figuration" of the musical degrees. It incontestably "speaks" to the eye, either by specific symbols designating a tonal function, or by conventional signs (the majority of them diastematic) indicating added notes. This particularity was the basis for neumatic notations from the very beginning. In contrast the alphabetic Greek notation only presents a graduated "order" of signs (implying a mental tabulation).

This intellectual exercise was rendered all the more necessary in that the alphabetically represented degrees belong to a system englobing seventeen tones embracing every partial scale employed by one mode or another. This means that the reader is required to make an intellectual adjustment in order to assimilate the generalized alphabetical labeling of the degrees to the function of the degrees retained (but not represented), constituting the particular scale fragment in use.

Certainly, by the position of the letters (upright, reclining or reversed), the exact alteration of the degrees was signified by the letters themselves, thus specifying the mode. But this determination requires a certain concentration. On "first sight" these various details, though theoretically valuable, render the reading tedious (in some cases, impossible) by the very complexity they engender (cf. Postface).

Undoubtedly it is from these particularities that the Greek notation, so warmly received by the music schools, derived its decadence.

The admittedly less ambitious Tiberian notation does not pose such inconveniences. Its melismas are more reserved, and the functions of its degrees specified. These correlations allow us to imagine that at least the Greek and Tiberian notations could have been contemporaries, with the Greek system being even more evolved than the Tiberian.

The Greek notation, in fact, specifies the mode and includes rhythmical signs indicating sounds and even rests (used, to be sure, only in certain cases). The Hebraic notation does not indicate the mode; it contains no rhythmical signs. Thus the Hebraic notation most certainly could have been in use several centuries before the destruction of Jerusalem, during the last millennium B.C.E. This is an important augur for the conclusion of this chapter.

**7) WITHOUT ANY NOTATION, THE ANCIENT WORLD
WOULD HAVE ONLY KNOWN OF ORAL TRADITION.
YET THE TIBERIAN NOTATION COULD NOT HAVE BEEN
DERIVED FROM A STRICTLY ORAL SOURCE.**

a) An oral Gregorian tradition is hardly conceivable

Let us not forget, in reviewing the course of history, that the neumatic notations did not appear until several centuries after the Greek notation; and until their emergence, it must be assumed that the Christian monodies (disdaining the Greek notation relegated to theoretical treatises) were orally transmitted. This point does not fail to greatly trouble certain musicologists for there exists, beyond reasonable doubt, a Christian hymnography conceived, so it is said, on ancient cantillation which was in use by the 4th century C.E. (the time of Saint Ephrem of Syria).

We know that the liturgical chants were inventoried by Pope Gregory I in the 6th century. A solely oral means of transmission hardly seems adequate to account for the integrity of the tradition. As A. Machabey queried, "How was the enormous repertoire" (note his emphasis) "of liturgical melodies transmitted up to that period (the 7th century, when the ekphonetic notation first appeared)? By oral tradition (which presupposes an astonishing memory on the part of the clerics). . .?"⁴⁴

**b) It is impossible that an oral tradition
could result in the Tiberian notation**

Concerning the idea of a musical tradition capable of leading up to the Tiberian notation, we will be even more categorical: it could not have been strictly oral. Its perfect preservation—such as it appears to us now—formally contradicts this idea. Such an occurrence would be far too miraculous. It could not have been transmitted "from mouth to ear" in its entirety by a handful of initiates for numerous generations, and thus jauntily traverse the centuries. That would simply be impossible. Either this notation is the work of the Masters of Tiberias, in which case it is not the genuine Tradition. But if so, why did they not reveal its real *musical* meaning? Or else it actually does represent this Tradition.

It is true that this cantillation was comprised of preformulated meanings and that these meanings had names many centuries old. But if these meanings simply possessed names, how would they have been able to bridge the generations, maintaining the extraordinary precision pictographically fixed by the Masters of Tiberias, and which verifies as being exact? (We will formally present the proofs of this in the course of separate studies of the two accent systems.) This precision is especially notable for the signs which only affect the *end* of a syllable, for if one does not respect the exact position of a sign, the resultant melody (as we shall see) becomes distorted. And how could anyone memorize such a quantity of minutia which were no longer used?

When one reads the biblical text, he does not name, syllable by syllable, the musical meanings which help to inflect it. How then could anyone define with precision that this or that musical meaning was intended for a particular vowel rather than one preceding it?

By what miracle then could an oral tradition, faltering so very early in transmitting the melodic configuration (as we have observed),⁴⁵ have been able to receive and transmit such careful detail, indispensable for the perfect realization of a music unknown to it? Detail, moreover, which would prove embarrassing simply because the tradition could not justify their existence. This cantillation could not have been transmitted by mouth. The Bible is too long and its entire text is musically annotated.

Obviously there existed another means of transmission.⁴⁶ Without presuming that it really was this other means which the meticulous scholars of Tiberias used to finally notate the ancestral meanings whose meaning had been lost, it is still important to examine this method of notation and of transmission of music. While it may be an outdated means, this does not justify the deep silence surrounding it.

NOTES

¹ Cf. PART TWO, Book I, Chap. 3.

² Cf. Supplements I and II.

³ The details of this relationship will be subsequently explained.

⁴ Cf. Introduction II.

⁵ Tiberias was the site of several other schools in earlier centuries.

⁶ With the exception of certain consonants serving as *matres lectionis*.

⁷ "Truly, the Masoretes were numerous, generation after generation, during many long years. No one knows today the exact period in which they began their work, neither the date they finished it." G.E. Weil, *Elie Levita*, op. cit., p. 343.

⁸ Cf. p. 104.

⁹ This rule does not apply to the Masoretic Codex, intended for the preparation of synagogue reading and never used in public performance (this is a significant point).

¹⁰ "Ezra put into written form everything relating to the vowels and accents... It is understood that we are only speaking of the configurations and the names of the vowels and accents, since the vocalization and accentuation were orally taught and were given to Moses on Sinai." *Manuel du Lecteur* [Reader's Manual], an anonymous work written well before the 18th century, reproduced and translated into French by Jules Derenbourg in the *Journal Asiatique* (1870), p. 467.

¹¹ Responding to the affirmation of *Ga'on Mar Natronay* that the cantillation signs were revealed on Sinai: "It was the meaning of the neumes which was revealed to Moses on Sinai, but the form of the symbols is the work of the scribes." Anonymous commentator in the *Mahzor Vitry*, compiled by Rabbi Simha de Vitry, ca. 1100 C.E. (cited by G.E. Weil, *Elie Levita*, p. 332). Cf. p. 145.

¹² *Manuel du Lecteur*, op. cit., p. 476.

¹³ "At any rate, the Tiberian interpunctuations do not resemble ours, and neither of the two resemble the interpunctuations used in the land of Israel." *Mahzor Vitry*, loc. cit. (cf. G.E. Weil, *Elie Levita*, p. 332; and also I. Adler, "Musique Juive," in *Encyclopédie de la Musique*, Vol. I (Fasquelle, Paris, 1961), p. 647. [It would be well to keep this statement in mind; the other notations referred to are very likely the Babylonian and Palestinian notations discussed later in the chapter.—Ed.]

¹⁴ This is a point of view which is not shared by everyone, seeing it is a tradition. Cf. p. 104.

¹⁵ According to certain Hebrew specialists ל is not part of the early Babylonian notation; according to others, this sign is definitely included. Cf. P. Kahle, *Massoreten des Ostens* (Hildesheim, 1966), plate 3.

¹⁶ That is, the divisions of the sense.

¹⁷ No contemporary commentator mentions it.

¹⁸ These are the *serugin*. According to G. E. Weil, the *serugin* are mentioned in the Babylonian Talmud (*Yome* 38a, *Gittin* 60a). [Besides the Palestinian texts mentioned by Haïk-Vantoura, some Tiberian mss. found in the Cairo Geniza are written in the form of *serugin*; cf. Israel Yeivin, *Introduction to the Tiberian Masorah*, trans. and ed. by E.J. Revell (Scholars Press, 1980), pp. 10-11.—Ed.]

¹⁹ Cf. C. Hoeg, *Notation Ekphonétique*, Vol. I., fasc. II (Copenhagen, 1935), p. 108.

²⁰ According to the chart by R. Verdeil, "Musique byzantine," *Larousse de la musique*. Vol. I (Paris: Larousse, 1957), p. 143.

²¹ This notation, considered to be "more musical," was also used in Byzantium from the 10th century on, but its use persisted for several centuries; it is less abstruse.

²² C. Hoeg, *Notation Ekphonétique*, op. cit., Vol. I, fasc. II, p. 5ff and especially p. 19.

²³ "For each group the scribe had added a little melodic motive in proper musical notation. Unfortunately, the notation employed is what is called 'Paleobyzantine,' which only tells us again that these signs do not have a precise intervallic significance." C. Hoeg, op. cit., p. 22.

²⁴ One should remember that our solmization today still uses letters to represent the successive notes of the scale: A, B, C, D, E, F and G.

²⁵ O. Tiby, "Notation musicale des Grecs," in *Histoire de la Musique* (Paris: Gallimard, 1960), p. 401.

²⁶ O. Tiby, op. cit., p. 402.

²⁷ "The scribes which, from century to century, transcribed and thereby transmitted the literary part of their lyric productions, were ignorant of the musical significance of the letters (already by the end of antiquity), and

neglected to recopy them." R. Braggard, "Notation de la musique Grecque," in *Larousse de la Musique*, Vol. I (Paris: Larousse, 1957), p. 411.

²⁸ M. Pincherie, *Histoire illustrée de la Musique* (Paris: Gallimard, 1959), p. 217, note 4.

²⁹ We have already noted that the appearance of such notation was no better remarked in Palestine (cf. p. 49).

³⁰ O. Fleisher, *Neumen-Studien* (Leipzig, 1895), p. 25.

³¹ Loc. cit.

³² There is no trace of contrary opinion in Palestine. It is true that the tradition was still rigorously observed there, yet only so far as exegesis was concerned. (Cf. p. 48.)

³³ Le Guénnant, "Le chant Gregorien," in *La Musique des origines à nos jours* (Paris: Larousse, 1946), p. 102.

³⁴ Op. cit., p. 83.

³⁵ It obviously had precursors since "around 850 C.E., Aurelian of Rome defined the science of the 'Harmonic' as that which distinguishes the grave accent and the acute accent in sound. He gives an example of this, but unnotated, taken from Gregorian chant." A. Machabey, *La Notation Musicale* (Paris, 1960), p. 49.

³⁶ A. Machabey, op. cit., p. 29.

³⁷ Cf. p. 98.

³⁸ A. Machabey, op. cit., pp. 28-29.

³⁹ Cf. op. cit., p. 29.

⁴⁰ Cf. p. 76.

⁴¹ Our emphasis.

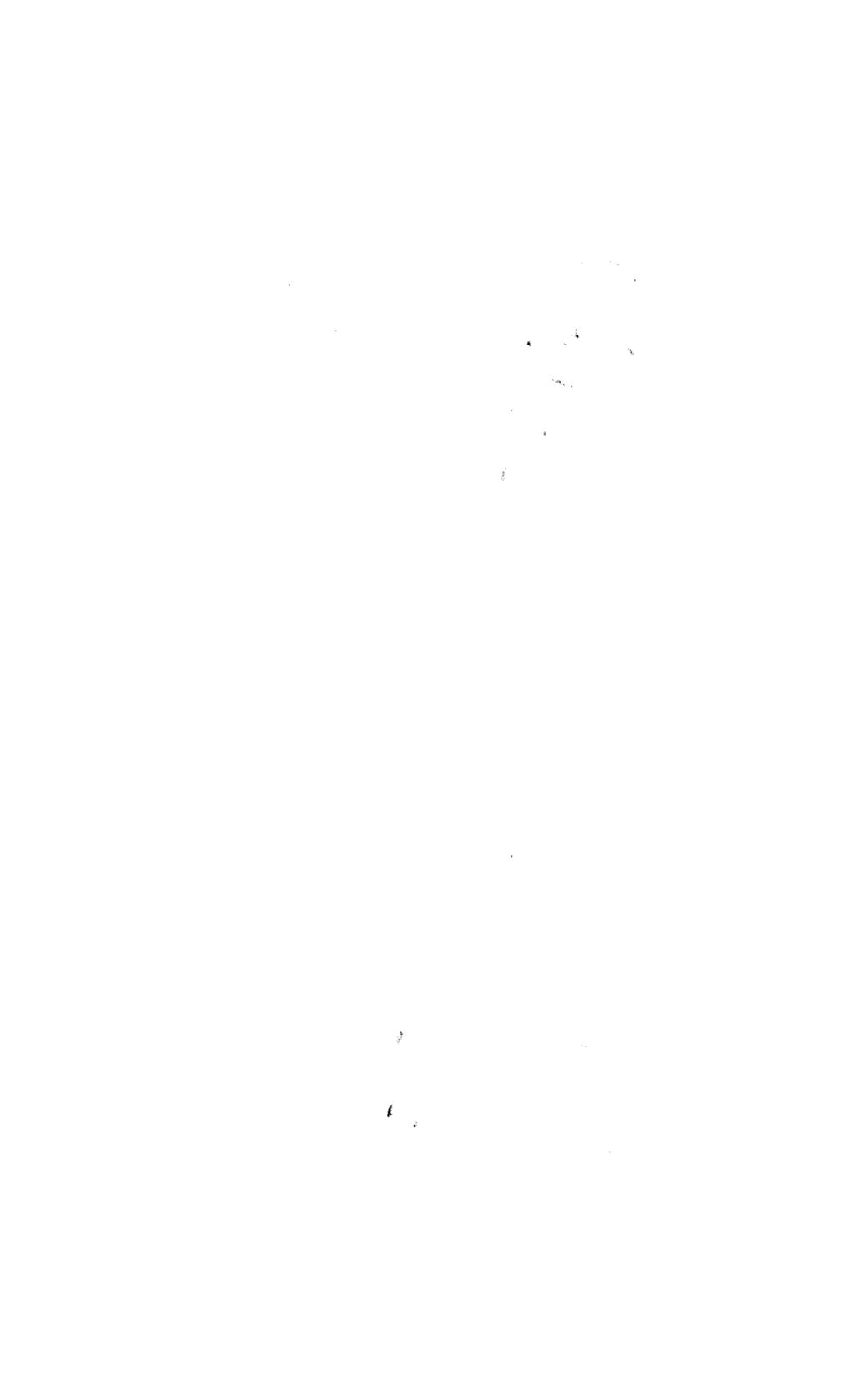
⁴² These key signs [*martyries* in the original French] are placed to the left of the text; they represent degrees of a given mode, points of departure of a musical phrase. The signs within the text represent intervals subordinated to the key signs. Actually, we are not so far away from the distinction which affirms itself, in our deciphering, between the signs above and below the letters (cf. p. 48).

⁴³ The "fundamental note" upon which the phrase ends is the principal note or tonic of the mode. R. Verdeil, "La Musique Byzantine", in *Larousse de la Musique*, Vol. I (Paris: Larousse, 1957), p. 143.

⁴⁴ A. Machabey, op. cit., p. 32.

⁴⁵ Let us remember there are varying traditional interpretations (cf. p. 68).

⁴⁶ This other "means" was chironomy, which we will discuss in the next chapter.



CHAPTER III

CHIRONOMY: THE ANSWER TO THE NEUMATIC NOTATIONS

The Principle of Chironomy Clearly Accounts for the Features of the Tiberian Notation and the Conformation of the Reconstituted Music

— Summary —

- 1) Already in use three thousand years before Christ, chironomy is still practiced today 70
- 2) The neumatic notations and the Latin accent were derived from chironomy at the beginning of the Christian era 81
- 3) Chironomy in antiquity was efficacious; the Tiberian notation is an unexpected, indirect witness to this fact 85
- 4) In fact, it seems that a specific kind of chironomy may have been the source of the Tiberian notation; two-handed gestures can clearly express the music concealed in this notation 87
- 5) The reconstituted monody also carries the imprint of formal restraint imposed upon it, permitting a precise, intelligible gestural system 89
- 6) We have proof that the Hebrews practiced chironomy for the biblical chronicles themselves (later misunderstood) specify its use 90

**1) ALREADY IN USE
THREE THOUSAND YEARS BEFORE CHRIST,
CHIRONOMY IS STILL PRACTICED TODAY**

a) What is chironomy?

Fortunately many things become clearer because of chironomy. But what is chironomy? There are few persons today who realize that for numerous centuries (for several millennia, in fact), music was represented and transmitted by gestures instead of (or despite the existence of) musical notations. Chironomy is the art of representing music by means of gestures and was a common practice among ancient peoples. It is a word often vainly sought in a dictionary of music; and, if one finds it there, it does not always indicate the primordial role chironomy played in ancient music. Nevertheless, chironomy reigned over the musical world before our era, and even into the Middle Ages.

Did you know that it is still used today by certain religious communities, Jewish as well as Christian, the latter including Coptic communities and Gregorian chant schools? Of course, these are only vestiges.

There is a regrettable void in music history due to neglecting the mention of this practice. Outdated it may be, but it had a direct influence over music for centuries; and, if one takes this practice into account, it answers a number of questions concerning ancient music as well as that of the Middle Ages.

Concerning our particular subject, this lapse must be rectified if we wish to clear up this seemingly unsolvable mystery, i.e., how could such subtle music have been performed, then transmitted from generation to generation, until it was fixed in this notation (the meaning of which was apparently unknown to its very promoters)?

We have looked at the historical records and they seem to be without an answer. But following this clue, the threads reweave and the elements of a reconstituted history finally come together. It is not wasted effort to enumerate them here.

b) The chironomy of pharaonic Egypt

It is a boon for history that the Egyptians were preoccupied with depicting for eternity musical scenes of the pharaohs' lives, without failing to note the use of chironomy. There are numerous testimonies of its use, the most ancient dating back three thousand years before our era. Besides the writings mentioning this practice, such as the *Hymn of the Nile* ("the men sing to you with the hand"),¹ there are portrayals of instrumental ensembles, as amply documented by the glyphs of the pharaonic tombs.

There is no doubt the Egyptians considered chironomy indispensable for the proper ritual of entertainment consecrated to the pleasure of the upper class of the Empire, since they employed this visual musical figuration. The pictured scenes call attention to this practice, for which popular music undoubtedly used a less-scholarly version.

There was the costly necessity of having one chironomer² for each instrumentalist, as shown by many scenes. Without there being the objective of precision in diversity, these mute collaborators would have been just useless "walk-ons." We will return to this fact (p. 86), all the more important in light of their individual gestures, proving the intricacy of this method.³ Besides, it bears witness to non-empirical **heterophony*** practiced in that far distant epoch.

H. Hickmann has devoted himself to revealing the scope of this practice in Egypt, where he believes it originated. He affirms it never ceased to exist under the pharaohs, even during the period of the Low Empire.⁴ He set out to decipher the enigma of the gestural figuration, which was accompanied by a few hieroglyphics (some evocative, others undecipherable). This is a problematic undertaking (as he himself agrees), and ultimately destined to be unsuccessful, seeing the limited number of scenes of this type which "fix," as if frozen in time, the harmony incident to the parts of music nowhere formulated in its entirety, and without the support of an accompanying text.

c) The chironomy of Greece

It is not only Egypt that used, for lack of a (known) notation (or in spite of one relegated to the past), this means of musical figuration: a *summary* procedure, barring proof to the contrary. From earliest antiquity India made use of it; some indications of this have come down

to us.⁵ Closer to us yet, ancient Greece, the cradle of our civilization, made use of this common practice and its use persisted during the Roman domination.⁶ Dance, war and music each had its particular chironomy. It was also used in theater to convey the sentiments expressed by the actors' words.⁷ It replaced reading as private entertainment. Xenophon (4th century B.C.E.) recounts employing it upon returning home in order to evoke dance.⁸ This symbolic practice, of which *mime* is a vestige, has totally disappeared from our customs; but at the end of antiquity, it was fully developed.

In Greece, as in Egypt, music therefore had its own particular chironomy. From what we know about it, it could not have been a mnemonic device, comparable in this aspect to the notations of the Middle Ages. There is every reason to think that it was a very precise notation. According to pseudo-Cyrill and Pollus, it was a veritable "dance of the hands."⁹ Nor would it have consisted of vague formulae. It is surprising to learn that Plato defined music itself as "the art of guiding the singers of a chorale."¹⁰ In order to make this comparison, he had to establish a total equivalence between music and chironomy.

O. Fleischer, to whom we owe the thorough examination of this practice throughout the ages, remarked that it was unquestionably impossible to have the artistic collaboration of the choirs of that period without a director to guide the total ensemble by means of visible signs.¹¹ It is from this viewpoint that we must consider the chironomy practiced in ancient Greece.

d) Ancient chironomy could have taken the place of notation

The details that we have just given do not substantially enrich our understanding of ancient music. Nevertheless, they give us a particularly important view of it, because it is exact. To omit these details is to deprive ancient music of part of its life and, if new details appear, to risk depriving them their legitimate place. This is exactly what has caused our torment!

Compartmentalization of knowledge is dangerous; we understand this today. Certainly it favors specialized, deep analysis, but it has the disadvantage of depriving the given subject of certain apparently secondary facts, thus suppressing the links which unite them all the while masking the basic truths concerning the subject.

In ancient Pharaonic Egypt, each instrumentalist in a large musical ensemble had his own chironomer, proving that the melody was supported by a "harmonic base," even if it was light.

Two important testimonies of what could have been this "dance of the hands," ancient chironomy, which the Bible itself mentions.



PLATE IX
MURAL IN RELIEF
FROM THE TOMB OF NENCHETKAI OF THE 5TH DYNASTY
(c. 2700 B.C.E.) —Cairo Museum

The chironomers are indicating identical hand-signs; thus, the musicians are playing "in unison" (cf. p. 86).



PLATE X

SCENE OF EGYPTIAN MUSIC UNDER THE OLD EMPIRE

Painting in a mastaba — M. de Leyde

The chironomers are indicating different hand-signs; thus, the musicians are playing a "chord" (cf. p. 86).



PLATE XI
TOMB—ETRUSCAN ART
6th century B.C.E. —Photo Lauros-Giraudon

This couple is performing a gesture with the right hand: the index finger extended, the fourth and fifth fingers curled back (the position of the wife's left hand is equally characteristic). There is no doubt that this is a scene of musical chironomy; the "inward" look of the two deceased suggests the reminiscence of a sweet melody.

**PLATE XII****GODDESS AND MUSICIAN**

7th century B.C.E.—Photo Olle Verlag

Fragment of a mural—Kyzyl—Chinese Turkestan
Berlin Museum

The musician is "reading" the melody dictated to him by the significant positions of the fingers of both hands of the goddess. The same suggestive expression is on both faces. Here is a vestige, a thousand years distant, of an explicit, traditional chironomy in Eastern Asia (cf. p. 80).

Consider the evolution of occidental art music. If we disregard the undeniable amelioration of notation, achieved several centuries beforehand, it is inexplicable! It could not have attained such precision in complexity! What little we know about ancient music is largely through a few commentaries and the explanations in treatises. In eliminating the ancient practice of chironomy from music history, we make it more obscure and impenetrable. This is because we were inclined to believe its reputation overrated. It is difficult in the matter of musical art to have complete confidence in a "non-fixed" tradition.

But the truth is completely different. Ancient chironomy—especially that of the Egyptians and Greeks—substituted for written notation. The definition of Plato, assimilating it to music itself, proves this. The visual gestures of the choirmaster were undoubtedly called "music," just as we call "music" today the piece of paper filled with notes on a music stand!

Many musicologists have thought it correct to separate chironomy from music history because it was only a gestural practice, even though it was linked with music. It has been said that chironomy was a consequence of philology. It is nonetheless true, barring proof to the contrary, that these hand-signs fulfilled the same function as our pictographical signs and that, at a certain epoch, they must have influenced music just as our modern notation has modified music in Western Europe.

We are cognizant that music in other regions of the globe, deprived of this powerful means, has not at all evolved in the same way. Without chironomy, ancient music would not have been what it was—even if we do not know what it was actually like! In passing over this practice in silence or mentioning it with only a brief word without entering into what little is known about the subject, eminent musicologists have deprived music history of an element capable of explaining ancient music and giving it its proper value.

Not everyone has observed such stolid silence.¹² Specialists like A. Schaeffner mention it.¹³ But to understand chironomy, one must begin with **ethnomusicology,*** and those interested in musical art do not generally take up that special route.

If chironomy had been but a paltry aid to musical art, why would the great theorist Aristoxenes of Taranto—called the "father of music" by his contemporaries—have declared that notation was not worth studying? He would have pointed out the weaknesses of the notation, exerting

himself to find a remedy. In the absence of an efficient system of gestures, any notation, even an imperfect one, is progress over a tradition based only upon aural memory.

This quip of a perspicacious theorist beautifully confirms that chironomy in its time held the same role as notation did later. To forget it when speaking of ancient music, is tantamount to concealing it, or when seeking the origin of medieval notations, to distorting the comprehension of what their real sources were.

For not only our vision of ancient music is distorted, but also that of the music of the Middle Ages, since it was believed to have been born of itself, having no other source but the verbal accent, from which alone it would have drawn all music (cf. p. 59).

e) The use of chironomy persisted during the Middle Ages

That the link does not immediately appear between ancient chironomy and what we generally know of the history of medieval music will not be a surprise, since what was connected with the practice, especially in antiquity, has been ignored by music history. The practice of chironomy took root, however, and persisted for long centuries, even when neumatic notations were sufficiently developed to supplant it and the use of the music staff became generalized.

Throughout all the Middle Ages, chironomy continued to be practiced by the Greek Church. Pictographical signs emerged here and there, but chironomy remained. These two forms of musical representation went so well together as a pair that the origins of the one were lost in the continuance of the other.

At the end of the Middle Ages, reports O. Fleischer,¹⁴ the Greeks still rarely chanted from their pulpit books and directed music even less from transcribed notes. He quotes, in substance: "During the chant, which they know more or less from having learned it by use, they utilize various movements of the right hand." He also states that this gestural practice is called "chironomy." For that period we know it was associated with musical notation. It differs in this, perhaps, from the chironomy of the ancients, but it remains the prolongation of it.

Paralleling the notations, in fact, were *tables of graphical signs* reproducing the gestural figures in use, such as that of John of Damascus (8th century), who actually put into written form the signs used by the Greek liturgy of his time.¹⁵ He states that he himself did not create

these signs and attributes their invention (from lack of more abundant information, no doubt) to Ptolemy (2nd century C.E.).¹⁶ This affirmation connects us with antiquity, proving the continuity of this practice over the centuries.

Unlike the neumes of Christianity, chironomy remained in use, as witnessed by a mural painting dating from the 7th century and found in Chinese Turkestan. I have had the privilege of being allowed to examine a reproduction of this "Goddess and Musician."¹⁷ The musician instrumentally reproduces the melody indicated to him by the reserved, careful gestures of both hands of the goddess. A living, vibrant practice, if we can judge by the captivated expression of the two personages (this aspect never seems to have been noticed).

As first-class documentation for this subject, we may note that the Jews themselves have made use of chironomy down through the ages. It is mentioned in the Talmud (its redaction was completed at the beginning of the 6th century). The grammarian Aaron ben Asher (mentioned in the last chapter) evokes it in relation to the traditional cantillation. The anonymous work called the *Manuel du Lecteur*, appearing shortly after him (cf. p. 47), gives important details (which will be seen in the following chapter), confirming the use of the gestural figuration of the notational signs that we are studying. The famous Rashi¹⁸ expresses himself clearly in his biblical commentaries concerning chironomy, affirming that the right hand is sacred because it enables the punctuation of the sacred text.¹⁹ The Jews of Yemen were still using chironomy in the 19th century, reported Rabbi J. Sappir (who also discovered in that country, around 1850, the *Manuel* we just mentioned). Finally, in our day, we have students from North African communities, recently arrived at the rabbinical school of Paris, accompanying their chanting of the musical accents of the Bible with corresponding hand movements.

We see that certain chironomical practices, from the Middle Ages on, are parallel with notation. They add nothing to history, but are merely a "vestige." But other chironomies during the Middle Ages and antiquity dictated or preceded neumatic notations. Instead of neglecting their role in the elaboration of these notations, we must increasingly take them into consideration.

**2) THE NEUMATIC NOTATIONS AND
THE LATIN ACCENT
WERE DERIVED FROM CHIRONOMY
AT THE BEGINNING OF THE CHRISTIAN ERA**

**a) Chironomy cannot be defined as
a "phenomenon paralleling the accent"**

How could J. Combarieu—whose remarkable, masterfully written *Histoire de la Musique* is a valuable source of information—have given the false notion of the place of chironomy in the phenomenon of the birth of the neumatic notations? It is hardly understandable. Yet he states that "the idea of chironomy (a kind of silent language in which the hand replaces words by gestures) interposing itself in order to *explain the graphical accent*²⁰ is a useless idea?"²¹

Why useless? (His remark only applies to chironomy in the Middle Ages.) The gesture, in historical reality, was not necessarily "interposed" in order to *explain* the graphical accent; it was able to *motivate* it, being its promoter. It was the originator of the written accent, and that is altogether different. He adds, "Mr. O. Fleischer attaches a great importance to philological research in a question where philology is very dangerous." This viewpoint is erroneous. If a philological contribution must intervene in order to legitimatize the appearance of notations arising in inexplicable circumstances, let us welcome philology! He concludes, "one cannot deny that originally the teacher had his students chant the inflections of the voice to hand indications, as today; but the gesture must be considered as a phenomenon *parallel* to the accent and not as the model for which the accent would be the pictographical image." This is his own special viewpoint and it is incorrect.

This particular position is regrettable, for it warps the judgment. There was a time when chironomy stood for real notation; it marked the music of an epoch, at least in certain regions. And from this practice—forgotten, but not devoid of efficacy while it yet existed—are derived, of necessity, the graphical signs: simple transcriptions, in this first manifestation, of the gestures which they suggested. Far from being negligible or undesirable, this research—of scientific order, since it is based on citation of the period and not upon suppositions—gives a far more exact picture than that which makes the classical medieval notation and music derive from a summary inflection of the voice marking the

meaning of a word, and of the sign (or rather, the corresponding gesture which the sign evokes) indicating the grave or acute accent. (Cf. p. 60.)

b) It is a proven fact that chironomy preceded recent neumatic notations

John of Damascus clearly states that he was not the inventor of the graphical signs figuring in his chironomical tables. He referred to Ptolemy, six centuries earlier. Even if chironomy was not born until the time of Ptolemy, it would already be older than the earliest known neumatic notations. The point he makes is that chironomy is like a *bridge* which leads us back to ancient music practices, for in the 2nd century C.E.. Greek civilization ruled over the dominating Roman Empire, which had adopted it. We are now aware of the general role played by chironomy in ancient Greece since it was in use long before the Roman conquest. We can legitimately see it as the source of certain neumatic notations, those born in distant countries as well as those around the Mediterranean basin.

Interestingly, the etymology itself of neumatic notation confirms this. *Neuma* in Greek signifies "figure," meaning the gestures employed by the director of the chorus. The Latin accent graphically imitated this gesture to syntactical ends; thus its own etymology, *ad cantus*, "in the manner of singing."

Embarrassed musicologists have simply avoided the subject. Rare are the scholars who mention chironomy, even by simple allusion, as concerning ancient music. What is the good of discussing a forgotten practice connected with "lost music?" J. Combarieu is among them, so it seemed natural to conclude with him that, although chironomy may be ancient, it was really not "developed" until the graphical signs arose in the Middle Ages, thus making it only support the notation. We have discovered that it is completely otherwise.

Certain scholars are stubborn in their pursuit of truth. O. Fleischer²² has dedicated himself to describing the role played by chironomy in the elaboration of neumatic notations in his work *Neumen-studien*.²³ A specialist in research concerning the first Byzantine notation, C. Hoeg, who has compared and attempted to decipher quantities of manuscripts (we have cited him earlier), renders homage to O. Fleischer's works: "This eminent musicologist is the first to

fully comprehend the character of this notation, to which he has devoted several impressive and lucid pages of his *Neumen-studien*.²⁴ This persuasive conclusion comes from a researcher fully knowledgeable in the subject himself.²⁵

We also recognize that A. Machabey mentions chironomy as the source for the Armenian and ekphonetic notations, yet without renouncing the Latin accent! A most curious concession, and highly unusual.²⁶ Was he not aware of Plato's definition? (Cf. p. 72.)

Based on what we know about the Tiberian notation today, the historical accounts marking the appearance of the neumatic notations no longer surprise us. Let us remember from the 4th century on, different systems of neumatic notations appeared here and there, with or without similar signs. Knowing of the persisting practice of chironomy in that epoch, it seems highly probable that their correlations and divergences have their origins in gestural figures, locally and variously interpreted. In other words, there was a generalized, non-standardized usage of chironomy.

Not one historian living at the time of the birth of any one of these notations thought it necessary to mention the mutation of the ancestral gestures (known to all) into graphical signs. To what good? This silence was justified by the simple correlation that this pictographical representation constituted regarding a deeply rooted practice.

On the other hand, it is only natural if certain persons are alarmed by the low efficacy of these notations, since they only set forth practices that, for the most part, had become empirical, seeing the complications that the evolution of music had provoked.

c) Melodic expansion at the beginning of the Christian era gradually made chironomy inefficient

A striking fact confirms that, the formulation of melody must have really posed serious problems for medieval chironomers. The importance of the table of chironomical signs of John of Damascus is proof. It contains no less than thirty-eight "principal" signs, the majority of which have complicated forms.²⁷ Occidental neumes also presented the same inconveniences.

It is clear that gestural figuration became *impotent*. Greek melody, at least that which motivated the alphabetical notation so quickly abandoned, was characterized by its simplicity. The relevant texts of the

classical period prove this to us, as do the few extant manuscripts. The basic notes constituting monody based on syllabic articulation were interspersed with only short melismas, three notes long at the most.²⁸ A chironomy adapted to this kind of music is highly plausible, since it could be explicit. But the profound transformations that melody underwent during the succeeding centuries slowly rendered this kind of representation ineffective.

Already in a time of "decadence," particularly in effect since Alexander (330 B.C.E.), how could gestures continue to represent minute chromatic nuances which were gradually added to the healthy melody of yore, so lauded by the philosophers? Theoretically, the octave was divided into some fifty degrees, differentiated by various positions of the graphical signs of the notation (cf. p. 62); but could manual gestures retain their precision? Before such a plethora it is justifiable that Aristophanes of Byzantium (same epoch) dreamed about disengaging song—which had customarily supported poetry from earliest times as one body with melody—from these rapidly multiplying formulations which were too refined to efficiently serve the verbal syntax.

Enharmony* was reigning²⁹ and persisted long afterwards, along with an exaggerated **chromaticism*** which was repudiated (as will be seen) by religious authorities, as concerning the worship service (cf. p. 141). But on the other hand, the **vocalise*** was flowering. A. Gastoue reports that "the new Greek hymns of the 2nd and 3rd centuries united the purity of antique modes with melodic groups on the same syllable, a device which ancient Greeks never employed."³⁰ They were not just simple melismas as in our reconstituted cantillation. In the 5th century Jean Cassien, a monk from Marseilles, indicated that "the hermits of Egypt added rather long vocalises to certain **antiphons***".³¹ These vocalises continued to develop in Byzantium until about the 8th century.³²

One can better understand that the pictographical signs, appearing here and there, gradually were transformed and *complicated* in order to keep up with this melodic expansion. How was it possible to represent through particular gestures these sinuous contours, varied and rapid, evolving more and more upon the same syllable! Chironomy could never have presumed to accomplish such a feat.

It is no longer surprising then that neumatic notations should prove to be inefficient. (Whether or not they derived from gestures, they were still connected to them; gestures and notation formed one system to its

users.) But could it be the same for the chironomy for the reading of the Scriptures by the Hebrews? Nothing leads us to believe this. It must have been exempt from all transformation, especially in the direction of greater complexity. Knowing the scruples behind this tradition (unless, of course, the tradition was really not the master of its own preservation),³³ we are convinced the gestural figures inherited from the past had not proliferated.

Furthermore, this is proven by the two Hebraic notations already mentioned (cf. p. 49); they actually contain very few signs. Moreover, even though the Tiberian notation contains more signs, let us not forget it was recognized as being conformed to the *real* Tradition, and that it is a perfectly lucid notation.

**3) CHIRONOMY IN ANTIQUITY WAS EFFICACIOUS;
THE TIBERIAN NOTATION
IS AN UNEXPECTED, INDIRECT WITNESS TO THAT FACT**

**a) Ignorance leads to underestimation of the eulogistic reports
by the ancient Greeks about the music of their time**

Those who presume to see in the accent, sign of verbal syntax, the origin for neumatic notations and Gregorian monody, deny at the same time the possible influence and thus, the very existence of any ancient music of value. And yet documents abound which prove there was a flourishing musical life in antiquity, notably in Greece. Various specific vocal forms, accompanied instrumentally, were popular as early as the 9th century B.C.E. They originated in the Near East. Instrumental solos and duets gave rise to the classical period of the 6th and 5th centuries B.C.E., with its famous and memorable contests.

It is not progress that marks the last centuries prior to our era, but decadence. "The great forms [of music] are reduced, the purity of the [melodic] line deteriorates, the rhythms become complicated."³⁴ (Plutarch places the beginning of this decadence in the middle of the 5th century.)

And yet, in the 4th century, Aristotle still can observe the expressive qualities of this music, about which *ethos* was the primary characteristic (a quality which escapes many among us, but which our restitutions masterfully illustrate). "Whenever the nature of the modes begins to vary," he states, "the impressions of the listeners change with each

[variation] and follows them.³⁵ This is a finesse of syntax which is hardly the primary characteristic of Gregorian monody and consequently was contested in ancient music. Plain-chant, being of another era, shines with different luster.

b) Why could not Greece and other ancient nations have benefited from a "musical art" aided by a chironomy specifically adapted to it?

Tending particularly to be expressive, ancient cantillation, in its sobriety of melodic contours, must have found in chironomy its facile representation. The Greeks speak of a precise figuration (cf. p. 72). Each musical note therefore was translated by a specific gesture.³⁶ (Here we are far from a gestural *aide-mémoire* dictated by melodic proliferations.) The fact that Aristoxenes of Taranto chose to neglect notation is proof of the efficacy of this "dance of the hands" (cf. p. 79), as is the comparison by Plato.

The Greeks were not alone in possessing systems of such precision. The Egyptian chironomical representations also show us that both hands collaborated. For them as well, each gestural figure had to represent just one sound. This deduction comes from their depicted musical scenes: the chironomers (one per instrumentalist) produce the identical gestures in certain scenes and dissimilar gestures in others.³⁷ Identical gestures indicate a unison; differing gestures correspond to differing notes for, in the case of dissimilar gestures, if they represented different melismas, imprecision, even chaos would result!

H. Hickmann informs us that this intelligent representation of one sound in relation to others, by a specific gesture, was also the rule for Vedic vocal music of ancient India.³⁸ Today, we better understand the musical necessity of maintaining established norms. Within these limits music could be explicitly clear and thus legitimize the eulogistic comments which have come down to us from Greece and elsewhere.

c) Does the deciphered Tiberian notation, in the light of the music it unveils, give us an example of such an art?

It becomes apparent from all these facts that music underwent fluctuations instead of progressing by slow ascent and Gregorian music may not have been the starting point, but rather a recovery (following a change in direction). To "rehabilitate" ancient music is an undertaking worth the effort. Nevertheless, I never would have attempted this written "rehabilitation" if it were not necessary in order to explain the kind of music that we have seen reborn by means of the Tiberian notation which supports it.

Inexplicable in the circumscribed orbit of conventional history, this reconstructed cantillation finally is given its place in a proportional context. In antiquity, this music must have had its own kind of chironomy. But if that were true we would suddenly have before our eyes the invaluable example of what could be ancient chironomy (at least one form of it). And this unexpected fact would permit us to explore just how the specialized gestures could explicitly translate music constituted according to the rules of art of its time. We know that these rules were rigorously respected (cf. Introduction II) by the renewed flux of creators, and for good reason: it was indispensable to observe the norms in order to channel the message? We are cognizant of the unsuccessful adventure of the chironomy accompanying occidental medieval Christian monody. It was reduced to the repudiated rank of a "memory device" because of its inefficacy.

Let us closely examine the Tiberian notation, the receptacle of this gestural tradition for it should be carrying the imprint of this indispensable discipline.

**4) IN FACT, IT SEEMS THAT
A SPECIFIC KIND OF CHIRONOMY COULD HAVE BEEN
THE SOURCE OF THE TIBERIAN NOTATION.**

It would really be child's play to reconstitute a workable chironomy as the basis for the Tiberian notation. But who would ever dream of doing it?³⁹ However, let us imagine what it was like. The cooperation of both hands is required (which is notably the case for the chironomy of Egypt, Greece and Vedic India).

The left hand then (we select the left hand since Rashi stated that the right hand punctuated the text) represents the lower signs, being the seven or eight fundamental notes of the unique scale of the psalmodic or prosodic systems:

	6	7		1	2	3	4	5	6
prosodic:		/			/	\	^	^-	<
psalmodic:		v			/	\	^	^-	<

A little experimentation would quickly furnish figures sufficiently different from each other so that they would not be confused by the attentive eye of the singer or emulator.⁴⁰

Coming into play only at the right moment, the right hand would simultaneously transcribe the meanings symbolized by the added notes or melismas (signs above the words). Their number is not great:

psalmodic:	/	\	♦	'	<	^-	€	∞
prosodic:	/	\	:	♦	l:	g	p	'

Yes, it is like child's play, but naturally you must be a musician to really understand it or, as the director, to be able to accurately execute the gestures.

If by chance the left hand ceased to indicate the basic note in progress (represented by the successive signs below the words whose function is interrupted only by the intermittent signs above the words), all gesticulation would lose its meaning.⁴¹

These conditions respected, after a relatively short preparation, anyone could "sign" to practiced musicians all the marvelous monodies that we have brought back to life—just by the explicit gestures. Such a demonstration would be thrilling!

**5) THE RECONSTITUTED MONODY
ALSO CARRIES THE IMPRINT OF FORMAL RESTRAINT
IMPOSED UPON IT, PERMITTING A PRECISE,
INTELLIGIBLE GESTURAL SYSTEM**

We must not imagine this would also work for other notations or monodies. The brilliant demonstration that we have described would easily be realized, not only because the chironomy and the notation which graphically expresses it are tried and proven effective, but because the music they express in parallel manner is *specially conceived* according to this plan:

1. a scale limited to 7 or 8 fundamental notes
2. an invariable position for each note in the preestablished scale (therefore, facility of note identification and execution)
3. a particular kind of rhythm appropriate to the execution
 - a. accenting key words of the verbal syntax for the "solo" reading of the prosody
 - b. uniformly flowing, with the melismas dovetailing into syllabic rhythm for psalmody (making possible its performance by massed chorus).

All these monodies which we have reconstituted easily submit to these limitations, for they seem to us (despite these restraints) to be the fruit of inspiration. Nevertheless, they each "bear the yoke" *without exception*. Therefore, without necessitating a notation, in practice, music worthy of the name could have existed in antiquity (this does not have to be the exclusive appanage of Israel).⁴² And thus, a simple **heterophony*** could have been signaled by two chironomers. We recall again the musical scenes of Egyptian tombs where each instrumentalist had his own personal chironomer. The harpist even has two in one scene,⁴³ most likely representing two different sounds!

**6) WE HAVE THE PROOF
THAT THE HEBREWS PRACTICED CHIRONOMY
FOR THE BIBLICAL CHRONICLES THEMSELVES
(LATER MISUNDERSTOOD)
SPECIFY ITS USE**

The beginning of this chapter showed us that the gestural figuration, while it still accompanies Bible reading in certain groups today, already existed in far distant times, well before neumatic notations ever appeared.

Concerning Judaism, we have learned that the use of chironomy is mentioned by the first commentators of the Tiberian notation as well as the writers of the Talmud (cf. Postface). But the use of chironomy by the Jews goes back much further into time. The Babylonian Talmud attributes to Rabbi Akiba (40-135 C.E.) the instructions to indicate with the right hand the tonal meanings of the Bible reading.⁴⁴ This is a proven use of chironomy.

For biblical times, the Old Testament might seem to be silent on the subject. But could this standard practice have been ignored or disdained by Israel, notably by the specialized Levitical cantors? It is certain that they did make use of it, for the Bible itself provides the proof. Without elaboration, the biblical chronicle mentions this detail, but only in the Hebrew text. For confused translators, in their incomprehension, distorted its meaning (cf. p. 132). Under David's reign the execution of an impressive work of liturgical music was placed under the direction of three chief-cantors, themselves directing according to the indications of the king in person! (I Chron. 25:2-4,7)

The gestures of "hands" (the plural is indicated) had to have had chironomical significance, since it is also stated that one of the chief-cantors directed only with "the hand."⁴⁵ This would have been an indispensable method for the correct execution of the often-choral music of the Psalms (which were specifically concerned for instrumental accompaniment).⁴⁶ Concerning such accompaniment, let us state already that the monody itself suggests a harmonization (cf. PART TWO, Book II, ch. 5).

Furthermore, this point of view today is singularly supported by archaeology. The discovery in 1947 of scrolls of the Bible in a cave of Qumran near the Dead Sea incited widespread interest. Subsequent

excavations brought to light numerous manuscripts which, like the others, were deposited in jars no later than 135 C.E.—and more likely before the great revolt of 70 C.E.⁴⁷

Several manuscripts contain curious signs which would be nothing else but *chironomical inscriptions*. In fact certain signs rather closely resemble the signs of the Byzantine notation.⁴⁸ We have already mentioned the *Table of Signs* set down by Jòhn of Damascus, which carries the tradition back to the time of Ptolemy in the 2nd century. The hypothesis raised by the Qumran manuscripts now seems all the more probable.

Naturally this musical discovery remained in the shadows. When it really ought to have confirmed the practice of chironomy by the Hebrews at that period of time, it still was not sufficient to bring to light a forgotten music! No one had yet sought to establish, by the use of gestural figuration, a link between the Tiberian notation (considered a dead letter) and the liturgical music (totally vanished if not contested) of the Hebrews. But for the present conjecture, this important discovery is a written testimony of a healthy vision concerning the extraordinary message concealed by the Tiberian notation so superficially approached until now.

That an efficient chironomy was practiced in Israel long before the time of Christ is now an open door to a firmly traced horizon—a vision, not at all utopian, of what could have been the liturgical music of the Hebrews during biblical times, as supported by the use of chironomy. That is what the reconstituted cantillation peremptorily attested, being detached with the reality which evaded us until now (cf. Postface).

NOTES

¹ Cited by H. Hickmann, "La chironomie dans l'Egypte pharonique," *Bulletin de l'Institut d'Egypte*, p. 96.

² H. Hickmann, "Problème de la notation musicale dans l'ancienne Egypte," op. cit., vol. 36, p. 490.

³ H. Hickmann, "La chironomie dans l'Egypte pharonique," op. cit., pp. 107-108. Upon careful examination of the transcribed figures of H. Hickmann we see that the two hands really work together. One of the arms is extended, the other generally displaces the hand toward the ear or the knee. The fingers of both hands, being in different positions, form specific signs.

⁴ H. Hickmann, "Problème de la notation musicale dans l'ancienne Egypte," op. cit., p. 491.

⁵ Cf. O. Fleischer, *Neumen-studien*, op. cit., p. 32. We will quote the information later (p. 104).

⁶ op. cit., p. 29.

⁷ Ibid.

⁸ "When I return home, I do not dance, never having learned how; but I 'chironomize'—I know how to do that!" Cf. O. Fleischer, loc. cit.

⁹ Ibid., p. 28.

¹⁰ Ibid., pp. 29-30.

¹¹ Ibid., p. 28.

¹² Especially Michel Hugo. See his article "La chironomie medievale," which we will quote later on.

¹³ *Origine des instruments de musique*, p. 64 "Chironomy comprises all the rhythmical gestures of the arms, the hands, and the fingers, and was an essential element of the pantomime so important in the conducting of ancient orchestras."

¹⁴ O. Fleischer, op. cit., p. 34.

¹⁵ Loc. cit., p. 33. Cf. Plate XII, p. 92.

¹⁶ Ibid.

¹⁷ "Goddess and Musician," 7th century (fragment), reproduced on Plate XII.

¹⁸ Rabbi of Troyes (France) in the 9th century.

¹⁹ This affirmation is found even earlier in the Talmud (TB Berakot 62a). (Cf. p. 90).

²⁰ Our emphasis.

²¹ J. Combarieu, *Histoire de la Musique* (Armand Colin, Paris, 1930), vol. I, pp. 247-248.

²² Already amply cited (cf. p. 92).

²³ From which work we have drawn the greater part of our documentation.

²⁴ That is, pp. 69 and 74. Cf. C. Hoeg, op. cit., p. 17.

²⁵ On one hand C. Hoeg confirms the generally admitted chironomical origins of the ekphonetic notation; but on the other, he projects back into the far distant past the birth of these signs, which he defines as first rare and simple, then as more and more numerous and complex.

²⁶ Cf. *La notation musicale*, op. cit., p. 32.

²⁷ O. Fleischer, op. cit., p. 33.

²⁸ A procedure similar to that which translates the so-called "Tiberian" notation of the Bible.

²⁹ That is, the enharmonic* genre of music.

³⁰ A. Gastoue, "La musique Byzantine," *La Musique des origines à nos jours*, p. 69.

³¹ A. Gastoue, "La musique Byzantine," *Encyclopédie de la Musique* 2(Delagrave), p. 544.

³² A. Gastoue, "La musique Byzantine," op. cit., p. 69.

³³ This is a concrete fact concerning the cantillation of the Temple at Jerusalem. [That is, the biblical and historical sources we have confirm the accurate preservation of that cantillation.—Ed.]

³⁴ A. Machabey, "Musique Grecque," *La Musique des origines à nos jours*, op. cit., p. 64.

³⁵ Aristotle, "Politics," I - V, ch. 5, cited by J. Combarieu, *Histoire de la Musique*, vol. I, p. 160.

³⁶ O. Fleischer, op. cit., p. 29.

³⁷ H. Hickmann, "Problème de la notation musicale dans l'ancienne Egypte," op. cit., p. 490.

³⁸ "The principal singer indicates the notes with the index finger of the left hand striking the fingers of the right hand." H. Hickmann, "Sur la survivance de la chironomie égyptienne dans le chant liturgique copte," *Miscellenia Musicologica* (Cairo, 1949), p. 149.

³⁹ Haïk-Vantoura lists three hand-signs which were preserved in the *Manuel du Lecteur* (cf. p. 120). In fact the *Manuel* lists a number of other signs, corresponding almost entirely to accents found above the words. The precise correlation one finds in most cases between the hand-signs and the written signs as defined by the Key led me to believe that the chironomy behind the accents could be accurately reconstructed. I am so attempting at this writing.—Ed.

⁴⁰ We can imagine them in close correlation with the graphical signs, this being only a simple illustration. [Such correlation is precisely what we find with most of the signs defined by the *Manuel du Lecteur*.—Ed.]

⁴¹ Let us not forget in this illustration that the Jewish and Christian chironomies of the Middle Ages employed only one hand.

⁴² Regarding this, let us bear in mind the recent remarks by musicologists affirming that the Greek modes must have consisted of "formulae" (cf. Introduction II). Undoubtedly these formulae were easily transmissible by chironomy. We know as well that the Greek *melismas** never exceeded three notes.

⁴³ See the mural relief in a tomb from the 5th Dynasty (2700 B.C.E.): Musicians, Singers and Dancers, Cairo Museum, reproduced in Plate IX.

⁴⁴ Cf. *Dictionnaire de la Bible*, vol. V, supplement, col. 1450.

45 This was Asaph (verse 2), who undoubtedly used one hand to direct the cymbals. It is stated, moreover, that Asaph played cymbals (I Chron. 16:5).

46 It is noteworthy that prosody, monody without obligatory accompaniment, did not necessitate a gestural figuration for its execution.

47 *Dictionnaire de la Bible*, op. cit., vol. V, col. 818.

48 "Professor [Eric] Werner recently tried to interpret certain signs found in the margins of the Dead Sea manuscripts (see Werner's article in *Music Quarterly Review*, 1957, no. 1). The resemblance of these signs, either to certain Gregorian neumes or to the chironomical signs of Byzantium, leaves us truly perplexed..." Professor Leo Levi, "Notation Biblique et chant proto-chrétien," in *Actes du 3ème Congrès international de Musique sacrée* (Paris, 1957), p. 334.

CHAPTER IV

ETYMOLOGY OF THE MEANINGS SYMBOLIZED BY THE TIBERIAN NOTATION

**Correlation between the meanings of the signs
in the Tiberian notation and the deciphering key
indicates the ensemble was conceived as a whole**

— Summary —

- 1) The sense of the accents, which at first seem to be unfounded and incoherent, is revealed by their etymology 96
- 2) The extraordinary coincidence between the meanings behind the accents' names and the musical meanings conferred on the signs by the deciphering key 97
- 3) In reality, a triple coincidence, attested by the shapes of the signs corresponding to the musical meanings and their names 102
- 4) An indissoluble ensemble which could only have been created in full knowledge of the complete system 104
- 5) The "codex" disclosed by the Karaites 105
- 6) The predictable conclusion 108

**1) THE SENSE OF THE ACCENTS,
WHICH AT FIRST SEEM TO BE
UNFOUNDED AND INCOHERENT,
IS REVEALED BY THEIR ETYMOLOGY**

It seemed preferable to me, in the course of this study, not to mention the archaic names for the ancestral meanings as symbolized by the Tiberian accents for these details added nothing, on first sight, to the solution of the technical problems which I intended to solve through experimentation and not through history itself. Later, when I finally took up this aspect, the awareness of these names still did not have any bearing upon the subject. But in digging deeper into the facts concerning the birth of this notation, it became obvious to me that the very names had very great importance and they even unexpectedly dictated the conclusion.

In the majority of the treatises, only the names themselves are given while their meaning [etymology] is neglected. Left in obscurity by the earliest exegetes and ensuing commentators, this allowed one to suppose that these names themselves carried no special message. This is not the case. Their etymology provides a most unsettling testimony: the pure and simple confirmation of the musical interpretation ascribed to these signs by the deciphering key as presented in this book!

It must be kept in mind that *neghinot*, which generically designates the meaning symbolized by the Tiberian accents¹ (conjointly with *te'amim*²), is a biblical term of musical sense.³ It is not surprising to us that these accents had at their origin a musical sense! The agreement of the evidence stacked up page after page in our technical exposé ultimately constitutes irrefutable proof. But the additional confirmation through etymology is no less impressive. Besides, as we mentioned, it throws a light of decisive clarity upon the conditions necessary for the elaboration of this notation.

First of all, to what period can we date these names which were already abbreviated in the Babylonian notation? Tradition pointed to biblical times. Some scholars thought the same was true for the signs themselves. But we know that in ignorance of present historical facts, this opinion was later modified (cf. pp. 8, 105, 173).

Textual criticism is limited, since their source is unknown. The language is Aramaic we are told (cf. Postface), the kind that was spoken during the early Middle Ages in Western Asia. Anyone pronouncing

these names at that epoch consequently understood their meaning and must have been astonished that there was so little correlation with what was stated in the treatises which limited themselves to the grammatical syntax. Yet these ancient names were known.

Whether the terms are ancient or a translation of the initial Hebrew⁴ is not so important for translation implies "respect for the meaning." We can believe this all the more since all the early treatises indicate the *same names* for the accents. In fact, although there was an abundance of names⁵ (if not signs also) at that hazy epoch when this notation was proliferated, only the following names are mentioned principally or uniquely in those first treatises, wittingly retained by contemporary exegesis,⁶ along with their pictographical symbols and their etymology.

At first glance their etymology seems to have an enigmatic, incoherent sense, when we cite them in random order: "end, resting, cluster, chain, rising, crouching." These allusions seem void of significance for both syntax and music. Who would have been capable then (or even later) of explaining them? The reader will be made aware of the errors engendered by the interpretations of grammarians and the traditions of synagogue chant.⁷

In order to interpret these names, we must be knowledgeable of the *deciphering key*. We now present to the reader their pithy testimony.

2) THE EXTRAORDINARY COINCIDENCE BETWEEN THE MEANINGS BEHIND THE ACCENTS' NAMES AND THE MUSICAL MEANINGS CONFERRED ON THE SIGNS BY THE DECIPHERING KEY

PROSODIC SYSTEM

The signs *below* the words constitute *basic* degrees of a tonal scale.

Name:	Darga	Tevir	Silluq	Merka	Tipha	Atnaḥ	Munaḥ	Mapakh ⁸
Sign:	ſ	ꝝ	ꝑ	ꝝ	ꝑ	ꝑ	ꝑ	ꝑ
Musical Transcription:								

Etymology: ladder broken end extension palm resting placed returned

The signs *above* the words represent notes subordinated to those below.

Name: Pashta Geresh Gershayim Zaqef Qaton Zaqef Gadol Revi'a

Sign: 

Musical Transcription:



Etymology: stretcher expulsion double rising greater rising crouching

Name: Pazer Zarqa Segolta Telisha Octannah Telisha Gedolah

Sign: 

Musical Transcription:



Etymology: dispersing spurt cluster small pulling away greater pulling away

PSALMODIC SYSTEM (complementary meanings) ⁹

Name: Galgal Shalshelet Oleh Veyored Revi'a Qaton Iluz Tsinner

Sign: 

Musical Transcription:



Etymology: wheel chain ascending & descending small crouching elevated tube

Presented randomly, these expressions seem strange and inappropriate. Once united with the musical meaning attributed to each sign by the deciphering key, the correlation becomes obvious, even compelling.

FOR THE BASIC SCALE DEGREES (LOWER SIGNS):

end  : We call this "final" or "tonic."

extension  : This is the second degree.

- broken* $\overline{\vee}$: another extension, but in the inverse direction—the seventh degree.
- palm* $\overleftarrow{\wedge}$: The only chironomical expression, whose explanation will follow.
- resting* $\overline{\wedge}$: The fourth degree, the place of the half cadence.
- placed* $\overline{\square}$: The fifth degree, indicating a suspending cadence.
- ladder* \overline{s} : The lower sixth degree, actually the *base* of the "ladder."¹⁰
- returned* \overleftarrow{s} : The upper sixth degree, the top of the "ladder" from which point a *return* is necessary to review the complete series.

(Notice the *measured* expressions: "end, resting, placed," which characterize the three degrees favored for cadences.) And this is only the beginning of the demonstration. Let us take note of the next table.

FOR THE SUBORDINATE DEGREES (UPPER SIGNS):

- stretcher* $\overline{\Delta}$: An appropriate designation for the appoggiatura of an upper second.¹¹
- expulsion* $\overline{\angle}$: An appoggiatura of an upper third¹²—a more distinct movement.
- double expulsion* $\overline{\angle\angle}$: A double appoggiatura.
- small rising* $\overline{.}$: This appoggiatura of a lower second *emphasizes* the word.
- greater rising* $\overline{!}$: The prolonged movement downward emphasizes the word even more.

- crouching* $\underline{\text{—}}$: One cannot better translate this repeated degree which becomes an appoggiatura of a lower second.
- dispersing* $\underline{\text{—}}$: Dispersment is really the effect produced by these three descending notes, including the note of resolution.
- spurt* $\underline{\text{—2}}$: The graceful symbol of a double appoggiatura of an upper and lower second without resolution (cf. PART TWO, Book I).
- cluster* $\underline{\text{—3}}$: An imaginative picture of this appoggiatura with its "embroidery."
- small pulling away* $\underline{\text{—}}$: It cleverly characterizes these three ascending notes at the end of a word (cf. PART TWO, Book I).
- greater pulling away* $\underline{\text{—2}}$: This is a cascade of four notes, occurring at the beginning of a word (cf. PART TWO, Book I); its movement is broader [than for $\underline{\text{—}}$].

These expressions are imaginative, but not unnatural. We make use of similar figures of speech to designate embellishments like "broderie," "pincé," "mordent," "coulé," and so on...

THE ADDITIONAL SIGNS OF THE PSALMODIC SYSTEM

wheel $\underline{\text{V}}$: We will examine in our technical study the movement of "coming and going" provoked by the seventh degree, being the lowest note or limit of the scale of the psalmodic system (cf. PART TWO, Book II).

ascending and descending \leq : Once more, our interpretation could not be better justified! \leq represents a note higher than its obligatory intermediate resolution.

small crouching  : Our experimentation confirmed the more restricted meaning of this sign in psalmody (cf. p. 39).

elevation  : Again, a justification of our interpretation.

tube  : Rather than "spurt" as in prosody. The expression is legitimized since the melodic figure "encloses" itself in its resolution (which does not occur in prosody, where it emphasizes the middle of the phrase member). (Cf. PART TWO, Book I.)

And so the etymological meanings of the names for the ancestral accents symbolized by the Tiberian notation *perfectly* agree with our deciphering key. Not one sign shows a contradiction anywhere! Just as the names of modern-day notes (tonic, mediant, dominant, leading tone) as well as our names for ornamentations (mordant, pincé, trill, etc.) depict their functions, these ancient expressions denote basic scale degrees and their corresponding subordinates.

However, this obliges us to turn the question inside out. In order for the names of the accents to so clearly evoke the corresponding musical meanings, it was necessary they be linked together from the beginning. The music in any case did not graft itself onto these expressions (without music they had no sense). The music and names (the latter very likely translated from Hebrew into Aramaic) were *interdependent*; and if one preceded the other, it would have to be the music. The contrary is unacceptable.

Which brings us to declare again that these ancestral expressions indeed harbored their musical significance (for those who were aware of it, of course). When the musical sense became forgotten, the words were emptied of their substance! This certainly explains the very antiquity of the music which is indubitably linked to that of the names themselves. But the "dossier" is completed by a further undeniable attestation borne by the figures of the signs themselves: their morphology.

**3) IN REALITY, A TRIPLE COINCIDENCE,
ATTESTED BY THE SHAPES OF THE SIGNS
CORRESPONDING TO THE MUSICAL MEANINGS
AND THEIR NAMES**

In effect, there is a triple coincidence here. Not only do the meanings of the consecrated names fully justify the deciphering key, but so does the very *shape* of the signs. Could anyone better pictographically represent the basic degrees of the tonal scale and their subordinate degrees, by their shape and their positions above and below the words? We have revealed with surprise (but not trying to go beyond that) throughout this technical study that this notation is not only a model of clarity and efficiency, but it also contains *morphological* implications.

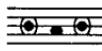
Every musician contemplating the previous tables will arrive at the same conclusion. The simplicity of the tonic note, the first degree I ; the equivalence by inversion of / and $\text{\textbackslash}^{13}$ (the opposite direction being simply and efficiently indicated by the central dot), the two diagonal lines evoking an obvious "dependence" on the tonic; the opposition of / and \textbackslash (the second and third degrees), itself set apart from the tonic influence. Then again, the suggestion of resting by the sign \wedge in the form of a bell or "enclosed area," set apart from the influence of the context (suggesting the tonal power of the fourth degree); the opposite implication of the sign \vee (seventh degree of the psalmodic system), itself open to the influence of the context. Again, the remarkable implication of the octavle correlation between \textless and \textgreater (the lower and upper sixth degrees), the latter looking out from its high register, the former incorporating the latter \textless and the symbol of the inversion of its sense at the same time \textgreater , both implying the rungs of a ladder, the name which it coincidentally carries! Then there is the correlation and derivation of the meanings marked by the different positions of the signs \textgreater and \textless , \textwedge and \textbackslash (cf. p. 33); the same equivalence between \textwedge and \textbackslash (the former being the fifth degree of the mode, the latter a "jump" to the upper fifth), these different interpretations being justified, moreover, by the new names used.¹⁴

Moreover, there is the remarkable rough idea of diastematic notation: the melisma \textwedge , an upper note prolonged by a descending movement; its counterpart, \textwedge an ascending movement culminating in the upper note; \textwedge , marking a movement similar to \textwedge although smaller (cf. p. 97); \textwedge , a time-honored sign which indicates here an appoggiatura

to the lower, then the upper neighbor (read from left to right in Hebrew); and , this shearing effect, pictured so clearly by its name, "chain," perfectly translating the small intervals of half-steps it uses.

In conclusion, all the signs masterfully depict the correlated musical meanings and the ancestral significance of these meanings, as verified by their names. An astounding demonstration to which yet will correlate certain other testimonies confirming it via the oblique course of chironomy.

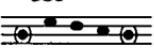
The grammarians indicate (*Manuel du Lecteur*, op. cit., pp. 492-93):

— for  ("rising"), "*a movement of the fingers from above to below*"—which rightly indicates the appoggiatura rising from the lower neighboring tone;¹⁵

⋮

— for  ("expulsion"), "*throwing the word behind*"—an expression corresponding to the movement of the descending third between the upper appoggiatura and its resolution;

⋮

— for  ("greater pulling away"), "*drawing out the word behind*," being the characteristic effect of the melodic contour.

⋮

The objectivity of these remarks is impressive!

What the scholars do not say, however, is how one was supposed to symbolize the conjugated action of two superimposed meanings by one-handed gestures only (according to what is indicated by the Talmud).¹⁶ Here is the evidence of deep oblivion or ignorance.

Whereas the solitary use of the expression, "palm," for the third scale degree indicates that this figure must be represented by the left hand in order to be viewed by the reader, thus justifying the ancient practice of two-handed chironomy as we described in our imaginary gestures (cf. p. 87).

**4) AN INDISSOLUBLE ENSEMBLE
WHICH COULD ONLY HAVE BEEN CREATED
IN FULL KNOWLEDGE OF THE COMPLETE SYSTEM**

What is concluded from the ensemble of facts reinforcing our deciphering key in every detail? The Tiberian system forms a whole: music, names and signs. The proof is the deciphering key which when applied to the verses of the Bible unmistakably produces a structured, often exquisite cantillation. The signs and their names collaborate to represent the sounds and tonal figures. This is why the total ensemble could only be the work of a single team of persons.¹⁷

We are told that the men of Tiberias "invented" this notation, but all the facts demonstrate otherwise. In order to invent this notation, they would have had to know the exact sense of the accents' names (from which these signs are derived as an *accurate pictorial transcription*). Therefore they would have perfectly understood the musical sense of these names since, without reference to their musical basis, these names do not tell us anything (cf. p. 97).

The system's triple relationship—the tonal values, names and their sense, and the graphical signs—form an *indissoluble* whole, an ensemble which could not have been created in stages (each part unfolding from a previous part that had fallen into oblivion), but only with the *full knowledge* of the musical system which itself alone justifies this double expression.

This is how the revelation of the etymology of these names, and the deductions which it imposes, guides history to the origins of this notation. For if it is clearly stated that these cantillation signs "were invented in the seventh century by the Masoretes, exegete-grammarians (*and undoubtedly musicians as well*¹⁸) of Tiberias,"¹⁹ there is simply no proof of this. We only know of the writings, not their filiation (cf. p. 47).

The critic, confronting these three Hebraic notations (two of which are anterior), has attempted to justify the later, more complex notation as the "full flowering" of the first two.²⁰ But G. Weil concedes that "we still know too little about the links permitting the transition from the Babylonian system to the Tiberian."²¹ And since it is only a question here of pure syntax, G. Weil insists:

"Even if the question of differences between the oriental and occidental traditions were resolved. . . we would have bridged only one stage in the history of

the transmission of the texts. Specialists would still have to discover how the reading of the texts, at that far distant period of time, was effected... when the Levites sang them on the steps of the Temple."²²

This actually is where the shoe pinches: the syntactical interpretation does not lead to the music; and if the notation comes from an ancient source, it can only be musical.

Aaron ben Asher is the author of the first known treatise concerning the signs said to be "of Tiberias;"²³ and his is only an inventory. It does not substantially say more than the *Manual du Lecteur* (cf. p. 171). In 895 his father, Moses ben Asher, wrote and interpunctuated with his own hand a manuscript of the "Prophets."²⁴ For the first time, it seems, the cantillation signs appeared as part of a manuscript (at least in such a complete manner—cf. p. 49). At the end of the 9th century *Ga'on Mar Natronai*²⁵ warned in speaking of the scrolls of the Bible: "We must not add the cantillation signs to them, even though they were revealed at Sinai."

Does this intervention lead to the deduction that the Tiberian signs are the work of his century, or rather did they already exist without being revealed? Furthermore, if the signs were the dilatory work of these masters, why did Aaron ben Asher explain their meaning so evasively? Why did he insist on the user's not respecting their exact position? Why did he suggest the *substitution of one sign for another* here and there in the sentence? (Cf. p. 168.)

If one would only take into account their own exegesis, it would become apparent that the Masoretes were simply the *trustees of the scriptuary system* which they set forth, and not its creators (as has been insinuated.) The opinion of Gerard E. Weil confirms this: "The Masorete is an empiricist who precedes the grammarian."²⁶

5) THE "CODEX" DISCLOSED BY THE KARAITES

From where then did these signs so suddenly appear or reappear? A hidden detail may answer this question and strangely confirm the conclusions indicated by our study of this problem, in its historical-technical globality.

In autographing the manuscript produced in 895, Moses ben Asher states that he reproduced it according to the *Codex* of the Karaites,²⁷ "as 'the assembly of Prophets' conceived it"²⁸ (cf. Postface). Moses ben

Asher was a Kairite and we know that the Karaites had the reputation of being the sole guardians of the *written tradition* of the *reading of Scripture*. Would they have disclosed a sacred relic? Perhaps that was not necessary.

The Talmud²⁹ already mentions the existence of *condensed forms* for the reading of the Texts in which just the first word of each verse is given, followed only by the accented syllables of the remaining words.³⁰ This is a procedure sufficient to protect any tradition, no matter how meticulous. Would not such a preserved document—or an identical copy—have served as the basis of the ultimately propagated notation which we have deciphered?

The Karaites were only the trustees, as we said, of the millenary written tradition of the reading of the Book. They were the butt of virulent assaults by a hostile community which only followed the Talmud, forsaking the sacred message of their forefathers.³¹ Besides, the School of Tiberias was tottering. It must be said that "a wind of incredulity and skepticism was blowing" and "it founded Jewish schools for the propagation of this skepticism."³² Moreover, Aaron ben Asher was the last representative of this august institution.

Under the yoke of Islam, denigrated and beaten by their own brethren, it is likely that these "*masters of the transmission*" became fearful that this venerated tradition would sink into the gulf of oblivion. Consequently they decided to hand it over, not in its abridged form but in clear terms, to their contemporaries and to posterity.³³

To be certain, this is just an hypothesis. But equally certain are the conclusions indicated by our discovery: the entire system could only have been created during a single period of time; and furthermore, history shows us that its creators were not the "Masters of Tiberias" (cf. Postface).

The Colophon of the "Prophets" Manuscript
Written by the hand of Moses ben Asher in 895 (column 586)³⁴

אני משה בן אשר כתבתי זה הטהזר שלטקוֹרָא על פי כיד אליה הטובה עלי באר היטכ במדינת טוזיה טבריה העיר הhollla' כשבינו עדת נבאים בחוּרִי י קדושי אלהינו הטבינים כל נסודות והט启发ים סוד הכמה אליל' הצדק אנטנה לא כייחדו דבר טעה שניתן להם ולא הויפנו טאמְנָה על מה שנימסר להם והעיצמו והגדלו הטק עשרים וארבעה ספרים וויסdom באטונתם בעטמי שכל בפירוש דבר בחיק מחוק ביוּפִי קאמר הי רצון מלפני יוצרנו שיאיר עינינו ויגיה לבנו בתורתו ללמד וללמוד ולעשות בלב שלם ובנפש חפץ וכל ישראל אמן:

נכתב לך שטונה מאות שנה ועשרים ושבע שנים לחורבן הבית השני שיאמר יוצר נשמות וישוב עליון ברוחמים ויבנהו באבני אקדה וספר וכבד בניון שלם בניון טקים בניון שלא ית Nash ולא יחרס ולא ינתץ לעולם ולעולם עולמים בטהרה ביתינו וביתך כל ישראל אמן

English translation by Paul Kahle³⁵

I, Moshe ben Asher have written this Codex (*mahzor*) of the Scripture according to my judgment "as the good hand of God was upon me" (Neh.II,8), "very clearly" (Deut XXVII,8), in the city of Ma'azya-Tabriya, "the renowned city" (Ezek. XXVI,17), as it was understood by the congregation of Prophets,³⁶ the chosen of the Lord, the saints of our God, who understood all hidden things and revealed the secret of wisdom, the oak trees of righteousness (Isa. LXI,3), the men of faith, who have concealed nothing of what was given to them nor added one word to what was transmitted to them, who have made the Scriptures powerful and mighty, the Twenty-four Books which they have founded in their faithfulness with explanatory accents³⁷ and clear instruction as to pronunciation with sweet palate and beauty of speech. May it please our Creator to illuminate our eyes and enlighten our hearts by His Torah, that we may learn and teach and act with a perfect heart and a willing mind (I Chron. XXVIII,9) and for the whole of Israel. Amen!

It was written in the year 827 after the destruction of the Second Temple to which may the Creator of souls be pleased to return in mercy and build up with rubies, sapphires and carbuncles (Isa. LIV,2f.) as a perfect building, a firmly established building, a building which can neither be pulled down nor demolished nor destroyed in eternity and eternity of eternities, (may it be done) speedily, in our days and in the days of all Israel. Amen!

6) THE PREDICTABLE CONCLUSION

Faced with the total absence of proofs which would allow us to presume that the exegetes of Tiberias could have created the cantillation signs, and pushed on the other hand by the evidence to affirm that the entire system could only have been created in one fell swoop (and not in ignorance of the musical meanings which gave birth to the signs and their names), we need only restrict our ultimate question to this:

Could the entire Tiberian system be the work of the Middle Ages? If not, all of it must be dated back to antiquity. This last clarification will produce our conclusion. However, here is why the entire system cannot be the work of the Middle Ages:

- 1) First of all, the creators of this music would have employed an archaic tonal system,³⁸ as well as outmoded melismatic figures (the **vocalise*** having the place of honor in the Middle Ages).³⁹
- 2) They would have used a primitive, non-metrical rhythm that already in the 4th century was termed "antique" whereas, through the influence of Greek culture (cf. Introduction II), *longa* and *brevis* were the basis of medieval rhythm.
- 3) They would have been the creators of an intense, "realistic" melodic expression, for which they would have had no model to imitate.
- 4) Abandoning the norms of their day, in which music disassociated itself from the words (couplets, refrains, vocalises), they would have "reinvented" the *dependence* of the melody upon the written text to which it was bound—the basis of the original cantillation, the foundation of the "ethos" of the Greeks—again without the support of a contemporary, "living" example around them.
- 5) Finally, they would have had to come up with the idea of constructing a melodic system exclusively translatable by *two-handed gestures*,⁴⁰ whereas medieval chironomy as historically attested in the Mediterranean countries, especially among the Jews (cf. p. 81), specified the use of a single hand.

In admitting all these contradictions, it still would require a minimum of historical proofs that this music actually could have been conceived at that period of time. Very likely we have no proofs. By which academy? Where? No one ever said that Tiberias was renowned because of any musical activity. There simply are no echoes of it.

Even granting such an hypothesis, it would still be necessary to prove that the notations of that time had a correlation with this one. On the contrary, in rapport with the others, the Tiberian notation is an anachronism (cf. p. 59) because it was isolated in its perfection. It would also be necessary that the signs already included in the two anterior notations (cf. p. 49) be consequently the only ones previously created. This renders the hypothesis even more inconsistent.⁴¹ Even if all the facts coincided, why were the first commentators, or better yet, why was the very *presenter* of this notation, Aaron ben Asher, content with only counting the signs and their relationships like so many "unknowns?" He would have been capable of indicating their meaning. Unless, for really inexplicable, unacknowledged reasons, the unknown creators originated this admirable music in order to present to their contemporaries and to posterity an enigma!

In admitting all this, was the 8th or 9th century in Palestine really the time to give oneself to this kind of prank when upheavals and tyranny had made the majority of the Jewish population flee? Were the times propitious for such a monumental, enthusiastic musical creation? The flowers of art do not grow vigorously on the arid terrain of misery (as the original chants of the prophetic books bear witness). Moreover, what a feat of minutious research, what an incredible accomplishment would be this masterwork, created gratuitously for instrumental and vocal ensembles never assembled!

It must be admitted that this hypothesis is contradicted in every aspect by the norms of music,⁴² as well as by history itself.

NOTES

¹ L. Algazi, "Histoire de la Musique Juive," *Histoire de la Musique* (Gallimard), vol. I, p. 364 (and Mayer Lambert's *Traité de grammaire hébraïque*, p. 27).

² This word, suggests Mayer Lambert (op. cit., p. 29), is probably an abridged form of "*piske te'amim*" (division of the sense) which is found already in the Babylonian Talmud (Nedarim 37b). Rather skimpy historical research really, for we know that *te'amim* in its multiple meanings also signifies "musical tone" (cf. p. 48). Cf. Léon Algazi, *Dictionnaire de la Musique* (Larousse), vol. I, p. 4. See also the Postface.

³ *Neghinot* signifies "modulations" according to Mayer Lambert (op. cit., p. 27). *Naghen* means "to play on stringed instruments" (cf. any Hebrew dictionary); *al-neghinat*, *binghinot* are terms which figure at the beginning of certain psalms and designate stringed instruments.

⁴ Of the list of names given by Mayer Lambert, more than half are Hebrew; the others are what Solomon Rokowsky (in his *The Cantillation of the Bible: the Five Books of Moses* [New York: Reconstructionist Press]) calls "Aramaic forms" of Hebrew originals. At least a few accents carry both Hebrew and Aramaic forms of their names in the Masoretic literature.—Ed.

⁵ See J. Derenbourg, *Manuel du Lecteur*, op. cit., p. 519.

⁶ Mayer Lambert, *Traité de grammaire hébraïque*, pp. 31-33.

⁷ We will treat this subject in Supplements I and II. Cf. Postface.

⁸ Cf. p. 168.

⁹ See the deciphering chart for the psalmodic system (p. 39) where all the signs belonging to the prosodic system as well, having the same etymology, maintain the same musical interpretation. (Certain rare prosodic signs are treated in the course of the examination of the prosodic system.)

¹⁰ Some authorities translate this word "step"—an even more appropriate link to the analogy of a "ladder."—Ed.

¹¹ The next note in the series.

¹² An interval of three notes, counting from the first.

¹³ The two degrees surrounding the tonic.

¹⁴ Which easily shows the incorrectness of the supralinear position for all the signs, as employed by the synagogal tradition (cf. Supplement II).

¹⁵ This appoggiatura produces the effect of a "spring."

¹⁶ The use of the right hand alone is noted not only in the Talmud, but also in the *Manuel du Lecteur* (cf. p. 81), where a number of other hand-signs are given. It is interesting that all the hand-signs but one mentioned in the *Manuel* correspond to signs above the words in the Hebrew text—and all these correspond more or less exactly to the indications given by the

deciphering key. The one hand-sign given for a written sign below the text ("shofar" or *munah*) seems to be a guess; it has no evident correlation with the other hand-signs or with the deciphering key. The gesture simply traces the form of the written sign.—Ed.

¹⁷ The musical system could also be the work of one brilliant musician, familiar with the ancient practice of chironomy. Moses, who according to tradition received the accents at Sinai, is a plausible possibility, given his Egyptian background.—Ed.

¹⁸ Our emphasis.

¹⁹ *Dictionnaire de la Musique* (Larousse), op. cit., vol. I, p. 4.

²⁰ Which attempt stirred up controversies. C. Hoeg, in *Notation ephonétique*, op. cit., p. 139, cites M. Spanier (*Die masoretischen Akzente*, Berlin, 1927): "Monsieur Spanier does not believe it possible that a melody can be expressed at first by a simple, insufficient notation, and then several centuries later by another notation, more refined and exact." (A pertinent remark in itself.)

²¹ *Elie Levita*, op. cit., p. 340.

²² Op. cit., p. 343.

²³ *Diqduqe ha-Te'amim* (work translated into German in the 19th century).

²⁴ The "Cairo" manuscript discovered in a Karaite synagogue (even though incomplete, it nevertheless contains the Pentateuch, the books of Kings, and others).

²⁵ *Mar Natronai*, Ga'on de Soura, Babylonia (at that epoch, the site of an important center for biblical studies for more than five centuries).

²⁶ "La Massorah," *Revue des Etudes Juives: Historica Judaica* (vol. CXXXI, January-June 1972), p. 66.

²⁷ We have reproduced on page 107 this significant text by Moses ben Asher. Paul Kahle, who includes it in his work *The Cairo Geniza* (Oxford, 1959), reports (p. 96) that he studied the manuscript with two scholars, specialists concerning the early Karaites, arriving at the conclusion that without a doubt they were viewing a work possessing the characteristics of Karaite writing.

²⁸ Another term for the Karaites, a holy community of rabbis.

²⁹ The Babylonian Talmud, the redaction of which is anterior to the 6th century.

³⁰ We have cited the relevant passages (p. 49, footnote) in dealing with the archaic Palestinian notation, but nothing impels us to think that these texts concerned this particular notation.

³¹ The "Rabbinites."

³² G. Arié, *Histoire Juive*, p. 124.

³³ The redaction of the manuscript, thus "completed," by Moses ben Asher, was commissioned by a Karaite of Jerusalem (who paid him with his own funds) for his personal use. Later, the precious manuscript, devolving to the Karaite community, was then transferred to a Karaite synagogue in Old Cairo where it was preserved for 850 years as an inestimable treasure. (Numerous Karaite texts are also preserved in the Leningrad Library.)

³⁴ Such as it figures in the work of Paul Kahle, cited above, p. 95.

³⁵ Page 96 of Kahle's work.

³⁶ Or, "by the *assembly* of Prophets" or "Prophets' assembly" (Heb. 'edat nevi'im).

³⁷ "Explanatory accents" = *te'amim* (Heb. *ta'amē sékhél*). Translation reviewed by Dr. Nadine Shanken (cf. Postface).

³⁸ Cf. Introduction II and the technical study (PART TWO).

³⁹ Cf. p. 84.

⁴⁰ The superimposed signs prove this.

⁴¹ All the more so in that, as we have already mentioned, several of the signs of the Babylonian notation are nothing but the initial letter of their respective names.

⁴² We will see this detailed in PART TWO.

CHAPTER V

BRILLIANT LITURGICAL MUSIC REVEALED BY DECIPHERING KEY

Only in antiquity could such music have been created

— Summary —

- 1) David founded a veritable academy of sacerdotal music; the reconstituted music may be the proof of this 114
- 2) The Chronicle recounts that this institution was maintained throughout biblical times 120
- 3) The reconstructed monodies carry the imprint of the diversity of biblical times; moreover, their contexture acknowledges their various destinations 123
- 4) The Levites jealously guarded the tradition, continuing their functions until the destruction of the Second Temple in 70 C.E. 126
- 5) These reconstituted songs conform to all the norms of ancient music 128
- 6) To equate the traditional cantillations with the sacerdotal music is to deny, without proofs, the biblical evidence 132

**1) DAVID FOUNDED A VERITABLE ACADEMY
OF SACERDOTAL MUSIC;
THE RECONSTITUTED CANTILLATION
MAY BE THE PROOF OF THIS**

It is granted to the Hebrews the privilege of being musical.¹ Would this distinctive musicianship have reached its peak at a late date, after biblical times? Or after the Middle Ages whose music gives little encouragement in this sense? Would its "Golden Age" only have known the shadow of a music just at the beginning of its development?

Perhaps the Hebrews lacked the necessary training? The Bible affirms the contrary, giving precise details (of which we have already had an echo). It testifies of a veritable institution designed to train recruits, from infancy, for the liturgical service.

According to the Chronicler (I Chron. 23:5), "Four thousand were praising the Lord, accompanying themselves on the instruments which David made for giving praise" (according to David's own ordinance).

Let us note that it is here a matter of training singer-instrumentalists, an education normally more difficult than that required for ordinary voice training. The following narrative confirms that an actual process of selection was employed. The cantors participating in the worship service only numbered 288—"all who were skillful" (I Chron. 25:7). But these master musicians were devoted to training beginners. "They were divided by lots into their [twenty-four] sections, the small as well as the great, the teachers as well as the apprentices" (I Chron. 25:8). Thus these twenty-four sections of twelve masters each were filled out in their formation with persons of lesser training who were in training under the practiced ear of musicians well-versed in their art. It could not be more explicit.

This could be the proof of nothing else but an obvious desire for excellence. But we will see that the quality of liturgical music was also overseen in the choice of the instruments approved for use in religious celebration: instruments which David "invented" especially for this purpose. Furthermore, the instruments used in that period were not grouped indistinctly; their particular purpose was already taken into account.

Thus, when the holy Ark was moved for the first time² (to the house of Obed-Edom) after it was taken back from the Philistines, the Hebrews made a procession, dancing to the sounds of "all kinds of instruments:"

tambourines, sistras and so forth (I Chron. 13:8). But when the Ark of the Covenant was moved the second time (only three months later) from this temporary residence to the pavilion specially constructed at Jerusalem to shelter it until the great Temple was built, the instruments for the dance were excluded. Only noble instruments—shofars,³ lyres, harps, cymbals and trumpets—were retained (I Chron. 15:28). And the choir of Levites sang a song of thanksgiving in front of the pavilion. We have the privilege of hearing this music once again:

I CHRONICLES 16:8-9 as reconstructed by the deciphering key⁴

O give thanks to the Lord, call upon His name; make known among the peoples His deeds.

hô_dôu_la_ do_nay qir_ 'ôu bish_mô hô_dî_ 'ôu ba_ 'am_mîm a_lî_ lo_thâv
< | : / | \ | |

[9] Sing to Him, sing praises to Him, speak of all His wonders.

shî_rôu_lô zam_m_ rou_lo sî_ hoû be_khol_nif_le_ 'o_thâv
< : / | |

Can one imagine a simpler yet expressive monody with such rustic warmth? "Anterior to the institution of the monarchy," says I. Adler, "the majority of these musical manifestations... had a spontaneous, popular character."⁵ Is this not now verified?⁶

Let us assume that the music of the hymn commemorating the crossing of the Red Sea was equally vibrant. The tambourines and instruments of dance accompanied it when it was sung by the daughters of Israel. Yet what a dismal introduction to this song the synagogue tradition offers us:

EXODUS 15:1, traditional synagogal cantillation⁷

[1] Sing to the Lord, for He is highly exalted;



'a_ shi_____ rah la_ do_ na____ y_ ki_ gha_ 'oh ga_ 'ah

the horse and its rider He has hurled into the sea.



so_ūs ve_ ro_ khe_ bō_ ra_ imah bay_ Yam_ :

This monody has no movement, no joy, no "life." Yet in our reconstituted music, it is just as vibrant as the monody we have just cited and immediately moves into a crude, though exultant and strangely powerful hymn! Here is a song calling forth the dance. The delicate jingling of sistras and tambourines still echos in the hearing, intimated by the character of the music (solely capable of committing to remembrance such an eventful moment):

**EXODUS 15:3-4: The Song of the Red Sea
(according to the deciphering key)**

[3] The Lord (is) a warrior, the Lord (is) His name!



'A_ do_ nay 'ish mil_ ha_ mah 'A_ do_ nay she_ mō

＼ ＼ ＼ ＼ ＼ |

[4] The chariots of Pharaoh and his army He has cast into the sea,



mar_ ke_ both par_ 'oh ve_ hē_ lō ya_ rah bay_ Yam

＼ ＼ ＼ ＼ ＼ |

and the choicest of his officers are drowned in the Sea of Reeds.

ôu_mib_har sha_li_shâv toub_ôu_be_yam-soôf:

The full spirit of the text is given here in this introduction, but its imprint is consistently present in the remainder of the song.

The same song, verse 10

[10] You blew with Your wind, / them / has covered / the sea

na_shaf_ta be_roû_ha_kha kis_sa_mô_yam

they sank like lead in the waters / mighty.

tsa_le_loû ka_ô_fe_reth be_ma_yim 'a_dî_rîm:

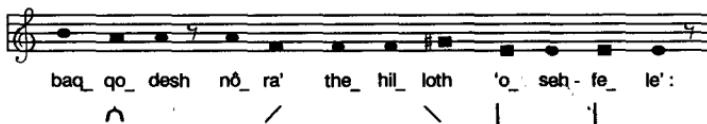
This gives the impression that suddenly the lights come up on a tableau of history—a "slice of life" springs forth in this exultant homage:

Verse 11

[11] Who (is) like You among the gods, O Lord? Who (is) like You, majestic

mî_kha_mo_kha ba_e_lim 'A_do_nay mî_kâ_mo_kha_ne'_dar

in holiness, awesome in praises, working wonders!



What a fantastic vision of history, an imaginative monody if there ever was one, in its singular "ruggedness."

What is the good of appealing to traditional cantillations? Rather, let us keep ourselves away from them. They have no soul, as we said, and thereby they ravage the texts; whereas this rediscovered music evokes its very *thought*, pure and penetrating.

Moses consecrated the sons of Levi,⁸ the Levites, for their priestly duties (Numbers 18:21). Music was their appanage, but it was not until the Davidic impulse that it took on importance. Music had only a modest part in worship during the long period preceding the monarchy. The Ark of the Covenant was unceasingly transported, having no assigned resting place but that of a tent. As for instruments, only trumpets (blown by the priests) intervened, announcing the particular religious occasion (Numbers 10:10).

At that period of time it was not the practice to read in a speaking voice. Instead one "cantillated" the texts (the music *clearly indicating* the punctuation, which was not marked by specific signs). Undoubtedly when Moses solemnly entrusted the *Pentateuch* (the first five books of the Bible, written in his own hand at the end of the Exodus [Deut. 31:9]) to the Levites, they learned to cantillate it, having been instructed to read it to the people every seven years (Deut. 31:10-11). It must be noticed, however, that nothing is said concerning their particular training for this.

The "Song of the Crossing of the Red Sea" fully demonstrates that the Hebrews were a musical people from the dawn of their history. But the narratives of the *Pentateuch*—Abraham's Sacrifice, the Burning Bush (see PART TWO, Book I), etc.—support this affirmation all the more. The following monodic prose narrative is full of expressive finesse:

EXODUS 3:11: The Burning Bush

[11] But said / Moses to God, "Who am I, that I should go

vay_ yo_ mer mo_sheh 'el - ha_ 'e_ lo_ him mi - 'a_ no_ khî kî 'e_ lekh
 < | | | | | |

to Pharaoh? and that I should bring the sons of Israel out of Egypt?"

'el - par_ 'oh ve_khî 'ô_tsî 'et - be_nê yis_ra_ 'el mi_ mits_ra_yim:
 ⌂ / ⌂ / ⌂ / ⌂ |

Of universal scope already is the "Priestly Benediction," and the Decalogue, although unelaborate, is a powerful work of great art (cf. p. 147). The Levites were most certainly trained in the art of thanksgiving (see the "Song of Thanksgiving," p. 115). At the beginning of the monarchy there existed a "Book of Songs" (II Sam. 1:18) which, undoubtedly, contained the famous "Song of the Red Sea." Nevertheless, it was under David that sacerdotal music took an immense leap with impressive, massed choirs and instrumental participation. The spiritual richness of the Psalms is underscored (as we shall see for ourselves) by their recovered music.

The musical gifts of David have remained ever present "in spirit" throughout the centuries. From him comes the unforgettable *Elegy* (II Sam. 1:17-27), which he decided should be taught to the children of Israel. Certainly it is a work of genius. Its eloquent theme, despite its somber character, is the equal of the most beautiful melodies by the world's greatest composers. Such accents are not common currency in the world of music.

We will see at the start of the technical study (Introduction II) that Israel was not innovative in this art. It was content to utilize, but in a particular way, the elements that culture placed at their disposal. And it made choices. For example, it did not use (at least in religious services) gigantic instruments, like certain Egyptian harps that were only played by two persons.⁹ The substance of music, more than form, preoccupied Israel. Later, when decadence set in, the prophet Amos (8th century

B.C.E.) raged against the voluptuous people and their "noisy songs" (Amos 6:5). So a distinction was made between healthy vigor and squalling.

At the inauguration of the Temple at Jerusalem, over which Solomon presided, the liturgical music functioned according to the prescriptions of David. Choirs and instrumentalists—among whom were 120 trumpeters (more than 400 performers in all)—set about to praise the Lord. The Chronicler reports that "when they lifted up their voice, accompanied by trumpeters and cymbals and instruments of music . . . then the Temple of the Lord was filled with a cloud." (II Chronicles 5:13). An exaggerated figure of speech? We will not challenge it. But does the following musical "sample" refute the ardent faith and the impressive dignity of the priesthood?

PSALM 118:19-20¹⁰

Open to me the gates of justice; I shall enter through them, I shall give thanks to the Lord.

pith-hoū - if shā'a_rē - tse_deq 'a_bo - bām 'ō_deh yah:

[20] This (is) the gate of the Lord, the righteous will enter through it.

zeh - hash_shā'_ar la_ do_nay tsa_dī_qīm ya_ bo_ 'ōu bō:

On the contrary, we are convinced it highly affirms it.

2) THE CHRONICLE RECOUNTS THAT THIS INSTITUTION WAS MAINTAINED THROUGHOUT BIBLICAL TIMES

Let us not be carried away. Let us consult this important chronicle. It holds so many secondary details that it is quite improbable that it is posterior to the reported events. Did this "golden age" of Hebrew music have a continuation? Are the Levites mentioned again as *maintaining* their functions conferred upon them by David?

The next reference to them is after the death of Solomon, when the schism occurred.¹¹ The part given to the Levites by Jeroboam, king of Israel, was so vile that they fled and regrouped themselves in the kingdom of Judah (II Chron. 11:14). It was the beginning of a dark period, where the decadence of the kings was interspersed with brief returns to the faith of the patriarchs. We observe that the faithfulness of these men, attached by entire families to the priesthood, remained unshakable in these circumstances, and that they forgot nothing of their musical knowledge.

Under Joash (in the 9th century) this is clearly stipulated (we will return to this later to note several important points – cf. p. 131). It is the same story for Hezekiah (at the end of the 8th century) where it is recorded that the Levites stood in the Temple "with the instruments of David" (II Chron. 29:26). "They sang with gladness" (v. 30), and the king "spoke encouragingly to all the Levites who showed good skill in the service of the Lord" (II Chron. 30:22).

In the 7th century, King Josiah, abandoning the false gods, decided to reestablish the ancestral worship at the Temple of Jerusalem. "And he said to the Levites who taught all Israel and who were holy to the Lord, 'Put the holy Ark in the house which Solomon built. . you need no longer carry it upon your shoulders.'" (II Chron. 35:2-3)¹² A touching picture which enlightens us. When the priesthood was eliminated from the profaned Temple, they brought the sacred words to all, with this distinctive sign, "the Ark of the Covenant upon their shoulders." Here again it is said a little further on, "the singers, the sons of Asaph, were also at their stations according to the command of David" (II Chron. 35:15).

Thus we see it was always in the kingdom of Judah, at the Temple of Jerusalem, that the musical events concerning the Levites took place. When the Kingdom of Israel had been destroyed during the reign of Hezekiah, in 722, the Kingdom of Judah survived yet for a short time. Then, most of the last kings exiled the prophets or put them to death. As a consequence their voice became unrestrained! With what choice words Isaiah announces the intervention of the Messiah!

ISAIAH 11:4

(the original cantillation as resurrected by the deciphering key)

[4] But he will judge with righteousness the poor; he will decide with fairness



for the afflicted of the earth; he will strike the earth with the rod of his mouth,



and with the breath of his lips he will slay the wicked.



What a disrupting voice! And what place is given to its "music?" Here, a minimal one. It humbles itself before the immanence of the vision.

What about the Babylonian Exile and the Return? All these vicissitudes aroused fear in a displaced people! The famous *Psalm 137* comments on the exile. Its reconstructed melody expresses the full measure of their distress (cf. PART TWO, Book II, chap. V). As for the return to the Promised Land, we will see that the Levites participated, faithful in their duty.

According to *Ezra* and *Nehemiah*, about 50,000 Babylonian captives were in the first group to return to Israel when the *Edict of Cyrus*, king of Persia (II Chron. 36:23), authorized the rebuilding of the Temple to the one true God.¹³ Among the returning Levites were 148 singers (Neh. 7:44). Like all the Hebrews, these priests participated right from their installation in the construction of the Second Temple (Ezra 3:8). Ezra describes how the traditional worship was reestablished: "Now when the builders had laid the foundation of the Temple of the Lord, the priests

stood in their apparel with trumpets, and the Levites, the sons of Asaph, with cymbals, to praise the Lord according to the directions of King David of Israel" (Ezra 3:10).

We also know the counter balance through the unfalsified testimonies that certain Levites were corrupted "when Israel went astray" (Ezekiel 44:10). This too the chronicle does not hesitate to disclose, rendering it more worthy of our trust.

With the construction of the Second Temple, Old Testament history comes to a close. The books of Esther, Daniel,¹⁴ Ezra Nehemiah and others appeared, completing the sacred heritage.

Ezra, as *sopher* ("one instructed in biblical knowledge"), gave the salutary impulse for the renaissance and reaffirmation of a consecrated faith, scrupulously respected in its tradition. We know that in those new times "the religious leaders were particularly commanded to correct the manuscripts of the sacred texts. Each scroll had to be carried to the Temple to be revised in comparison with a master copy kept in the Temple courts."¹⁵

These reported facts are a further proof of the survival of the ancestral faith and beliefs. Thus they are one more stone added to this other structure, the actual existence of the Tradition.

3) THE RECONSTRUCTED MONODIES CARRY THE IMPRINT OF THE DIVERSITY OF BIBLICAL TIMES; MOREOVER, THEIR CONTEXTURE ACKNOWLEDGES THEIR VARIOUS DESTINATIONS

One touching detail (brought to light only through the reconstructed original cantillation) testifies to the attachment to the Tradition manifested by the Levites. The cantillation of one verse from *Nehemiah* places us in the presence of a majestic double procession, when, after several years of effort and struggle, the wall of Jerusalem (designed to protect the Second Temple, menaced as it was by the evil intentions of the surrounding peoples) was finally rebuilt.¹⁶

Later on we will read the glowing account of a graceful, dignified cortege of outstanding persons under the leadership of Ezra the scribe.¹⁷ The consecutive repetition of one of the signs of cantillation is the musical motivator of this quotation. The sign _ is repeated five times in a row. It so happens that this particularity of the same repeated sign—more exactly, the same melodic phrase—is also found

accompanying a parallel passage in the book of Chronicles (I Chron. 16:4), where it is stated that David "appointed some of the Levites as ministers before the Ark of the Lord, even to celebrate and to thank and to praise the Lord God of Israel."

I CHRON. 16:5:

[5] Asaph the chief, the second Zechariah, (then) Jeiel, Shemiramoth,

'a_saf ha_ro'sh oú_mish_ne hoú ze_khar_yah ye'_i_ 'el oúsh_mí_ra móth

Jehiel, Mattithiah, Eliab, Benaiah. . . Obed-Edom

vi_hi_ 'el oú_ma_tith_yah ve'_e_lí_ab oúb_na_ya_hoú ve'_o_ bed'e_dom

and Jehiel played upon the harp and the lyre; also Asaph (played) cymbals / loud-sounding.

vi'_i_ 'el bikh_lé ne_ba_llim oúb_khin_no_róth ve'_a_saf bam_tsil_ta_yim mash_mí_a'

The correlation between the two passages is undeniable: the inauguration, then the "re-inauguration" of the Levites in their musical duties; and the intent of the latter melody is the most significant of all. Would this indicate a lack of imagination on the part of its creator (we address this to those who are unwilling to admit the anteriority of one over the other)? Would he have conferred with a colleague responsible for the correct singing of an analogous verse? Such a deduction is hardly serious. It is easier by far to admit the tender, fervent reminiscence of a still-living past, to which testifies the preserved melody itself.¹⁸

Sensitive, melodic reminiscences are equally present among certain Psalms of like inspiration. The *Hodou Ladonai* ("O give thanks to the Lord") have the same melodic theme, regardless of what follows in the

poetry or music. Two Psalms, *Adonay Malakh* ("The Lord reigns"), numbers 97 and 99, have a similar beginning. The *Alleluia* Psalms all begin with the same melodic idea (Psalm 147 excepted):



We realize that the creators of the psalmody were not lacking in imagination. The announcements heading the Psalms are in themselves expressive and imaginative! Also concerning this subject, it seems that certain psalm writers delighted in confirming the tradition.¹⁹

A curious example in this sense is Psalm 33. In like manner, the themes emphasizing the beginning of other characteristic psalms are regrouped under the hallowed words *Hodou Ladonai* and *Shirou Ladonai* ("Sing to the Lord"). The reminiscence is flagrant:

PSALM 33:2-3

[2] Give thanks to the Lord with the lyre, with the harp of ten strings sing praises to Him.

The image shows a musical staff with a treble clef. The lyrics are written in Japanese characters with Romanized phonetic transcription below them. The lyrics are: "hō_dōu la_dō_nay be_khin_nōr be_ne_bej 'a_ sōr zam_m roū_lō". The transcription includes vertical lines under each character and some horizontal lines connecting specific letters.

[3] Sing to Him a new song; play skillfully with a shout of joy!

The image shows a musical staff with a treble clef. The lyrics are written in Japanese characters with Romanized phonetic transcription below them. The lyrics are: "shī_roū_lō shīr ha_dash#_hē_ tī_ boū_na_gen bith_ roū_ah:". The transcription includes vertical lines under each character and some horizontal lines connecting specific letters.

Here, too, it is highly improbable that to save himself the trouble (or because of a "breakdown in inspiration"), the composer thought to look over the shoulder of his neighbor who set the same words to psalmody. These facts are really striking!

Everything pleads in favor of the thesis of a *staggered creation* of this cantillation, with recurrent themes or reminiscences of a deeply rooted Tradition. It actually appears to be woven, with the exaltation it contains, on the contrasting framework of various succeeding periods of biblical history, and not to be the "production" of some "school," posteriorly connected to it in order to enhance the value of the Book (cf. Postface).

Later we will see in the technical part of this book that *the psalmody rather than the prosody*, seems to have been created with an instrumental accompaniment in mind.²⁰ Its configuration (with its often disjointed melodic movements, notably in thirds, and particularly the V - I cadence found frequently at the end of verses) testifies to this. Its structure implies a *harmonization*. Again, these given facts reveal a music created for a specific purpose.

4) THE LEVITES JEALOUSLY GUARDED THE TRADITION, CONTINUING THEIR FUNCTIONS UNTIL THE DESTRUCTION OF THE SECOND TEMPLE IN 70 C.E.

After the end of Old Testament history, testimonies from history are lacking for a long period of time. In the absence of any "chronicle," we lose practically all trace of the Levites and their musical activity. We discover them again at the time of Herod, learning that the number of singers in service was still large at that time. From Josephus (Hebrew historian of the first century C.E.) we have certain details. Even though careful to be in Rome's favor, he nevertheless seeks to retrace the history of his people.

We know as well it was always a real "music" that was performed by the Levites, and furthermore, this music was both *choral* and *instrumental*. In fact, there was no service of worship celebrated in the Great Temple without a minimum of 12 singers and 12 instrumentalists.²¹ And yet the priesthood was in peril. Herod had marked his accession to the throne of Israel with the massacre of several priests. True, he had ordered the reconstruction of the Temple, but an idol—an eagle of gold—now ornamented the main door. For having it struck down during riot, the traditionalist zealots were burned alive.²² A stormy, irrespirable atmosphere.

Nevertheless, the number of Temple personnel was great: twenty thousand persons, according to Josephus.²³ An exaggerated figure perhaps, in the light of his tendency to overestimate, but which lets us

imagine there was an important minority. These officials worked in relay fashion in the worship duties. Twenty-four teams were in charge of the worship service, each group for one week. The musicians, quite numerous themselves, took part in the rotation as well.²⁴ This was a wise precaution concerning them, in a time when deportations were far from nonexistent; a musical tradition is not learned overnight.

Who would be surprised at such a vigor in the priesthood, in this context? It was because the major preoccupations of the Jews at that time were of a religious nature, and the liturgy took part in this. A. Cohen explains it thus: "In order...to distinguish (the Jew) from his neighbors, a simple belief would not have sufficed—a total *way of life* was necessary; his way of worship had to be special, his house typical..."²⁵ This remark helps us to better understand the deep reasons behind such conformity.

Upon the unexpected return to the Holy Land, Ezra (according to written sources) founded a body of teachers²⁶ destined to the guardianship with respect for the religious Tradition, already miraculously preserved, "in order to adapt it and develop it in accordance with the new conditions of their epoch" and to transmit it.²⁷

Then comes a long silence (cf. p. 126). But the famous revolt of the Hasmoneans against Antiochus Epiphanes (2nd century B.C.E.), who desired to make the Jews renounce their beliefs, proves that their faith was more than ever intact.²⁸

"How can this imperishable attachment...be explained," deduces A. Cohen, "if no channel from the 5th century, the period of Ezra, had led them to the knowledge of the Torah?"²⁹ And this just observation also explains how the liturgical music could have been preserved at the Temple of Jerusalem during that long period of silence, even escaping the influence of the Greeks, perhaps felt in Hebraic music at that time, but outside the Temple.

If what we call the "original" cantillation only dated (hypothetically) from this later period, how can we admit that the Hebrews of that time, with their obstinate attachment to a tradition (for the preservation of which they feared neither torture nor death), allowed innovators unconcerned for this legacy to transform from top to bottom the "repertoire" of the sacred cantillation? It is unthinkable. Certainly, there were some recent books,³⁰ and without a doubt some "new songs;" but the foundation had to have remained intact so long as the priesthood still functioned.³¹

5) THESE RECONSTITUTED SONGS CONFORM TO ALL THE NORMS OF ANCIENT MUSIC

It is difficult to think that such music, rooted in the same principles as ours, could have been created some twenty-five centuries ago. But the only knowledge we have had concerning ancient music has been by the testimonies concerning it; and lacking proofs, certain persons erringly considered them overestimated. Cognizant of the existence of an ancient music of an incontestable value, these testimonies take on a new vigor.

Heraclitus said "the Dorian harmony possesses a virile, grandiose character."³² Why not! There is now a precedent; let us be circumspect. The appreciation of these thinkers, considering music thus, is actually rather close to our own. Furthermore, if this cantillation may seem *familiar* to us, it is because it is based on permanent values and an intangible principle (cf. Introduction II). This principle is the attestation made by the sense of hearing of the hierarchy of close relationships among numbers. *The octave, in its correlation with the unison*, and the interval of a half-step, *the simplest of relationships*, are the grand portals of this little-known edifice, where the filiations are ramified to such a point that they confound thought. For too long a time we have restricted ourselves to considering just the superficial aspect of these relationships, and because of this certain persons denied their value.³³ But in their complexity these relationships are all the more powerful, because they *interact*—a fact which the new acoustics, thanks to its unheard-of precision of the measurement of sound in experimentation, is but now taking into account (cf. Postface).

Pythagorus, who introduced the musical number into Athenian thought, derived this principle from the Sumer-Akkadian foundation, which we know influenced all of Western Asia before invading Europe (cf. Introduction II). Upon this same principle (there is only one), Vedic India based its theory of sound,³⁴ as did China.³⁵ Even an anticipated "science" reigned (itself already millennial) linked to this principle, facilitating the production of musical instruments.³⁶ Whether we like it or not, our modern musical understanding is rooted in this principle.³⁷

Ancient excavated instruments of Egypt and Mesopotamia (dating from 4,000 years ago) confirm the high antiquity of the knowledge of these acoustical facts (cf. Introduction II). They attest to the **diatonicism*** practiced in these distant times. Moreover, they appear to testify of an equal affinity by these nations for the heptatonic scale (a seven-note, diatonic scale), which is the same as ours today.

It clearly seems then that this scale was not "invented" by us, but was *bequeathed* from the foundation of the ages. For us this scale is a generator of emotion. Why then should our ancestors have been insensitive to the same effects?

The Greek philosophers attributed a different "ethos" (feeling, expression) to the various modes. Our own sensitivity, anesthetized by the "major-minor" system, has lost a little of its acuteness in this sense. Does not Combarieu see here (and this is most-peculiar) a survival of magic?³⁸

Those admiring exclusively our occidental music thought it to be unique in its great power of expression. Here is where the rediscovered cantillation affirms the opposite. We repeat, the musical basis is the same and the ancients felt melodic nuances as much as we do and made use of them. Not all ancient peoples, however. China used the same knowledge to tune its sonorous pipes and strings. But its tonal system is more circumscribed.³⁹ The octave is only covered by a pentatonic scale (lacking two fundamental degrees of our scale). It is exempt of half-steps (since they did not have the same affinities with the "colder" intellectuals).



They also had a six-tone scale which also excluded half-steps, but by equalizing the distance between tones. Hermetical modes in which sensitivity—at least that which we feel—is excluded, voluntarily or not. Another way of feeling things!



We said above, concerning the discovery of such very ancient diatonic instruments, that "they seem to testify..." Actually the discovery of "diatonic" instruments does not automatically prove the use of seven-note, diatonic modes. In Sumer and Egypt, they could have given life to melodies using **gapped modes***, as in the Far East.

But the use of modes familiar to us, 2000 years before our era, is now confirmed. Just recently, in 1968, Babylonian tablets were discovered and decoded which date back to that epoch. They come from Chaldea, the country where Abraham was born. They accentuate the truth of what we have been elaborating up to now. They witness to a system (graphically confirmed) based upon diatonic modes of *seven degrees*,⁴⁰ having natural resonance as their foundation. Moreover, the scale system is based upon the **Lydian*** scale⁴¹ (the same scale revealed by our deciphering key—cf. p. 31). The principle series of degrees used is the **Dorian*** mode (which is equally true in our interpretation of the prosodic system of the "Tiberian" notation—cf. p. 32). This scale system, moreover, was universally practiced.⁴²

This stupendous correlation justifies our reconstitution historically from a tonal point of view. This music effectively corresponds with the practices current in antiquity.⁴³ And the existence of these important tablets, whose mystery was penetrated by the perspicacity of M. Duchesne-Guillemain, demonstrates that these scales, anterior to Greek modes, should have lent themselves to melodic configurations sensibly the same as in our reconstituted cantillation, since the distribution of half-steps is the same.⁴⁴

The analogy, however, does not seem to be complete. It is not proven that other kinds of ancient music (even though created according to the same norms) would have the same power of access to our heart if they were resurrected.

The diatonic modes are capable of expressing everything: the quintessence of feelings, or banality, or insipidness. They reflect what is breathed into them. The poetry of Sumer, Egypt, and Akkad, although similar in their principles to that of the Psalms, does not appear to have the same high essence.⁴⁵

This music is "music of the Bible," the "Book of books," born of the same irresistible impetus. Here is dismissed the primary prejudice concerning the effective correlation of the means of expression between the reconstituted cantillation and our music.

The former was bound to its method of transmission, which was supposedly oral. In ignorance of the possible efficacy of chironomy, not even aware of its existence (kept so well-concealed for whatever reasons), was it not plausible to doubt that an authentic musical art could flourish in such highly unfavorable conditions as oral transmission offered?

The situation is no longer the same. Our monody gives us the model of a music composed to permit its gestural representation (cf. p. 89), and which is no less perfect than our own (although quite different and less evolved).

Let us remember that this music was voluntarily circumscribed so that the chironomical figures, produced by two hands and by fingers, could easily be understood by the performers. This art, capable of limiting itself while remaining "valid," could equally have been that of the Egyptians, the Hindus, the Greeks, peoples whose usage of chironomy has left traces (cf. p. 71ff).⁴⁶

We have mentioned that the Bible stipulates the use of "two hands" at the time of David (cf. p. 90). But this practice, said to be "of David," does not apply to his time exclusively. On various occasions it is subsequently mentioned explicitly. "According to the order of David," it is stated, under the reign of Josiah (7th century B.C.E.—II Chron. 35:15). *Al yedê David*, meaning "after the hands of David," literally states the chronicler's comments on the return from the Babylonian Captivity (Ezra 3:10), and, before that time, those commenting on the reign of Joash (9th century B.C.E.—II Chron. 23:18).

But today this reference to chironomy goes by us unnoticed. Most translators, not understanding it, have remained evasive or silent. E. Dhorme, however, takes care to mention "the hands;" but among other allusions—even though the expression *al yedê David* is the biblical text, he adds "the fashion, the way of doing,"⁴⁷ when he should have simply said "according to the *chironomy* of David."

In general we ignore everything about this practice, already primordial in biblical times. We may suppose that certain translators had wind of the medieval chironomy (also practiced among the Jews, cf. p. 81); but it was totally different from the chironomy of the past, being simpler but inefficient,⁴⁸ and only making use of one hand (cf. p. 103).

How could one imagine, without concrete facts, a refined chironomy, signifying (by specific gestures of both hands) a very precise form of music? It is in fact the comparison of the music born from the Key and the chironomy springing from its notation which gives us the totally unexpected example of one in relation to the other (cf. p. 89).

All these facts evoked here clarify and validate, in the light of history, what the technical discovery proposed; and it all converges, suggesting to us a realistic picture of ancient music—an art which is even yet misunderstood.

**6) TO EQUATE THE TRADITIONAL CANTILLATIONS
WITH THE SACERDOTAL MUSIC
IS TO DENY, WITHOUT PROOF, THE BIBLICAL EVIDENCE**

"We tend to deny what we do not know." Without a doubt it is because of this tendency that certain persons considered themselves authorized to deny to the original cantillation what history, directly or indirectly, attributed to it—or even more, to contest its very existence.

Under the pretext that the instruments cited at the beginning of certain psalms are not the same as those which were specifically created for the worship service,⁴⁹ it was even thought that one set or the other had never actually existed. That was when, on the basis of the problematic relationship between certain Akkadian liturgical terms (attributed to the nomenclature) and these names of instruments (which figure at the beginning of a number of psalms), it was believed that here was the proof that these biblical terms also served the nomenclature.⁵⁰

On an equally coincidental relationship between the locutions designating certain Arabian-Persian musical types and the incipits of several psalms (such as "the hind of the dawn," etc.), it was thought this proved that the Levites could have used current, "fashionable" melodies for the music of the Psalms.⁵¹

These hypotheses, based on ethnological comparisons, were set forth in the hope of being able to prove the practice of cantillation bequeathed to us by the synagogue had its origin in the heart of the Great Temple at Jerusalem. (The former, it is true, does without instrumental accompaniment; the latter would not have done so!) Upon this fragile basis, it was thus suggested—always from these particular viewpoints—that the instrumental ensembles described by the biblical chronicle could hardly have concerned anything but instrumentalists performing *one after the other*, not simultaneously—each one making place for his successor's ritournello.⁵²

The totally empirical ingéniousness of the melodic formulation characteristic of the traditional cantillations (cf. Supplement II), valuable only for a sacred service without "apparatus," was attributed to the teachers of the Academy created by David. What a feeble science, if this was of the Levites! It would hardly have justified the presence of a cadre of so many trained performers, of "apprentices and masters."

Thus it was thought—in deprecating, even ridiculing the biblical testimonies—that the sacerdotal music of the Great Temple of Jerusalem presented, from its origin, a *direct* relationship with the cultic monodies of the traditional cantillations. The music of the Temple of Solomon (it was alleged) would not have had a fixed scale system, and would have been partly improvised.⁵³ What a denial of the repeated affirmations from age to age, given first by the Bible, then by tradition!

The attitude of Israel Adler on this subject remains objective. He does not resolve the problem of the original cantillation, since it has remained unknown to all. He takes into account the clearly specialized character of the corps of Levite musicians: "The singers of the Temple were professional musicians, trained for the preservation of the tradition from generation to generation."⁵⁴ He resolutely separates the traditional cantillations from it: "It is above all the examination of the musical organization of the synagogue which renders *unreasonable*⁵⁵ a direct filiation between the music of the Temple and that of the synagogue."⁵⁶

The testimonies of history have the suppleness of reed grass! When pushed aside, they disappear temporarily from the field of vision. But they continue to subsist, and surprisingly, the facts often cause them to straighten back up.

NOTES

¹ "The Jewish people, from the beginning so admirably gifted for music-making..." F. Gevaert, *Histoire et théorie de la musique de l'Antiquité*, vol. II, p. 3.

² The Ark of the Covenant, which contained the two Tablets of the Law, since the days of Moses was placed in the Tabernacle, the ambulatory place of worship.

³ A curved trumpet made of horn.

⁴ The exact pronunciation of the Hebrew text for these musical examples is given later on in PART TWO, Book I, Chapter 1. The rhythm, also treated in PART TWO, is succinctly explained on p. 55.

⁵ I. Adler, "Musique Juive," *Encyclopédie de la musique* (Fasquelle), vol. II, p. 640.

⁶ The monarchy was but recently founded then.

⁷ *Dictionnaire de la Bible*, vol. V, supplements, col. 1445. The traditional synagogal interpretations will be treated in Supplement II.

⁸ One of the twelve tribes of Israel.

⁹ A. Schaeffner, *Origine des instruments de musique*, p. 343.

¹⁰ Let us remember that syllabic rhythm is *even* in the Psalms. This justifies the use of modern notated rhythm in our transcription.

¹¹ The Hebrew state was split into two kingdoms, Israel and Judah.

¹² It was Jehosaphat in the 9th century who commanded the Levites to go throughout all the land of Judah, instructing the children of Israel in the faith of their ancestors (II Chron. 17:7-9).

¹³ There were 42,360 individuals (cf. Ezra 2:64, Nehemiah 7:66); Zerubbabel was their leader.

¹⁴ According to certain specialists, the book of Daniel comes from a posterior date; nevertheless, it is canonic. [We should note the fact that the cantillation even in Daniel is pre-Hellenistic in its theoretical base.—Ed.]

¹⁵ G. E. Weil, *Elie Levita*, op. cit., p. 325.

¹⁶ Each citizen, priest, Levite, noble or otherwise, personally participated, working with one hand, holding a weapon with the other.

¹⁷ Cf. p. 267.

¹⁸ This accent is repeated in a similar way in I Chron. 15:18, 23 and (to a lesser degree) in I Chron. 25:3-4, both of which refer to the Levitical musicians.—Ed.

¹⁹ By making oblique references to it.—Ed.

²⁰ But apart from the Song of Songs and other canticles, of course, it is quite possible that the prose texts were accompanied by the lyre or harp in common use (cf. Introduction II).

²¹ "Two harps, nine lyres, one pair of cymbals." I. Adler, "Musique Juive," *Encyclopédie de la Musique* (Fasquelle), vol. II, p. 641.

²² F. Josephus, *Antiquités judaiques*, vol. IV, pp. 95-97.

²³ F. Josephus, cited by Charles Guignebert in *Le monde juif vers le temps de Jésus*, p. 76.

²⁴ Charles Guignebert, *ibid.*, p. 77.

²⁵ A. Cohen, *Le Talmud*, p. 20.

²⁶ The "Great Synagogue" (*Aboth I, I*), with which were affiliated the "scribes" of whom we spoke earlier (cf. p. 123).

²⁷ A. Cohen, loc. cit.

²⁸ *Ibid.*

²⁹ *Ibid.*, p. 21. See also Postface.

³⁰ Cf. p. 123.

³¹ Criticism, as we know, attempts to place in later centuries the redaction of certain books of the Bible (which claim to relate to more ancient persons or events), under the pretext of certain revealing particularities. But this kind of criticism is far from being unanimous, and moreover, it is

contested. It is possible that throughout various periods, undoubtedly anterior to Ezra—who imposed the rigorous respect for the Text (cf. p. 123)—certain modifications were made by some for the better comprehension of their contemporaries. Without a doubt many editions of works from the Middle Ages or the Renaissance undergo more marked alterations today; this does not cause us to question their ancient origin! Well-received in the 19th century, these hypotheses are more or less refuted today. (For more on this subject, see F. Thiburger, *Le Roi Salomon et son temps*, pp. 227-245; E. Dhorme, *Dictionnaire de la Bible*, vol. I, p. XXIX; G. Nahon, *Les Hébreux*, p. 76; etc.) Cf. Postface.

³² Cited by Plato (*Republic* III).

³³ For example, J. J. Rousseau, contradicted by Rameau: "What does he pretend when he adds that the consideration of proportions is not useful in theory? Is not this consideration part of the theory? A part which had principally occupied all the savants which have treated this matter, beginning with Pythagorus." Rameau, *Lettre à d'Alembert*, p. 2. Closer to our time, A. Machabey insists on the fact that "the consonance of the octave above all—but also of the fifth and of the fourth...of a psycho-physiological order...have received no explanation in this area." A. Machabey, *Genèse de la tonalité musicale classique*, p. 16.

³⁴ Cf. J. Combarieu, *Histoire de la musique*, vol. I, p. 50; also Dom Parisot, *Dictionnaire de la Bible*, vol. IV, col. 1350, which cites this affirmation by J. Weber: "In ancient Asia, India was in possession of a tonal scale nearly identical to that of modern physicists."

³⁵ Cf. J. Combarieu, *ibid.*, p. 48. He cites a Chinese author from the end of the 3rd century B.C.E. who explains diatonic generation by means of the circle of fifths as did Pythagorus.

³⁶ This is summarized in the famous law of Pythagorus: "When a string remains the same, and its tension remains unchanged, the period of vibrations is proportional to its length." A formula well-known to acoustical specialists. (Cf. J. Jeans, *Science et Musique* (Paris: Hermann, 1939), p. 71.

³⁷ It is our "musical sense" which helps us evaluate the similarity of certain tonal relationships—a similarity to which mathematics attests.

³⁸ "Almost certainly the survival of the traditions of musical magic among the Greeks is the doctrine of 'ethos,' or the expression and moral power of the modes; an often indistinct doctrine, in most cases little justified by purely musical reasons..." *Histoire de la musique*, vol. I, p. 84.

³⁹ Four 5ths linked together as 3:2, produce the pentatonic scale: C:G, G:D, D:A, A:E.

⁴⁰ M. Duchense-Guillemain, "La théorie Babylonienne des métaboles musicales," in *Revue de Musicologie* (Paris: 1969), Chart A, p. 8.

⁴¹ *Ibid.*, Chart D, p. 9.

⁴² *Ibid.*, p. 5. Concerning the Dorian mode, let us listen to J. Combarieu: "The Greeks thought they invented this mode; actually, it is universal... ." *Histoire de la Musique*, vol. I, p. 85.

⁴³ Look at the surprising equity of this observation by A. Machabey: "A planetary scale" (the diatonic scale of seven degrees) "written down in Gnostic and magico-Byzantine MSS... a scale offering one of the forms of the archaic Dorian octave with E as the fundamental and A as the 'mese,' the middle note or 'tenor'... This was also the Egyptian tetrachord *par excellence*, as well as that of the most ancient Israelite psalms." "Musique byzantine," *La musique des origines à nos jours*, p. 72. Of course, it is not the Psalms but the prosody which is supported by the Dorian mode, characterized by the second degree being a half-step from the tonic. Nevertheless, it still concerns the biblical cantillation of the Hebrews.

⁴⁴ M. Duchense-Guillemin, op. cit., p. 8, Chart C.

⁴⁵ "We must not exaggerate the resemblances that appear between the hymnology of Sumer and Akkad and the Israelite psalmody... Not one psalm contains any conjuration against the evil devices of sorcerers or demons... Hymns of thanksgiving are quite rare in Mesopotamian hymnology." R. Tournay, *Les Psaumes*, p. 47.

⁴⁶ Recent opinions about ancient melody fully confirm this revelation due to our "deciphering key" (cf. Introduction II).

⁴⁷ E. Dhorme, *Dictionnaire de la Bible*, vol. I, p. 1417, note 18.

⁴⁸ "Occidental chironomy does not make use of the complex signs formed by the fingers; it is simpler than the chironomy of Byzantium or Egypt." M. Hugle, "Chironomie médiévale,"

Revue de Musicologie (July 1963), p. 171.

⁴⁹ PART TWO, Book II, chap. 5.

⁵⁰ S. Langton, cited in *Dictionnaire de la Bible*, vol. V, suppl., col. 1437.

⁵¹ C. Sachs, *The History of Musical Instruments*, pp. 124, 127.

⁵² "The new element is the sacred dance accompanying the singing; with the religious change in direction which commences, and the abandonment of instruments associated with it, sacred dance could have replaced the instrumental ritornello of the Temple in later ideas..." L. Bréheir, *Les idées philosophiques et religieuses de Philon d'Alexandrie*, cited by *Dictionnaire de la Bible*, vol. V, suppl., col. 1448.

⁵³ *Ibid.*, col. 1437.

⁵⁴ I. Adler, "Musique Juive," *Encyclopédie de la Musique* (Fasquelle), vol. II, p. 643.

⁵⁵ Our emphasis.

⁵⁶ I. Adler, loc. cit.

CHAPTER VI

RELATION OF THIS MUSIC TO THE SYNAGOGUE CHANTS

Traditional cantillations are the product of the synagogue which explains their nonprofessional character. Relationship between some synagogue chants, plain chant and the reconstituted biblical chant confirm the latter's authenticity.

— Summary —

- 1) The traditional cantillations were sung in the synagogue, not in the Temple at Jerusalem. In ancient times the synagogue functioned parallel to the Temple 138
- 2) Plain chant derives from synagogue chant. Renovated by inspired creators, it constitutes an art 140
- 3) The Temple at Jerusalem was the focal point for the Jews of Palestine and of the Diaspora. These pilgrims heard the songs of the Levites, consequently, the same songs that we are resurrecting 145
- 4) The obvious correlations between certain traditional cantillations, plain chant and the reconstructed cantillation prove they existed as contemporaries 146
- 5) Thus the antiquity of the traditional cantillations is confirmed—but also the authenticity of the cantillation resurrected by the deciphering key. This indicates the existence of two musical currents in antiquity: noble music and utilitarian music (the latter alone surviving to the present in the Hebraic tradition) 153

**1) THE TRADITIONAL CANTILLATIONS WERE SUNG
IN THE SYNAGOGUE, NOT IN THE TEMPLE AT JERUSALEM.
IN ANCIENT TIMES THE SYNAGOGUE FUNCTIONED
PARALLEL TO THE TEMPLE**

History shows us that it was not in the Great Temple at Jerusalem where the traditional cantillations (or even some of them) were sung, but in the synagogue.¹ They never constituted anything but a *minor* sacred service. In that far-distant epoch the synagogues were what they still are today: "houses of prayer," reserved for the locally circumscribed communities. In them was practiced a specific ministry: the recitation of the Psalms and the reading of the Bible. There also children were instructed in the Law of Moses and help was given to the poor. Thus, when the ancestral liturgy of the Temple ceased as Jerusalem lay in ruins (70 C.E.), no part of the worship service anywhere was conducted in as prestigious a manner as that of the Great Temple; in its form, the latter was extinct.

The principal objective was the survival of the principles of the ancestral faith—not a glorious attestation of it. Under the instigation of a respected authority, Rabbi Ben Zakkai,² religious schools succeeded one another, attended by numerous disciples (some schools numbering more than a thousand). We know that the students, upon completion of their studies, left as delegates to call on the more distant communities.³ We have evidence that cantillation was not neglected in these centers,⁴ but we realize that there was never any question of training these future delegates as professional musicians.

Respect for the Holy Scriptures was one of their major preoccupations; consequently, there was reason to examine the Hebrew text with opportuneness. This point was all the more important since Hebrew had long since ceased to be a living language, and the Bible [Hebrew text] was devoid of our customary marks of punctuation.

Moreover, even had they been musically better instructed, they would never have pretended to correct the musical errors they encountered, since their mission was to correct the *punctuation* and *pronunciation* in the diverse and distant communities they were destined to visit.

Concerning this, each synagogue had its own customs (or rather, problems). The sacred texts were truly "cantillated" in each of them, but not by *chantres* ["singers"] instructed in the art of sound production. A

member of the community was asked to do this;⁵ preferably, someone with "a beautiful voice."⁶ Is it necessary to attempt a parallel between this "bee swarm" of liturgies and the memorable liturgy of the unique Sanctuary? In the Talmudic centers they did not even have a clear remembrance of what it was like a relatively short time after the destruction of the Temple.⁷

Even if the Tradition of sacerdotal music was effectively transmitted to the synagogue, it could only have been, under these highly precarious conditions, rapidly denatured. It is barely in the 6th century that the entitled cantor known as *hazzan* appeared in the synagogue.⁸ Moreover, at this late date, if the *hazzan* was musically qualified (which generally was not especially the case), how could he have resisted the established tradition? History declares that this was "local tradition" for the preceding and succeeding centuries;⁹ this seems in fact to justify the notation which appeared in Palestine in the 6th century (just as notations were appearing virtually everywhere else in the same epoch). It must be remembered that this was a sporadic notation (cf. p. 49), in discord with the traditional bases as revealed soon after by the signs of Tiberias.

This local notation must have responded to the current trend manifesting itself everywhere else (cf. p. 58): the desire to put into fixed written form the chironomic figures in use, by means of pictographical signs. The meaning of these signs remained generally ambiguous everywhere, as we have seen (cf. pp. 51-53). So it does not surprise us that the cantillations of the various communities were divergent during this period. This observation coincides with history. But it could seem paradoxical that the traditions already differed among each other from the very first centuries of our era.

It must be remembered that the synagogue was not founded when the Temple disappeared,¹⁰ but six centuries before. Born in Babylon at the time of the deportation, it was useful for the religious life of the Hebrews away from their homeland. These Houses of Prayer were the "rallying points of a nation without a home."¹¹ Equally useful for practical life, they were maintained when Cyrus permitted the exiles to return to the country of their ancestors in order to rebuild the Temple.

How can we imagine, for our own edification, that the synagogues, anterior to the destruction of the Second Temple, were able to benefit from a liturgical music of real value, specifically that of the Levites? We know that these were professional musicians (cf. pp. 114-115), passing their training from father to son, specialized in their duties for nearly a

millennium, experts in their art and masters of wisdom. They were consequently *equipped* for the perpetuation of a great music and even for creating it (certain Psalms are "of Asaph," the principal chief of the singers under David, the "musician king;" others are "of the sons of Korah," also Levites; and so on).¹² But in antiquity hardly any community had at its disposal such effectives, neither in numbers nor in quality.¹³ And the diversity of local customs, the remoteness of synagogues, the more important religious centers, all added their problems to this deficiency.

Without a doubt the tradition was observed in each community, but the tradition itself was already pluralistic and divergent. We have the echo of these synagogal monodies (defined according to their compositional structure as "primitive"), which the communities claim come from the earliest tradition.¹⁴

We will study them in PART TWO (cf. Supplement II). Nevertheless, right now we must state that they are a simple tonal framework, shaping themselves by local customs to the size of the verses rather than being capable of indicating the punctuation by their inherent syntactical power (Supplement II). An initial motive, without a real "figure," repeats itself almost exactly from verse to verse for an entire chapter at a time, freely "stretching itself" by the repetition of a tone in order to accommodate a larger or smaller number of syllables, according to the varying length of the phrase members.

This was a form undoubtedly appropriated from the ancient custom of cantillating one or another portion of diverse sorts of texts; the Talmud itself boasts of the mnemonical virtues of this practice.¹⁵ It is in this "spontaneous" music then that the principal source of plain chant must be sought. And even though it was able to escape the degrading influence of its source, it nonetheless bears obvious traces of it.

2) PLAIN CHANT DERIVES FROM SYNAGOGUE CHANT. RENOVATED BY INSPIRED CREATORS, IT CONSTITUTES AN ART

It is an established fact that the Christian worship service was based on that of the synagogue and not of the Temple of Jerusalem. Jesus preached first in the synagogues before taking on the Temple. The synagogue was the weekly meeting place of the Jews in Palestine and

elsewhere. The first Christian disciples of Christ frequented the synagogue like other Jews. Their presence in the Great Temple "was only occasional."¹⁶

The liturgical songs that the followers of Jesus, still identified with Judaism, most frequently heard were those of the synagogue. When they later separated themselves from the synagogue, they were impregnated with its melodies. But the proselyting early church welcomed the pagans; while the Jews, with memories of all-too-recent, horrible cruelties, separated themselves from them.¹⁷

The Jews of the synagogue confining themselves to their exclusive traditions, were attached to paralyzing principles. On the other hand, evolving Christianity embraced licentious kinds of music of diverse origins. This is why Clement of Alexandria¹⁸ felt constrained to forbid an adulterated form of Christian monody; i.e., a certain kind of chromaticism "belonging to those men who placed flowery wreaths on their heads and who enjoyed hearing songs of the style of debaucherous women."¹⁹ On the other hand, he praised the liturgical music of the ancient Hebrews (as a consequence, the music of the Great Temple). "The songs of the Hebrews were of regular and harmonious cadence; their melodies simple and serious."²⁰ This is a probing testimony relatively close to the time (in the 2nd century) when the Levites performed, which has the extreme value of concording with the impression given by the reconstituted music (if it had been disadvantageous, our deductions—which we wish to emphasize by comparison with history—would have been countered).

"Strangled" by these strict measures and by others,²¹ the song of the church was purified. It became the polished mirror of the Christian soul: an intense spirituality, "detached" from reality. It conserved the diatonic and heptatonic bases with which the believers could evaluate (so long as the Temple stood) the two antagonistic models (the synagogue being the opposite model). But carried away with the current of musical evolution, it welcomed the system of "eight tones."²² This was a complicated theory in comparison with the unique scale of the ancient Hebrews that we have rediscovered—and even in comparison with other ancient systems.

In the framework of these eight "authentic and plagal" tones, the tonic, in fact, is not stationary in relationship to the other degrees of the scale. It is *movable* as is the **dominant*** or **tenor***, even the **mediant*** (at least in theory, for the practice remained evasive).²³

Another distinctive mark was that the verses no longer ended on the same unique note, as did the Hebrew cantillation, whether it be the traditional cantillation or what we hold to be the original. This rigidity seemed henceforth, no doubt, excessive. Neither did the melodic **caesuras*** call for the same privileged scale degrees.²⁴ The modes lost their acuity; the degrees, their functional value. And yet, in this universe of a dimension which constituted the melodic line without real foundations, this music, manipulated by inspired creators,²⁵ expresses a new art form, born of a new spirit of faith. Whereas the synagogue chant, which is not considered to be the work of artists, has no sense at all.

Plain chant, as we know (cf. pp. 84-85), largely employed the vocalise, which gave to pure music a particular sort of expression. The same is true for the "couplets and refrains" which are said to be due to Egyptian influence.²⁶ Neither the traditional cantillations nor the reconstituted cantillation makes use of these. For the latter, this is to be expected; in such repetitions as these, music no longer exclusively serves the Text. As for the synagogue cantillations, it is a confirmed fact that, at all times, a deviated, misunderstood tradition quenched the expressiveness of the music itself.

Thus, on the conspicuous foundation of a diminished form that was thought to be that of ancient music, Christian chant took real flight. It developed in its own liturgy the "musical" element, because it existed and, furthermore, had existed anteriorly. It was aided all the more by the fact that it used a language other than the original: first Greek, then Latin. It established its own laws rather than containing itself! It was able to preserve (or rediscover) a nonmetrical rhythm (that of our reconstituted psalmody), but it shaped it according to the verbal accents (in the image of the prosody according to our deciphering key), which was the current manner of music in that epoch (Introduction II). And it sometimes doubled the syllabic time,²⁷ especially before the **caesura***; this was borrowed from Greek rhythm.

As we said above, this was a turning point in history and not a beginning. But undoubtedly the most spectacular transformation was the flowering of melody. Freeing itself of the heavy constraint of ancient chironomy which "dammed up" the melody in order to express it conveniently by gestures, it poured forth in renovated contours.

Of course, the problem of its notation was posed anew. Chironomy had become just an "aide-memoire;" but history proves to us that antiquity had treated it adroitly (cf. pp. 72-79), and that it also was

capable of benefiting from it in a way we would never have suspected without the music unveiled here (cf. pp. 88-90).

Consequently it is to this outdated method that the music of the Church owes everything that it has. Without this earlier scaffolding, implanted on the solid basis of natural expression and a well-known tonality, how could the liberated monody have instantly found the right path?

INTROIT (8th tone): First Sunday of Advent (Gregorian chant)²⁸



Ad te le_ vá_ vi á__ ni_mam mé_am___

Whereas in its wanderings (with a similar appearance), the synagogal chant has no sense. Correlations with the synagogue chant undeniably exist; for they have the same construction and often the same norms:

RESPONSE OF THE OFFICE OF ASCENSION (Gregorian chant)²⁹



A_scen_dens Chris_tus in al_tum : Al_le__ lu_ia, al_le__ lu__ ia

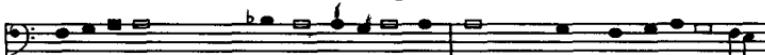
EXODUS 12:21 (synagogal tradition from Yemen)³⁰



vay_yiq_ra' mo_sheh__ le_khol - ziq_né yis_ra_ 'el

Notice the same melodic contours, phrase beginnings, **tenor***, and falling of phrases:

PSALM 109 (Gregorian chant)³¹



Dí_xit Dó_mi_nus Dó_mi_no mé_o: Sé_de_a déx_ tris_mé___ is

PSALM 122 (synagogal tradition of Yemen)³²

sa_ mah_ ti be_ 'om_rim li beth 'A_dó_nay' ne_ lekh

Here we see the same characteristic "flex" (inflection)...

**HYMN OF THE OFFICE OF LAUDES,
Pentecost Sunday (Gregorian chant)³³**

Sá_cro di_é rum cí_cu_lo, Quo lé_ge fit re_ mis_ si_ o.

PSALM 19, v. 2 (synagogal tradition from Persia)³⁴

hash_ sha_ ma_ yim me_ sap_ rim ke_vd- 'El_



où_ma'_a_ seh ya_dâv ma_ gid ha_ ra_qî_a':

... and certain similar melodic forms, already pointed out by many scholars.

If the synagogal cantillation had only originated during the opening centuries of the Christian era, it could not have been instantly what it was. Moreover, plain chant could not have been so rapidly impregnated by it. "A musical language, nor more than a verbal language, could not possibly be the work of one man; it is the result of continuously slow transformations and deformations."³⁵

Besides this, if the traditional cantillation itself, at that period of time, had not already been a reminiscence of the past, would it not have undergone the confrontation of "modernization" without even defending itself?

The following conclusion is then drawn: at least some of these ancestral chants are really anterior to our era. Cautious musicologists did not dare state this for lack of proof.³⁶ Here then are the proofs coming to us from an unexpected source.

**3) THE TEMPLE AT JERUSALEM WAS THE FOCAL POINT
FOR THE JEWS OF PALESTINE AND OF THE DIASPORA.
THESE PILGRIMS HEARD THE SONGS
OF THE LEVITES,
CONSEQUENTLY, THE SAME SONGS
THAT WE ARE RESURRECTING**

At the time of Herod, the Jews in Palestine and all those residing in far-away countries maintained close contact with Jerusalem, in spite of their own community life. The Temple was the real center, the heart, the very reason for living, not only of the nation, but of all of the exiles. From thence comes the importance and prestige of the sacred service which was celebrated there, from thence the conscience of the Levites regarding the importance of their work, and from thence their widespread reputation among believers everywhere.

Not only the Jews of Palestine participated in the maintenance of the Levites (as in the past—Deut. 18:3), but equally those of the Diaspora.³⁷ The number of dispersed communities was considerable; few people imagine just how many there were.³⁸ "Two and a half million pilgrims," estimates Josephus (who tends to exaggerate).³⁹ "Thousands of Jews from thousands of cities," confirms Philo of Alexandria, no doubt more accurately.⁴⁰ Each exile came at least once in his lifetime to behold the glory of the sacred service in the Temple. It is unthinkable that they returned home disappointed.

Certain communities had their own rather "refined" sacred chant. Philo reports a ceremony of the Therapeutes, a sect of the Essenes of Alexandria,⁴¹ in which there was the participation of choirs, alternating and even mixed,⁴² and songs set to Greek meter (proof of local geographical influences upon the synagogal liturgy).

This said in passing, would the pilgrims of Alexandria have tolerated that the music of the unique sanctuary, the Great Temple, to be inferior to what was heard locally in their own synagogue? We must admit that the Holy Scriptures were chanted in every community. But in this case, their monodies were contemporary with those of the last Levites—with

that wonderful liturgical music reconstructed by the "key," respected, in all probability (cf. pp. 126-127), with the same integrity as the other elements of the sanctified priesthood.

Would not the prestige which characterized the Great Temple have caused certain melodies (seeing their great beauty) to make their imprint upon the cantillations of various communities? Not in their totality, of course, given the precarious means of transmission. But what testimonies, what reminiscences were passed on?

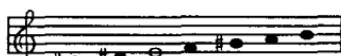
This is just what we are about to observe! True, in order to do this it was necessary to know the original monodies, which revelation would have necessarily fallen to us.

4) THE OBVIOUS CORRELATIONS BETWEEN CERTAIN TRADITIONAL CANTILLATIONS, PLAIN CHANT AND THE RECONSTRUCTED CANTILLATION PROVE THEY EXISTED AS CONTEMPORARIES

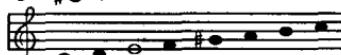
Ineffective in their ensemble and deprived of significance, the oldest oriental synagogal monodies sometimes show strange correlations with the musical, expressive melodies of our reconstruction. The modes often coincide, as does the **ambitus***, when it is not reduced to four or even three terms (as in the case in certain countries).⁴³ We think it is just a case of scattered, denatured echoes, but the ensemble of similarities compels this conclusion.

First of all, the mode for the narrative of the Creation (Baghdad tradition)⁴⁴ presents a curious analogy with that shown by our reconstituted music (the characteristic augmented second between the second and third degrees—cf. p. 32):

— tradition of Baghdad:



— reconstructed cantillation:



One seems to be the "blanched" plagiarism of the other.

In addition, a characteristic melisma of our decipherment (cf. p. 97):



q

is found in this tradition *as elsewhere*; and precisely right where the sign is

present in the text. This coincidence is all the more striking in that the melodic figure is *uncommon*. In numerous traditions, melodic figure and sign coincide; the reader should observe this—it is a fact worth remembering.

In the *Decalogue* (as transmitted by the oral tradition),⁴⁵ the melodic figure coincides three times on the same page with the corresponding sign. We should note that the sign is presented (still on the same page) in inverse form, as it corresponded to the inverse melodic figure (cf. Supplement II):



Even more, the version of the Decalogue just cited is a sort of stunning "parody" of the wonderful narrative that we have deciphered. For the sake of comparison it is worth citing, if only for a few verses:

DECALOGUE, Exodus 20:2-4 (synagogal tradition)⁴⁶:

[2]

'a_no_khì 'A_do_nay 'e_lo_hè_kha 'a_sher hò_tse_thì_'

kha me 'e_rets mits_ra _____. yim mi_bèth 'a_ba_dim

[3]

lo_yih_yeh le_kha _____. 'e_lo_hìm 'a_he_rìm _____. 'al pa_nay _____.

[4]

lo' tha_seh le_kha fe_set ve_khol te_moū_nah
a_shér bash_shá_ma_yim...

DECALOGUE

(same verses, reconstituted according to our deciphering key):

[2] I am the Lord your God, who brought you out

'a_no_khí 'A_do_nay 'e_lo_hé kha 'a_shér hō_tse_thì_kha

of the land of Egypt, out of the house of slaves.

me'_e_ rets mits_ra_ yim mi_beth 'a_ba_dím

[3] Shall not have / you / any gods / other / before me.

lo' yih_yeh le_kha 'e_lo_hím 'a_he_rím 'al pa_nay

[4] Shall not make / you / an idol nor any likeness

The musical notation consists of two staves of music in G clef. The first staff begins with a short melodic line followed by the lyrics "lo' - tha'_a_seh" with cantillation marks. The second staff continues with "le_kha fe_ sel ve_khol te_moū_nah" and ends with "of what (is) in heaven...". The third staff begins with "'a_ sher bash_shā_ma___ yim..." and ends with a final note.

In the traditional cantillation there is no musical substance, but when compared with the original version, a "breath" of the original strikes the ear, ever so faintly, as if a popular tune were being reproduced by a toddler!

Other echoes are equally discernible. The line of a traditional cantillation of Ecclesiastes evokes the same melancholy as our original version:

ECCLESIASTES 1:3 (synagogal tradition)⁴⁷

The musical notation consists of two staves of music in G clef. The first staff begins with a short melodic line followed by the lyrics "mah - yith_ rōn la_" with cantillation marks. The second staff continues with "'a_ dam be_khol - 'a_ ma_ lō" and ends with "shey_ya_ 'a_ mol ta_ hath hash_shā_ mesh:". The third staff begins with a melodic line and ends with a final note.

Compared to other traditions, this stands out clearly.

Certain other chants are like sketchy outlines of the original cantillation, as one finds by the examination of similar intervals.⁴⁸

But in listening to the beginning of the "Song" in the version of Turkish Kurdistan,⁴⁹ we are really amazed to see that it is a pure and simple "variation" of the initial monody (that which resurges from the Key):

SONG OF SONGS 1:1

a) Synagogal tradition of Turkish Kurdistan

[1] The Song of Songs, which (is) of Solomon . . .

shir hash_ shi_rim 'a_ sher lish_ lo_moh _____

b) Original melody, restituted by the deciphering key

[1] The Song of Songs, which (is) of Solomon . . .

shir hash shi rim 'a_ sher lish_ lo moh
/ \ / * |

We cannot tarry here! The crowning touch of all, however, is the similarity of the melodic figures beginning the book of *Lamentations* — a *triple* resemblance. As revealed (with general surprise)⁵⁰ by Dom Parisot, the similarity between the plain chant and the synagogal tradition of Damascus, which reveals its far-distant antiquity, is truly striking.⁵¹ But who will not be startled to see this coincidence reach back to the *original cantillation*, the fruit of the deciphering key?

LAMENTATIONS 1:1 (according to the deciphering key):

[1] Alas! (how) she sits lonely, the city (that was) so populous!

'è_kah yash_bah ba_dad ha_ír ra_ba_thi 'am

She has become like a widow; she, once so great among the nations

hay_thah ke_ 'al_ma_nah ra_ba_thi ba_gô_yim

(a) princess among the provinces, she is become a vassal!

sa_ra_thi bam_m_ dî_noth hay_thah la_mas :

LAMENTATIONS 1:1 (synagogal tradition of Damascus) :

'è_kah ya_she_bah ba_dad ha_ír ra_ba_thi 'am

ha_ye_thah ke_ 'al_ma_nah ra_ba_thi ba_gô_yim

sa_ra_thi bam_me_dî_noth ha_ye_thah la_mas :

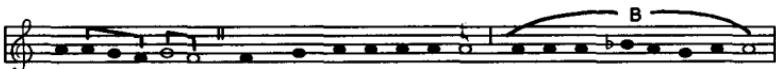
LAMENTATIONS 1:1
 (Gregorian chant, Tenebrae of Maundy Thursday)

The beginning of the lamentations of Jeremiah the prophet.



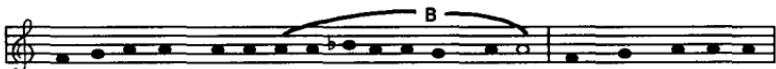
In_ci_pit La_men_ta_tio Je_re_mi_ae Pro_phe_tae.

(Verse 1) Behold there (sits) lonely this city (once) so populous.



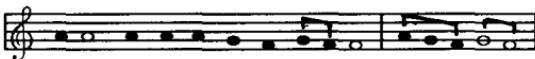
A_leph. Quo_mo_do se_det so_la ci_vit as ple_na po пу_lo:

She is become like a widow, the queen of nations; princess of provinces,



fac_ta est qua_si vi_du_a do_mi_na Gen_ti_um: prin_ceps pro_vin_ci_

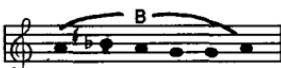
she is become (a) vassal. (Verse 2)



a_rum fac_ta est subtri_bu_to. Beth.

The same characteristic interval, an ascending fifth (A), is to be found at the beginning of both the traditional cantillation of Damascus and the original (which we have restituted).⁵²

The following particular musical phrase is the same *in all three versions*:



But the Christian tradition is less stingy in its use than that of Damascus. Moreover, it makes the phrase coincide with its specific text (B), whereas the synchronism is lost in part in the synagogue tradition.⁵³

Furthermore, the cantillation for Maundy Thursday makes this very phrase the "theme" of Lamentations, thereby emphasizing its predilection for this plaintive evocation—a predilection so representative of plain chant (disengaging itself from the text). This allowed the influence which the wonderful original cantillation had on listeners of yore to penetrate again. What a noble model is the original chant, and much more impressive than its reminiscences.

LAMENTATIONS 1:2 (restituted original cantillation) :

[2] She weeps bitterly in the night, her tears (are on) her cheeks . . .



**5) THUS THE ANTIQUITY OF THE TRADITIONAL
CANTILLATIONS IS CONFIRMED
BUT ALSO THE AUTHENTICITY OF THE CANTILLATION
RESURRECTED BY THE DECIPHERING KEY.
THIS INDICATES THE EXISTENCE
OF TWO MUSICAL CURRENTS IN ANTIQUITY:
NOBLE MUSIC AND UTILITARIAN MUSIC
(THE LATTER ALONE SURVIVING TO THE PRESENT
IN THE HEBRAIC TRADITION)**

Let us leave aside plain chant now. In order that these two cantillations (the reconstituted and the synagogal despite their differences) show us such similarities, they must have necessarily been contemporaries. There were no phonographic recordings in that far-off period of time! Moreover, one can only deduce that the cantillation taken as a model could not be the one called "traditional" (which is "denatured"), but the other, the perfect one, which is conformed with the accepted notation and is reconstituted according to the deciphering key.

The original cantillation of the Temple of Jerusalem did not leave a living tradition; consequently, it could not have been long after the fall of Jerusalem that it was so coarsely imitated. Therefore it was from the

cantors of the Great Temple themselves that the listeners so poorly learned or so poorly perpetuated it.

This is really what all the facts together allow us to deduce, testifying in one stroke to the antiquity of two cantillations: that of the synagogue (in part, at least), and that which is the object of our reconstitution. This unexpected perspective given by three traditions confirms a state of things which captivates our curiosity. Ancient music was beautiful, undeniably constituting a real art. But this music, apart from the original cantillation of the Hebrew Bible, is dead (alas, one would think so!). The sole vestige is the cantillation which is rediscovered thanks to the Tiberian notation, and our deciphering key.⁵⁴

On the other hand, it is rightly recognized that there was one common source for the traditional synagogue cantillations. It effectively existed, but without the least relationship with the incomparable art form that we have brought back from oblivion, which is the example of the skillful music of ancient civilizations. This common source was the procedure which was well-known at that time (we are told) throughout Western Asia, which consisted of "formulae or initial or terminal *motives* with a conjunctive or disjunctive character."⁵⁵ These motives crudely signaled by analogy the beginning, middle and end of written phrases, adapting themselves completely to their varying lengths, and endlessly repeating themselves for an entire chapter — formulae for which the synagogue tradition and plain chant provide us with countless examples.

This *utilitarian* music was the "other musical current" of antiquity. Common music, "obscure" music (to take up again Cicero's word — cf. p. 60), only served to indicate as much as possible the punctuation, in the absence of the special signs which appeared later. Upon these subordinate intonations were grafted (more or less) the misunderstood musical signs of Tiberias, before the tenth century — moreover without modifying the chants in the least.⁵⁶

There lies the curious historical fact, which is the cause of general error: only the "menial" music survived, as witnessed by the synagogue chants which persist to this day. It transmitted its weaknesses to plain chant, which surmounted them, finally giving itself an often artistic value (thanks to the trained ears of its creators). And subsequently it was thought that the sequel to plain chant was not just *our* modern music, but *music in its entirety* as an art form. And this occurred because of the erroneous testimony brought by the respected tradition of the synagogue (in relation to Gregorian chant) concerning the art of antiquity.

NOTES

¹ "It is important not to confuse the sacred service of the Temple of Jerusalem with that of the synagogues." L. Duchesne, *Origines du culte chrétien*, p. 47.

² "This doctor of the Law taught at Jerusalem in a school known for its great authority. He knew that the fate of Judaism was not linked with that of the Sanctuary, and even before Jerusalem fell, he resolved to transfer the center of studies outside of the capital." G. Arie, *Histoire Juive*, p. 97.

³ *Ibid.*, p. 111.

⁴ I. Adler, "Musique Juive," *Encyclopédie de la Musique* (Fasquelle), vol. II, p. 644.

⁵ G. Arie, op. cit., p. 100.

⁶ Cf. I. Adler, "Musique Juive," *Encyclopédie de la Musique*, loc. cit. It would seem that this only signified a clear, audible voice that stayed on pitch.

⁷ "It is difficult to establish in what measure the synagogal chant of the first centuries of the Christian era was modeled after that of the Temple. Certain Talmudic testimonies which go in the direction of this filiation . . . seem contradicted by the existence of multiple, divergent local practices even in Palestine (see, for example, m. Pesahim IV.8) or yet by the fact that we find among the Talmudic authorities (b. Sobah. 30vo) controversies about the manner in which a basic prayer like the Hallel (Ps. 113 - 118) was to be performed." I. Adler, *ibid.*, pp. 642-643.

⁸ Even today, certain communities do not even possess one.

⁹ "The existence of multiple, local practices in the first centuries of the Christian era" (see note 7). There were different traditions in various communities in the 10th century as well (cf. p. 48 and note 13, PART ONE, Chapter II).

¹⁰ "After the destruction of the Second Temple . . . it was the synagogue, an already established institution in Palestine as well as in the Jewish communities in Babylon, that became the cultural center in the different communities." I. Adler, *ibid.*, p. 642.

¹¹ A. Cohen, *Le Talmud*, p. 18.

¹² "Heman and Ethan were famous wise men; the didactic psalms are the work of musicians . . . Schools of wisdom (Ecclesiasticus 51:28; Jeremiah 36:10) were founded no doubt in the shadow of the Temple, as in Mesopotamia and Egypt." R. Tournay, *Les Psaumes*, p. 23.

¹³ Cf. I. Adler, op. cit., p. 643.

¹⁴ The present-day manner of chanting in our Western synagogues, attributing a neumatic meaning to isolated or even grouped Tiberian signs—variable according to the book of the Bible, the place in the liturgical year and the community from which they come—was not established until much later, having no historical attachment to the Masoretic signs (cf. p. 48), though the signs themselves were recognized as being of the most ancient tradition.

¹⁵ "The natural tendency of the Eastern reader to 'melodize' the text because of its contents is only one source of this style. There is another: the maintenance of the tradition by means of song ... To learn by singing became a proverbial axiom: 'May the tradition' that you are learning be studied like a song' (Babylonian Talmud Sab. 106b, etc.)." E. Gershon-Kiwi, "Musique," *Dictionnaire de la Bible*, vol. 5, supp., col. 1450.

¹⁶ L. Duchense, *Origines du culte chrétien*, p. 47.

¹⁷ *Ibid.*, p. 6.

¹⁸ We have already cited this on p. 101.

¹⁹ Cited by A. Machabey, *Genèse de la tonalité musicale classique*, p. 37.

²⁰ Cited by Dom Parisot, *Dictionnaire de la Bible*, vol. IV, col. 1355.

²¹ The use of musical instruments was also suppressed.

²² Under the reign of Constantine I (4th century). Cf. A. Gastoué, "Musique Byzantine," *La Musique des origines à nos jours*, p. 69.

²³ "The tone* is a label which serves in the classification of the antiphon. It is determined by the last note of the cantilene no matter what nature of note precedes it." A. Machabey, *Genèse de la tonalité musicale classique*, p. 78.

²⁴ As is often the case for the original cantillation.

²⁵ For these creations the Church does not neglect to mention Gregory of Nazianze (4th century), Andrew of Crete (6th century), and John of Damascus (7th century).

²⁶ In Egypt such song was as popular as the dance (cf. PART TWO, Book I, ch. 7).

²⁷ In such cases the "long" was substituted for the "short" (there being a two-to-one ratio between the two). This is the opposite of the meter of the Hebrew cantillation according to the deciphering key.

²⁸ Cited by J. Combarieu, *Histoire de la Musique*, vol. I, p. 267.

²⁹ *Roman Prayer Book* (1952), p. 850.

³⁰ A. Z. Idelsohn, *Hebraisch orientalischen melodienschatz*, vol. 2 (Babylon), p. 46.

³¹ *Dictionnaire de la Bible*, vol. V, supp., col. 1439, figure 586 (phon. G.K.M. 1401).

³² *Ibid.*

³³ *Roman Prayer Book* (1962), p. 876.

³⁴ A. Z. Idelsohn, op. cit., vol. 3, p. 50.

³⁵ J. Combarieu, *Histoire de la Musique*, vol. I, p. 209.

³⁶ Cf. I. Adler, "Musique Juive," *Encyclopédie de la Musique* (Fasquelle), vol. II, p. 640.

³⁷ Cf. Charles Guignebert, *Le monde juif vers le temps de Jésus* (Paris: Albin Michel, 1969), p. 248.

³⁸ They included those deported to Babylon (588 B.C.E.) who never returned to their homeland, those deported to Alexandria (at the taking of Jerusalem in 319 B.C.E.), those deported to Phrygia, to Lydia, those self-exiled during the Hasmonean revolts, soldiers deported to Rome by the Roman conquerors and finally liberated. Cf. C. Guignebert, *ibid.*, pp. 237-238.

³⁹ Cited by C. Guignebert, *ibid.*, p. 247.

⁴⁰ *Ibid.*, p. 248.

⁴¹ Cf. *Dictionnaire de la Bible*, op. cit., vol. V, supp., col. 1448.

⁴² Mixed male-female choirs were forbidden in the Temple of Jerusalem.

⁴³ Such as in the cantillations of Yemen (those of the Samaritans, on the other hand, are ornamented in an outrageous fashion).

⁴⁴ Cantillation recently recorded in Israel.

⁴⁵ A. Z. Idelsohn, op. cit., vol. 2 (Babylon), p. 132.

⁴⁶ *Ibid.*, p. 131. For the divergences [from the actual notation] and the inverted form of the signs, see Supplement II.

⁴⁷ Op. cit., vol. 4 (Oriental Sephardic), p. 47.

⁴⁸ *Ibid.*, vol. 2 (Babylon), p. 47.

⁴⁹ Traditional cantillation recently recorded in Israel.

⁵⁰ This surprise is shared by A. Machabey, who devotes one page of his work, *Genèse de la Tonalité musicale classique*, to this coincidence (op. cit., p. 34).

⁵¹ Cf. Dom Parisot, *Tribune de Saint-Gervais* (1902), pp. 351-353.

⁵² "The melody given to us as being particular to the Jews of Damascus corresponds in all its formulae with the traditional Latin chant with the exception of the intonation (which in the Jewish chant is based on the lower D)." Dom Parisot, *ibid.*, p. 351.

⁵³ The Latin chant, however, shifts the third phrase (B) from the words "princess of provinces" (where it is found in Haïk-Vantoura's restitution and in the chant of Damascus) to "the queen of nations." But the Latin chant also preserves the original melodic phrase more accurately.—Ed.

⁵⁴ In saying this, Haïk-Vantoura does not ignore the few ancient Greek melodies which have survived (cf. p. 209), which the reader may hear on the recording *Musique de la Grèce antique* (Harmonia Mundi HM 1015); nor the fragments of melody which come to us from ancient Ugarit (located in modern-day Syria). But these give but the barest hints of what ancient melody was like—and none of these are based upon the generalized practice of *chironomy*.—Ed.

⁵⁵ I. Adler, op. cit., p. 645.

⁵⁶ "The system called 'Tiberian,' the codification of which is attributed to Aaron ben Asher (10th century) and which has imposed itself since (at least in its graphical form) . . ." I. Adler, op. cit., p. 645. This is exactly what one can verify (cf. Supplement II): copies of the Bible were provided with these signs, but the traditional cantillations were not modified in like manner. Their modifications did not occur until much later and were done in a completely empirical manner (cf. note 14 above).

CHAPTER VII

CONCLUSION

— Summary —

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**1) THIS RESURRECTED MUSIC ORIGINATED
BEFORE THE CHRISTIAN ERA,
AS DID THE ANCESTRAL NAMES
AND THE WRITTEN SIGNS**

Here we arrive at the end of the historical study. Our conclusion, based in its essentials on the results of research, is here supported in every detail. The cantillation that we have been able to resurrect is anterior to the Christian era, reasonably constructed in stages all along the thread of biblical history. Not only is this music ancient, but so are the tonal meanings and the names which represent them, and even the graphic signs themselves.

This coincides of course with the technical decipherment (the detailed study of which will follow), but also with the facts which the entirety of this historical study confirms. Let us summarize a few points:

- 1) The tonal conception and the melody are conformed to those known in Western Asia in far-distant antiquity.
- 2) Its rhythmic simplicity is perfectly credible.
- 3) This music is easily translatable by the two-handed gestures which were employed in those remote times (and which were outmoded in the same regions by the Middle Ages).
- 4) Its quality, its power of expression, and its moral significance confirm the ancient testimonies of the Bible as well as those of the Greek philosophers (both of which have been alternately doubted).
- 5) The competence and exalted godliness ascribed to the chiefs of the singers [choir directors] and the fidelity of the Levites confirm that they could have been the meticulous guardians of such music, the work of the cantors of the Bible (cf. p. 161).

Concerning the notation itself, it need not be presumed that the ancients did not know how to write, especially music!

- 1) The Egyptians *notated* their chironomy.¹
- 2) The Babylonians wrote down the fundamentals of their tonal system 2000 years before the Christian era.
- 3) The Vedic priests, like the Egyptians, codified their chironomic figures by a notation.²

4) The Dead Sea Scrolls (from the beginning of our era) contain signs of this sort.³

5) Ptolemy (according to John of Damascus) *notated* the gestural figures then in use (cf. p. 80).

6) St. Gregory (6th century) left an impressive picture of himself; he dictated the chants of the Church by means of hand-gestures to a seated scribe who *notated them*.⁴

Would not the Levites also have thought to fix in written form the twenty-odd figures which, applied to the Bible, translated so magnificently, for the memory of all, such a precise system? Especially when, in the time of Ezra, the activity of the scribes was so intense.⁵

Who said, in the times of historical Tiberias, that nothing subsisted in this sense? Who even *suggested* that this notation was recent? No one. Everyone affirmed the contrary.

Thus, it appears that a graphical system, obviously reserved to the Levites alone, must have existed from early antiquity—a notation piously preserved from vulgarization both then and later. And this corresponds with the affirmations of the Talmud,⁶ and with those of the commentators of the School of Tiberias, who themselves confirm the ancientness of this notation (the significance of which, naturally, escaped them—cf. p. 166). Such affirmations, which at ten to fifteen centuries' distance we have no reason to contradict without evident proofs, are all the more persuasive in that the "Master" of Tiberias, author of the oldest extant manuscript containing this notation, in no way claims to have created it, but states on the contrary to owe his knowledge to the "assembly of Prophets" of whose rigorous faithfulness to the ancestral traditions he boasts.⁷

The biblical texts recognize the existence of written music since the time of Moses: "Now therefore, *write this song* and teach it to the children of Israel." (Deut. 31:19). We have recorded the existence of a *Book of Songs* at the beginning of the monarchy (II Sam. 1:18; cf. p. 119). II Chronicles 35:25 also tells us that "all the male and female singers speak about Josiah in their lamentations... behold, these songs *are written* in the Lamentations." We have no valid reason to question all these allusions to written music during biblical times (cf. Postface).

Why was this notation kept secret? This is explained by the prescription which predates our era: "raise up a wall around the Torah."⁸ The cantillation was an integral part of the Bible, since it supported and

completed it. The notation of this cantillation, we believe, could not be divulged. Was there not reason to fear its vilification by the wicked? Therefore it must have been preserved, hidden away, for centuries.

But let us remember that the tenth century did not shine with a unanimous faith. The partisans of skepticism violently attacked their brethren who remained attached to the sacred patrimony.⁹ Several manuscripts containing the precious notation were commissioned by patrons of that epoch (we know of three complete Bibles written between 935 and 1008). Were they perhaps given to a pious fear?

It was a sagacious and natural decision to place in the menaced Scriptures the signs of the ancient cantillation which up to that time was kept secret.

2) THE MESSAGE OF THIS RESTITUTION

Thus is explained this extraordinary flowering of chants created for the Bible. They are the fruit of the intensity of religious life of the Hebrews at the heart of their history (cf. Postface). Above all else the Bible is an act of faith—faith in the presence of God among men. In this the *Psalms* are universal and immortal. Through them, the believer rises above his particular circumstances to unite himself with this principle of faith.

The hymns of Sumer and Egypt (say the orientalists) do not give the impression of the same ardor of faith, the same total love, the same obvious tension towards purity of heart ("Be ye holy, for I am holy"—Leviticus 19:2).

Greece "did not feel the need for a just God," stated Renan. "The ardent genius of a little tribe settled in a lost corner of Syria seems made to compensate for this drawback."¹⁰ The masterpieces of Greek statuary are the triumph of form. The art of Egypt, Akkad and Sumer reaches us through various means. None of these touch us so profoundly.

Whatever music these peoples possessed, who will ever know about it? The Hebrews, in their technique, were not the most skillful among the nations; their music, in many points, would not have surpassed the music of other peoples. The music of these other nations, therefore, would have been quite beautiful, characterized by power, charm, spirit of finesse, and perfection of form. But to say by this that they shone with the same depth of love, especially in their liturgical chants, is far from conclusive.

In our egocentric vision of civilization, reaching us like a "rising tide," it is not without value to perceive that diverse peaks—and of the greatest height—were attainable by our distant forefathers. The evolution of civilization is not a one-way street; there are advances and retreats of truth in human works. In a certain sense, the evolution of the Hebrew civilization has not been surpassed. And since this particular point touches all mankind, we remain sensitive to it. But this message of peaceable brotherhood and this quest for holiness were not just idle words. Some have hesitated to push them, in their full sense, so far back into history. Even though the Scriptures insist otherwise, they make them the revelation of the prophets, born centuries later.

More powerful than any translation or commentary, the reconstructed music gives the Bible its true meaning,¹¹ and in this its message is also unique. Thus this cantillation from distant antiquity is part of our heritage. Henceforth, ancient music cannot be discussed without talking about it.

The Levites were consecrated by Moses for their jealous fidelity, their unlimited punctuality, as "guardians of the faith." The Levitical musicians acquitted themselves of their task. Sworn to the preservation of the message, they knew how to circumscribe, in these few signs, the entire soul of the Bible.

NOTES

¹ "It is incontestable that several of the chironomic signs we have analyzed served as models for a series of hieroglyphics and that, on the other hand, the latter are nothing but the strict representation of the very positions of the hands of the musicians observed in the musical scenes." H. Hickmann, "Problème de la notation musical dans l'Egypte ancienne," *Bulletin de l'Institut d'Egypte*, vol. 36, p. 505.

² "The notation of Vedic chant by means of numerical symbols and accents goes back to the far reaches of antiquity." A. Daniélou, "Musique Hindoue," *Larousse de la Musique*, vol. 1, p. 449.

³ It should be no surprise that they are not the signs called "Tiberian," since the latter were exclusively reserved for the use of the Great Temple.

⁴ We have already seen this in chapter 4.

⁵ Through these graphical signs it is so easy to imagine an efficient two-handed gesture system of great simplicity (cf. p. 87).

⁶ The Talmud (B. Megillah 18 reverse) attributes to Ezra the interpunctuation of the biblical verses. It also alludes to "emended" works. We cite Gerard E. Weil: "Rabbi Akiba . . . instructed his disciple, Simon ben Yokhai, to teach his son only from *an emended work*" (T.B. Pesahim 112a). "This could not already refer [at that early date] to a punctuated manuscript," states G. Weil, who nevertheless adds: "The expression proved fortunate, since it continued to designate in the Masoretic commentaries the works belonging to a particularly established scriptary tradition" (our italics). Cf. *Elie Levita*, op. cit., p. 326.

⁷ Cf. p. 123.

⁸ A. Cohen, *Le Talmud*, op. cit., p. 21.

⁹ Cf. p. 124.

¹⁰ E. Renan, *Histoire du peuple d'Israël* (Paris [republication]: Calmann Levy, 1953), vol. VI, p. 12.

¹¹ The music, and it alone, clearly indicates the exact punctuation of the verbal text.

SUPPLEMENT ONE

A THEORETICAL SYNTAX AS THE SOURCE OF THE TIBERIAN NOTATION

Why this commonly accepted thesis is untenable

— Summary —

- 1) The circumstances at the time of the first commentators necessitated a theoretical interpretation 166
- 2) A purely syntactical interpretation remains totally ambiguous. The Tiberian signs are indocile and too numerous 167
- 3) By observing only the grammar of the notation, scholars came to doubt its antiquity — something those contemporary with its first appearance never questioned 172
- 4) Aware of the existence of two earlier notations, those of the 19th century saw in the Tiberian notation (contrary to manuscript evidence) the full flowering of the other two 173
- 5) Modern research concedes the antiquity of the meanings the signs represent, yet cannot explain (by the syntax) the system of signs itself 175

**1) THE CIRCUMSTANCES AT THE TIME
OF THE FIRST COMMENTATORS
NECESSITATED A THEORETICAL INTERPRETATION**

The notation we have just penetrated is considered by some to contain in substance a message of pure *verbal syntax*. It is not that the first commentators denied the existence of a musical tradition capable of being the basis of this notation. Quite the contrary (as we know). But in the absence of general indications concerning this music, they fixed their attention only on the divisive power of the signs, and their successors continued to do likewise.

The problem, right from the start, was rather tangled in that there existed two other makeshift notations already in use for several centuries: the one called "Western" (being the archaic Palestinian notation), the other called "Eastern" (the Babylonian notation). Moreover, the cantillations which were more or less based upon them (musically speaking) were already divergent at that time (cf. p. 48). It must be assumed that even before the Tiberian notation appeared, one gave the primacy, because of the absence of precise instruction concerning the intonation, to a theoretical function of the signs then in use for the reading of the Holy Scriptures. Since the new notation added no further musical specifics, the first known commentators *persisted* in the same path.¹ Nevertheless, it is striking that they all more or less placed the emphasis on a musical tradition of early antiquity (cf. p. 47), of which the Tiberian notation would be the testimony.

This retrospective effected, it is good to know (in order to have an idea of the possible value of this partial interpretation) the theoretical meaning that the first exegetes were able to attribute to the signs of Tiberias. Numerous persons were preoccupied with it—no doubt at the call of the readers of the Holy Scriptures, concerned about submitting to the "true" tradition.

Imagine what the appearance of this new notation represented for them. It contained at least three times as many signs as the notations in use in their communities,² with different signs for the most part, and which (even worse) were found in places in the verse where up to that time no sign had indicated an accent (as we observe upon examination of the manuscripts).³

There is no doubt that the numerous manuals for the practice of the public reading of the Bible were written for these disconcerted readers. These manuals flourished as, little by little, community by community, this new manner of punctuating the texts was employed.

Introduced and already commented on, as we know (cf. p. 46), by the last representatives of the School of Tiberias (the Ben Asher dynasty at the end of the 9th century and the beginning of the 10th), this revolutionary notation was already a controversial subject at the time of the great Maimonides (1135-1204), the venerated philosopher famous for his profound knowledge of the tradition. In his time, the question was yet debated whether or not one was held responsible to adopt the Tiberian notation. His answer was conclusive: it must be adopted.

This disturbing notation (which claimed to correct the ingrained habits of the local communities) covered the entire text of the canon; whereas the archaic Palestinian notation, found only in some twenty manuscripts which have come down to us, seems to have had much more restrained limits. It does not appear to have had the intention of establishing a tradition. Its signs differ from one manuscript to another, and we also find them punctuating liturgical poems of the same epoch.

Let us examine more closely one of these "reader's manuals:" the *"Manuel du Lecteur,"* about which we have already briefly spoken. It was discovered by Rabbi J. Sappir in Yemen in the middle of the 19th century, and collected by J. Derenbourg (who presented it in the *Journal Asiatique* in 1870). Most likely this work is older than the 13th century. At any rate it contains the essence of the *first treatises* concerning this subject.

2) A PURELY SYNTACTICAL INTERPRETATION

REMAINS TOTALLY AMBIGUOUS.

THE TIBERIAN SIGNS ARE INDOCILE AND TOO NUMEROUS

What does this manual teach us? Few edifying things, to be truthful. The approach that it makes us follow for the signs of Tiberias is extremely empirical. No system devolves from it. Observations follow one after another, annulling each other. The manner in which the signs link with each other is the principal object of its observations. But no general rule can be deduced from it.⁴ Nevertheless, one fact is to be retained: the classification of the signs as "lords" and "servants" (*M. du L.*, pp. 475-476).⁵ The "lords" are here considered as marking *disjunctive*

accents defining the *separation* between words, thus the punctuation (even though one also finds these signs in the middle of any given word!). The "servants" mark *conjunctive accents* constituting, as a consequence, the linkage of phrase members.

However, this classification is but an arbitrary one—and it finds itself being constantly contradicted. For example, the most "disjunctive" sign of all is *silluq* T. The end of the verse is nearly always marked by this sign; but if its role is limited to just that, how then can we explain that it is often found two or even three times under the last word of the verse?⁶ Once would suffice!

Or again: *atnah* ַ, considered as the most strongly disjunctive sign after *silluq*, is "destined" (affirms this *Manuel*) "to divide the verse into two parts." Excellent. But when we find it under the first word of a verse (e.g., Genesis 19:7), the *Manuel* rectifies: "[this is] a case where the reader insists more forcibly on the sound" (*M. du L.*, p. 486). Here are examples of obvious breakdowns in the exegetical interpretation. This does not surprise us when we know the real *musical* meaning of the signs. Each sign fits very well with the verbal syntax, but none of them has an *irreversible* divisive function. Hence, no sign is strictly disjunctive or conjunctive.

Another type of misinterpretation: one sign, ָ, classed in our tables under the ancestral name *mahpakh* (p. 97), is given another name, *yetib* (and is considered a different accent with a different function), when it is found on the first syllable of a word. Moreover, *yetib* may present itself (according to the *Manuel*) "under two forms:" its own properly speaking, and that of another accent! (*M. du L.*, p. 485).⁷ This sign is not the only one subjected to such a metamorphosis. One of them⁸ for undefined reasons "changes its form, its position and its name" (*M. du L.*, p. 478). How can one base a real theory on such definitions?

These metamorphoses—and they are not the only ones we could cite—apparently arise because (from the point of view of the *Manuel*) the grammatical placement of an "accent," and its supposed disjunctive or conjunctive character, take precedence over the graphical *form* of the sign marking it. If two different graphical forms are found in similar grammatical contexts, the *Manuel* treats them as variant forms of the same "accent." If the same graphical form is found in different grammatical contexts, the *Manuel* treats the sign as two (or more) different "accents." Thus, identical graphic forms may be given different names and considered "mutations" of other accents. All is subordinated

to the presupposition of the purely grammatical function of the signs. No doubt this is the result of the pressure upon the exegetes to remain conformed to the interpretive norms of the time.

Whereas our approach in this study has been completely different. We logically assumed that, *barring proof to the contrary*, a particular graphical form must retain the *same meaning* everywhere it is found. The sign would logically *represent* the meaning; it would not be *subordinate* to it. If we have been able to set forth a coherent musical interpretation of the *te'amim*, it is in part because of this foundational approach.

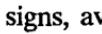
Returning to the *Manuel*, we find that the exact place of the accents is not respected either: "This accent⁹ is always placed above the end of the word, but the reader stops on the tonic syllable, taking as a pattern other analogous words having other accents" (*M. du L.*, p. 484). So why have this precision in a notation, if it is useless? It is clear that the sense of the signs is not that of pure syntax. Seen in this light, this is what renders their reconciliation incoherent.

To be honest, only *musical tones*—functional meanings physically and psychologically differentiated—can be employed, without contradiction, in all possible syntactic constructions because of their living, exclusive malleability. Besides, to claim that one sign is by nature conjunctive and another disjunctive was an attempt destined to failure. This fundamental error paralyzed, right from the start, all attempts to theoretically interpret the signs!¹⁰

Whereas the reality is so simple: the musical tones change meaning according to the arrangement of the phrase, the incidental clause, in which they appear. A tonic note T can be conclusive, but its presence in the heart of the phrase does not surprise the musician. A subdominant note A may mark a half-cadence, or sometimes begin a verse or a phrase member. How can one construct a valid theory when he confers *a priori* only one meaning—a disjunctive, one—to a sign? Or, in the case of certain other signs like Z or L , assign *a priori* different meanings (and often different, secondary names) to the same sign in different contexts? The stratification does not correspond to the reality of the *living syntax* which this notation actually represents, and is a reflection of music.

Again, the author of this treatise seeks to discover the number of times a sign may repeat itself consecutively in the texts (p. 481); which would seem, in pure theoretical syntax, to be an anomaly—and which,

musically speaking, is nothing more than a "repeated note!"¹¹ Moreover, these particulars are noted without any explanation for their existence (*M. du L.*, p. 484).

A more important fact is that in this "inventory" the upper signs are not differentiated from the lower signs. "Lords" and "servants" are distributed without taking into account their position. From which comes an expectancy of more alarming things: why were two signs, avowed to be equivalent, placed one above the other? For example:  Musically speaking, we can explain this fact (cf. p. 33). But if the sign, theoretically, has the same significance in both positions, can a word or syllable be logically provided with two syntactical signs for the same meaning? It is true that certain signs, including the ones we just gave as an example, have (according to the exegetes) at times a disjunctive, at others a conjunctive meaning when it is placed under a word. But the interpretation is only more critical in this case; a word cannot carry an accent which is both disjunctive and conjunctive—and even less a syllable! Thus, the *Decalogue*, where the signs abound and overlap frequently, is in this light an *unfathomable enigma*;¹² whereas it appears as a "transcendent voice of thunders and lightnings" through the musical interpretation born of the deciphering key.

We stated that the exact location of the signs was not usually taken into account in the exegetical interpretation. Nevertheless, there is just one precise place where each sign is presented in different manuscripts of a particular text—and always on the same consonant or vowel. About this fact no one until the present seemed to care (cf. p. 236), still less about the use of two signs on one syllable. These are inexplicable or even contradictory facts from the point of view of theoretical grammatical syntax—yet so simple and so easily justified from the musical point of view.

In good faith we are forced to conclude that this attempt to create a purely verbal theory for the signs fails because it does not correspond with their real meaning. This is not to say that the signs do not contain, in the reality of musical fact, this syntax in their parallel relationships. We have affirmed this and will fully demonstrate this in PART TWO of this book. But things here have been taken in reverse—and the labels that were tentatively ascribed to the signs do not suit them.

J. Derenbourg, commenting on this *Manuel* (which he presents with his own French translation), gives us several highly interesting and complementary details. He tells us that "the number of twelve accents"

(meaning twelve disjunctive signs—cf. p. 167) "has something arbitrary about it" (*M. du L.*, p. 519); that their names "never had either fixity or unity";¹³ that "this diversity of names is the result of subtle definitions having no foundation," attributing "a special domain" to each of the different terms which *originally designated but one and the same thing*" (*M. du L.*, p. 519).¹⁴ It further appears that the Tiberian notation effectively reveals a tradition "at its peak" (probably kept secret), with an integrity of signs and meanings. Otherwise, the diversity of the names would have provoked a like diversity of signs; and the message would not be what it is: a music completely enclosed in a perfect notation of unknown meaning.

To evoke the relationship of chironomy to this notation was not the domain of hypothesis. Our demonstration proved this relationship, and the idea is confirmed by the very text of this important manual. The unknown author states (*M. du L.*, p. 492): "The grammarians prescribe, in addition to the sound which is given by the mouth,¹⁵ a movement of the hand for each accent." This chironomy is even partly described (cf. p. 103), and it corresponds very well (as we have seen) with the musical meaning that our deciphering key confers on the signs (but this was unknown at that time as in our day).

In contrast to this reassuring comparison and helpful evidence, the *Manuel du Lecteur* is hardly convincing evidence for a theoretical significance for the signs in question. It really seems that this preliminary contact with the signs was a step in the wrong direction. Notwithstanding, J. Derenbourg states that the work he presents contains the *essential* of what was found in the earlier works on which this *Manual* was based (*M. du L.*, p. 519). We can readily believe this, since Mayer Lambert, the author of a recent treatise on Hebrew grammar¹⁶ in which the cantillation signs figure and are commented upon, hardly says anything more about them (cf. p. 97). But he adds several details which providentially support the cause of music, and we have not neglected to mention them (cf. p. 98).

Derenbourg concludes that the accents, *present in such a large number*, constitute an enigma (*M. du L.*, p. 522). He says that five accents would have sufficed to indicate the punctuation. He finds it inadmissible, with good reason, that according to the theoretical meaning conferred on the signs, a word be torn in two by the inopportune presence in the midst of the word of an accent termed "disjunctive" (*M. du L.*, p. 525). This leads him, disappointingly, to "disjoint" this marvelous notation from the

words—a sacreligious gesture! The points, the differently turned quarter-circles, the obtuse and acute angles—everything which makes up the visual differentiation, so finely suggesting the meanings the signs represent—are inventoried with no further interrelationship than that given in the theoretical study of the author of the *Manuel* (*M. du L.*, p. 526).

Finally, unknowingly corroborating our theory, the translator informs us that the reputedly most highly qualified grammarians have not taken into account this interpretation of the signs as being of purely syntactical meaning. He writes: "It is curious that the most authoritative grammarians have not deigned to give a place in their work to these accents" (*M. du L.*, p. 523), and he cites their names as examples (cf. Postface).¹⁷

**3) BY OBSERVING ONLY THE GRAMMAR OF THE NOTATION,
SCHOLARS CAME TO DOUBT ITS ANTIQUITY,
SOMETHING THOSE CONTEMPORARY
WITH ITS FIRST APPEARANCE NEVER QUESTIONED**

Why, despite the few clarifications which the observation of the signs indicated in reference to dichotomy, were they obstinately considered only from this angle? It is hardly conceivable.

That the first commentators limited themselves to these hardly-conclusive results is admissible enough, seeing the surprise and the pressure of circumstances. But it is really inexplicable that the scholars of the following centuries who were interested in this question (and who, according to S. Munk, were legion), did not at all enlarge the circle of their investigation to seek a musical meaning for this notation, knowing that it fixed a tradition in which tonal meanings were part and parcel. We wager that there were musicians interested in this problem, but perhaps they lacked patience.

The critique was attached to just one part of any possible explanation of this notation, because the first commentators confined themselves to it alone, even though they did not deny the musical sense of the signs, which responded so badly to a theoretical interpretation. Such is the case with the very substantial *Manuel*, which reflects earlier writings, when it stated that all the accents had a particular significance and follow different rules (cf. p. 48). Here was something to think about!

Instead of working in this direction, however, researchers chose to deny the antiquity of the notation, which the commentators contemporary with the Masters of Tiberias themselves affirmed.¹⁸

The promoter of the movement, Elias Levita, in his work *Massoret ham-massoret* (Venice, 1538), published the following: "Here is my personal opinion¹⁹ on the subject: I think that the vocal inter-punctuations and the cantillation signs did not exist before Ezra, neither during his time, nor afterwards, until the closing of the Talmud."²⁰

Here suddenly a trapdoor opens in the dark basement of the tradition; for no one had ever proposed that the signs of Tiberias were not very old, even though they were only diffused in the 9th century. But since the time of E. Levita this opinion has been dominant. Are we not told, in fact, that the Masoretes of Tiberias "invented" these signs (cf. p. 104)? One could not be more clear—nor in greater contradiction with the historical sources!

Though Levita provoked lively debates from his time onward,²¹ he found followers, including J. Derenbourg himself in the 19th century, who nevertheless translated many affirmations in the *Manuel du Lecteur* concerning the more or less high antiquity of the signs, himself contesting their syntactical meaning (cf. p. 171).²²

The wind of doubt was blowing during the 19th century! It is interesting to note that Renan, elsewhere so captivated as he retraces the thrilling history of Israel, contested gratuitously the possible preservation of the ancient songs of the Bible over the centuries.²³

4) AWARE OF THE EXISTENCE OF TWO EARLIER NOTATIONS, THOSE OF THE 19TH CENTURY SAW IN THE TIBERIAN NOTATION (CONTRARY TO MANUSCRIPT EVIDENCE) THE FULL FLOWERING OF THE OTHER TWO.

The 19th century finally became aware of the existence of two anterior notations which were unknown to Levita who thought that the Tiberian notation was a novelty^t of its kind. However, certain grammarians only saw in the Tiberian notation the flowering of the two others. Reality permits us to see another picture: namely, the Tiberian as a genuinely traditional notation, alongside two other local, sporadic notations. In fact, upon examination of the manuscripts containing the Palestinian or Babylonian signs, it appears that these two earlier

notations were only succinct memory aids, and not of pure syntax (as one would suppose at first glance), of an elementary supporting cantillation. What follows here will demonstrate this.

Certainly, signs of the same shape are to be found in all three notations (cf. p. 49); but the same signs do not repeat themselves on the same words in the verse where they are found. If, prior to the notation divulged by Tiberias, they had had a precise syntactical sense, would they then have been displaced in the verse in the meantime? The reality is hardly convincing in favor of this hypothesis of a complexification! Moreover, we observe that it is not at the junction points of the verbal phrase²⁴—points particularly justifying a sign of punctuation—that these precursor signs appeared (which were designated by their etymology as "cadences"), but at points where a pause is not justifiable. The end of the verse or hemistich remained void of signs (cf. p. 166).

These observations impose a particular conclusion: that of a somewhat unstabilized local tradition (the two earlier notations were less complete and different from each other), and of a perfect tradition, piously conserved but totally misunderstood.²⁵ Upon close examination, this is the reality which asserts itself.

The exegetes contemporary with the first two notations were not given to commenting on the signs which fixed, in their time, the ancestral synagogal cantillation. Some may find this astonishing. However, we know that everywhere else, when the first **neumes*** appeared, they were received in silence (cf. p. 59). This simply proves that a fact which did not call into question the oral tradition, sporadically reported and noted, did not draw attention to itself. The tradition, chironomic as it was, was written down as were the other traditions.

When the Tiberian notation appeared, with an affluence of new, non-translatable signs, the problem was then legitimately raised. These signs appeared at points in the verses where no sign was present before. Their names were no doubt known and even more numerous, but until that time they were englobed in a system containing many names and very few signs (cf. p. 170 and note 13 of this chapter).

**5) MODERN RESEARCH CONCEDES THE ANTIQUITY
OF THE MEANINGS THE SIGNS REPRESENT,
YET CANNOT EXPLAIN (BY THE SYNTAX)
THE SYSTEM OF SIGNS ITSELF.**

Today we are at the same place as before or nearly so. We still recognize the antiquity of the meanings symbolized by the signs of Tiberias. But, despite the work of Levita, it is not agreed that the appearance of the signs modified the manner of reading the texts. In his substantial work dedicated to this skeptical humanist, G. E. Weil insists: "Throughout the explanations given and the judgments pronounced by Levita against the work by the Masters of Tiberias, there appears quite clearly a law from which he could not escape. The reading of the text is traditional..."²⁶ Nonetheless, the hypothesis advanced by Levita—that the exegetes of Tiberias were the creators of this notation, being the first to propagate it—still persists. But here again Gerard E. Weil clearly states: "No one knows today the exact epoch in which they began their work, nor the date when they finished it" (cf. p. 46). But what is much more important is that he denies the grounds, and as a result the validity of the Masoretes' interpretation of the tradition. He states: "We can still say, without fear of making an error, that the language of the period of the fixation of the vocal—and accent—systems could no longer totally testify to the exact phonetics nor the original grammar."²⁷ This condemnation confirms our theses: the *te'amim* are indeed of ancient times.

In ignorance of the undeniable musical sense of the signs, some scholars are attempting to use the computer to rediscover the *coherent* theoretical sense of the accents. Scholars today, who still discuss the cantillation signs given by that famous School for the reading of the Bible, are no further along than their illustrious predecessors in understanding these signs.

One need only look at Mayer Lambert's *Traité*,²⁸ a work of authority, to be persuaded. In the tiny section reserved for the cantillation signs in his vast study, he simply reports the evasive and contradictory data given by the first grammarians. Without determinative reasons in support (given the variable conditions of the interrelationships of the signs), the accents are cited in "the order of their disjunctive value" (p. 13). And, in the manner of the *Manuel du Lecteur*, he suggests that one accent, when placed on the first syllable, "is replaced

by another" (p. 13); that a certain accent "can transform itself;" that still another "is not properly called a disjunctive accent, but renders the conjunctive disjunctive" (p. 13). Here are definitions where, above all, the embarrassment of the past resurfaces!

Moreover, Mayer Lambert agrees as he begins his enumeration: "The accents are divided into disjunctive and conjunctive accents. Only the first kind actually indicate the division of the sentence. The others are hardly anything else but musical signs" (p. 29). It is not just the conjunctive accents that are musical, but *all* the accents! And according to the etymology of *te'amim* which designates them as an ensemble, they give the Bible its full meaning.

NOTES

¹ This is not to say, of course, that the signs did not receive a semblance of a musical interpretation. The sense was ambiguous, but double. Cf. p. 103.

² Cf. H. Bauer and P. Leander, *Historische Grammatik der Hebräischen Sprache des Alten Testamente*. Mit en Beitrag (ch. 6-9) von P. Kahle.

³ P. Kahle, *Massoreten des Ostens* (Leipzig; 1913, republished in 1966, Hildesheim), plate 3.

⁴ Gerard E. Weil tells us: "As precursors of the grammarians they taught their vocalization and cantillation systems by means of analogous mechanisms which were in use at that time. . ." *Revue des études juives*, Historica Judaica, La Massorah, vol. CXXX, Jan. 1972.

⁵ By their musical meanings, the upper and lower signs can thus be differentiated (cf. p. 44); but of course this point of view is not shared by grammarians.

⁶ Cf. Song of Songs 7:1; Psalm 86:6; Psalm 96:13; and other places. [This sign  is called by grammarians *ga'ya* or *metheg* when it is found on any syllable other than the last accented syllable of a verse—even when the sign is found two or three times under the last word. The *Manuel* and other early treatises (and modern specialists) consider *silluq* and *ga'ya* to be different signs. Yet, the *tonic* note easily fulfills all the functions assigned to these different "accents" by grammarians. Cf. pp. 445-446. —Ed.]

⁷ The sign  is called *yetib* by the *Manuel* (and all modern specialists) when it is found on the first syllable of a word or (if on a one-syllable word) followed by certain other signs. This "accent" is considered disjunctive. Under certain conditions, *yetib* supposedly is transformed to *pashta*, a sign found above the word. No explanation for this transformation is given anywhere by the *Manuel*. Modern specialists give the same graphic form (when it is found in any other context) the name *mahpakh* or *mehuppak*, and (like the *Manuel*) consider it a conjunctive accent. Yet there are at least two cases (Song of Songs 1:12, 13) where *mahpakh* is considered to be "disjunctive" by modern specialists! —Ed.

⁸ This is called *telisha* by the *Manuel*: , listed as *telisha qetannah* in our tables (p. 97). It supposedly transforms itself (in sixteen places) into , a sign found commonly in psalmody and rarely in prosody (cf. pp. 273, 276-277). Again, no reason for this transformation is given anywhere by the *Manuel*.

⁹ This is also *telisha*.

¹⁰ According to the analogous method then in use (cf. note 5 and Postface).

11 Lightly accented, as in Nehemiah 1:6 where the sign ל appears two and even three times in a row; there the melody proves this to be the case (cf. p. 273).

12 We know that the tradition in certain cases interprets this text according to the lower signs only, in certain others according to the upper signs only (cf. p. 36. See this text in Hebrew with the signs on p. 149).

13 When a sign qualified as "disjunctive" appeared to be "conjunctive," or vice versa, it was given another name.

14 Our italics (cf. Postface).

15 It does not say "the word" but "the sound"—which confirms that the signs do not have a purely theoretical value, but a *tonal* one.

16 We have cited the names of the signs of Tiberias with their etymology, as given by M. Lambert, on p. 97.

17 Mayer Lambert, moreover, devotes but a few pages to these accents.

18 "We are forbidden to deliberately add (to the Text) anything at all, for fear of transgressing the Law: 'You shall not add anything to it...' [Deut. 12:32]. This is why we do not vocalize the scrolls of the Law. Neither may we add the cantillation signs, even though these latter signs were revealed at Sinai." Mar Natronai (II, ben Hilai, Ga'on of Soura in the second half of the 9th century), cited by G. Weil in *Elie Levita*, op. cit., p. 332.

19 Our italics.

20 G. E. Weil, *ibid.*, p. 309.

21 *Ibid.*, pp. 317-318ff.

22 This was the only thing, of course, taken into consideration by Elias Levita.

23 "They believed in all this" (as Nehemiah 12:44-47 comments), "above all in that which concerned the singers, that they were only reestablishing the order given by David and Solomon." E. Renan, *Histoire du peuple d'Israël*, p. 1078.

24 Places where these signs (l , נ , ל) are most often located in the Tiberian tradition.

25 This explanation embarrassed the men of Tiberias themselves, and the low efficacy of their method of approach to the signs they propagated is ample proof.

26 G. E. Weil, *Elie Levita*, op. cit., p. 330.

27 *Automatic analysis of the Hebrew Bible and its Aramean Paraphrase* (cf. Postface).

28 Mayer Lambert, op. cit., p. 193.

PART TWO
THE DECIPHERING PROCESS
SYNTAX OF THE RECONSTITUTED MONODIES

BOOK I
THE PROSODIC SYSTEM

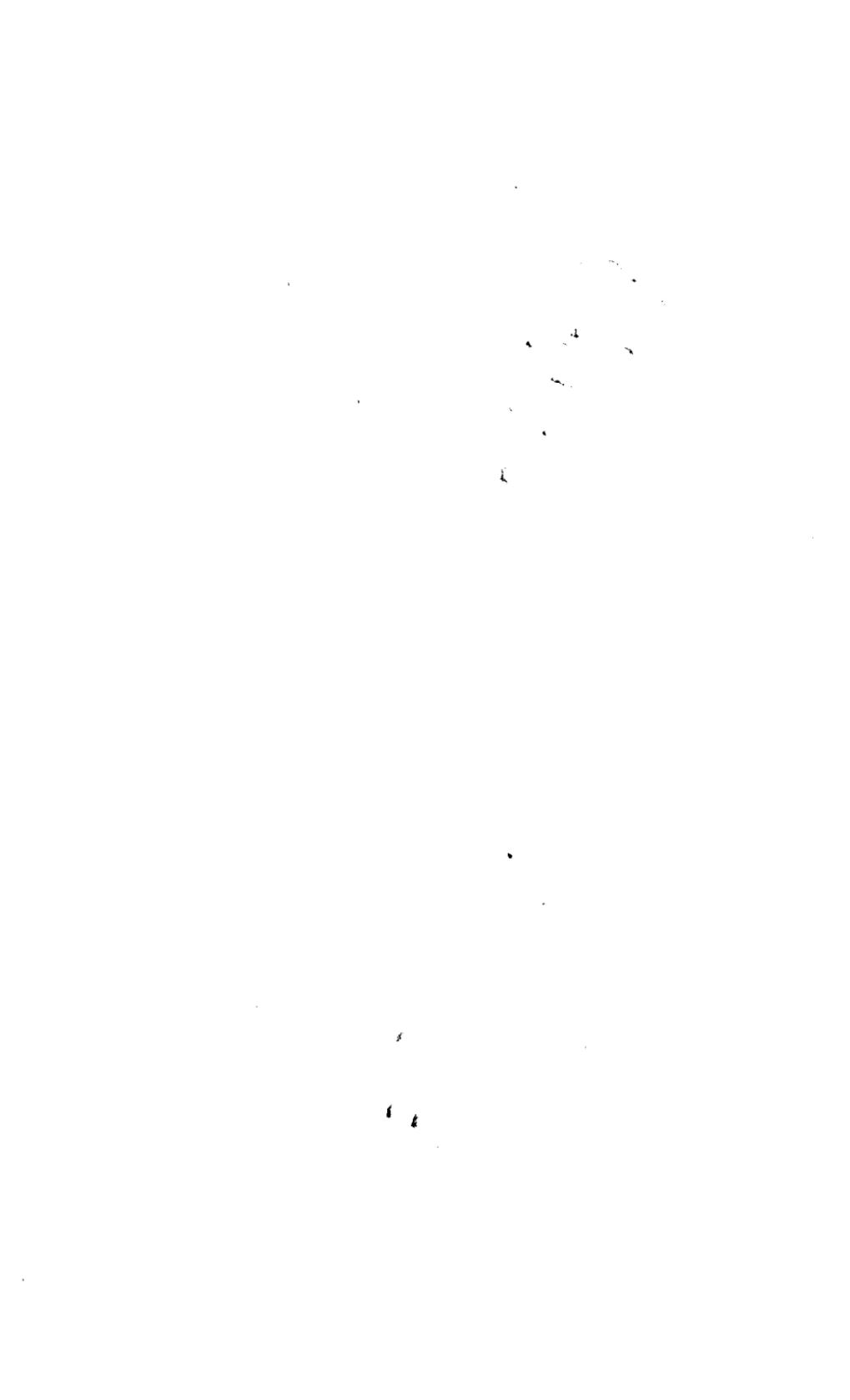


שין

If, in certain subjects, scientific experimentation adds nothing to history, in other subjects history will never replace experimentation. Sometimes these two disciplines cooperate. If the subject which occupies us, the technical aspect predominates.

Thus, all that we have been able to affirm to this point concerning the recovered cantillation is only possible thanks to the writings, the historical evidences which corroborated our conclusions on one hand, and, most importantly, to the technical proofs which we have held in reserve, on the other.

It is important now to produce these proofs. This is why, after a brief look at what was known about ancient music until now (by means of treatises and traditions) we will—apart from the historical facts and their contingencies—examine in detail the cogs and springs of this notation and the delicate inner workings of the music it retained. And this music is, once again, totally new to all of us.



INTRODUCTION II

THE SIMPLE CONFORMATION OF ANCIENT MUSIC DOES NOT RULE OUT ITS BEING AN ACCOMPLISHED ART

— Summary —

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1) THE TONALITY OF PRE-HELLENISTIC MUSIC

If we wonder how Hebraic music of biblical times might have been constructed, we are not so deprived of answers as one might think. Knowing the tenacious influence of Sumerian civilization over the nations which adopted it, there is no reason to imagine that the Hebrews, living originally in Sumer and later residing in regions in contact with it, could have written music inferior to that of Sumer.

It was not the ambition of Israel to distinguish itself from others by technical novelties; but its love of music as well as its belief in a universal harmony (which the Psalms link to that of sounds), suggest to the ear a well-constructed, well-constituted (if not "learned") music.

We know nothing about Sumerian music except—and this is of capital importance—that its tonal basis is the same **diatonic scale*** we use today. In fact, the treatises of the Greeks mention that they were imprinted by the Orient (Sumer) with the sole possible foundation of valid musical theory: the division of the octave into seven fundamental degrees, a division based upon the relationship between numbers and music.¹

Since this echo of the past seemed misty with speculation (the analogy between the seven notes and the seven planets), we gave it but passing interest. But by chance this heritage has been recently confirmed by the important discovery at Ur, the large Sumerian city where Abraham lived, of a wind instrument dating circa 2800 B.C.E. Its state of preservation allowed the conclusion that the sounds it was designed to produce indeed corresponded (approximately) to the seven traditional, normally spaced notes of our scale.² Recently discovered Babylonian tablets confirm the theory of this heritage (cf. p. 129).

2) A DIATONIC TONALITY, VERY LITTLE DIFFERENT FROM OURS

Thus we cannot doubt that the Sumerian recitative chant was not so far different, in its structure, from our melody. This is a reassuring fact. Neither were those of the Dorians, Phrygians, Lydians and others; all were composed in modes (more precisely, "scales")³ of an equally diatonic basis. This information which we receive from the Greeks seems all the more authentic now that the famous Babylonian tablets have been deciphered.

The Greeks also reveal at the same time that each of the aforementioned peoples had a marked predilection for one or another of these structures. And therefore, they did not use without distinction the steps and half-steps which make up our musical language and give to the various diatonic modes their well-known originality and savor. It was given to our century to inspect these affirmations! This sobriety of musical means, commonly adopted, is related to our own musical system.⁴ Is not our "classical" music constructed-in **major*** and **minor*** modes, enriched only by modulations permitted by the juxtaposed scale of twelve degrees?

We have proof that the ancients also used chromaticism. Another archaeological discovery which completes our information was made in Egypt—of flutes capable of producing successive **chromatic*** tones (for some flutes, the entire twelve degrees of the octave). We must hasten to add, however, that the greater part of the instruments which have come to light only produce the sounds of the diatonic scale,⁵ proving that the Egyptians themselves made but moderate use of chromaticism.

Greek theory did not disdain borrowings of the chromatic genre (nor of the **enharmonic*** genre), but made only limited use of them. These incursions were protected by a sort of guard rail within the theoretical structure: the unalterable note limitation of the **tetrachords***—key-notes of the tonality. Thus the Greeks enlarged their range of expression by cautious borrowing. In fact, the instinct of other peoples of antiquity appear to have dictated the same caution.

The supremacy of diatonicism: The quasi-unanimous opinion of theoreticians is that the affinity between human beings and the diatonic genre appears to be connate. Gevaert sees here "the manifestation of a general law, a consequence of the physiological organization of man;"⁶ and the restrained use of the augmented second⁷ would merely be a variant, the origin of its usage being lost in the obscurity of time.⁸

The musical theory of Islam itself, with its highly ambiguous modes, concedes the *anteriority* of diatonicism.⁹

Reassured now concerning the possible cohesiveness of ancient musical language, we should still not forget that it was predominately **monodic***, a fact which could diminish our estimation of it. Our occidental customs would have us believe that music is incomplete if it is not harmonized or polyphonic; it is simply less complex! Its message can hold complete meaning, as in plain-chant for example (we know how delicate it is to add a harmonic accompaniment to it without spoiling it).



PLATE XIII

TWO HARPISTS FROM THE LAND "OF THE TWO RIVERS"
Beginning of 2nd millennium B.C.E. (Larsa epoch) — Louvre Museum
Photos: Clichés des Musées nationaux

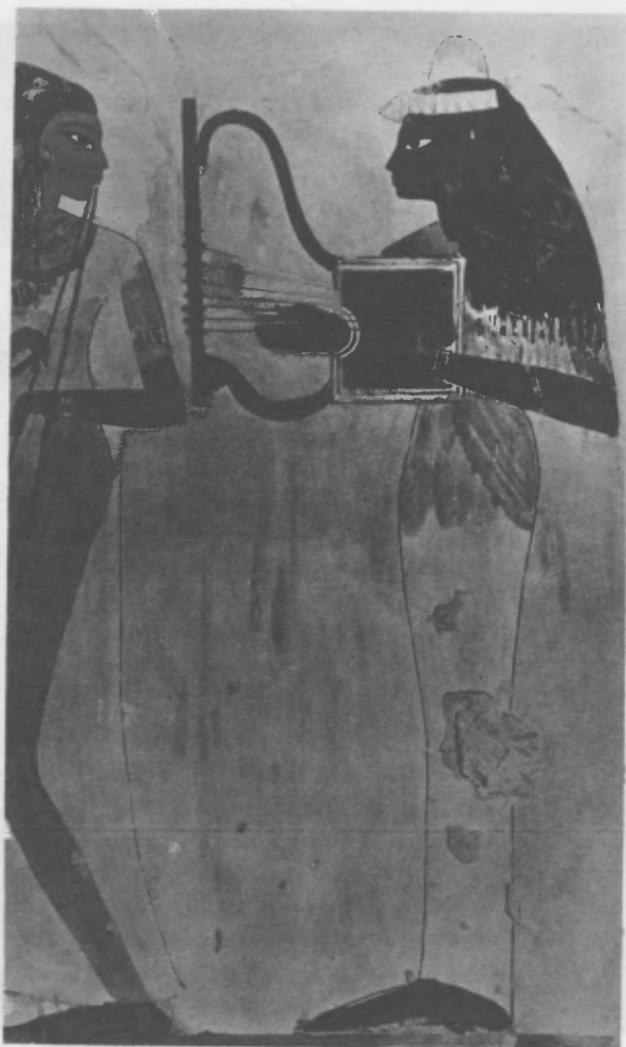


PLATE XIV

**PAINTING FROM A THEBAN TOMB OF THE 18TH DYNASTY
(LYRE)**

Musical life in Egypt in the middle of the 2nd millennium B.C.E.

Metropolitan Museum of New York



PLATE XV
TOMB OF MAKHT (Cairo Museum)
Double flute, lute, harp
Photo Giraudon

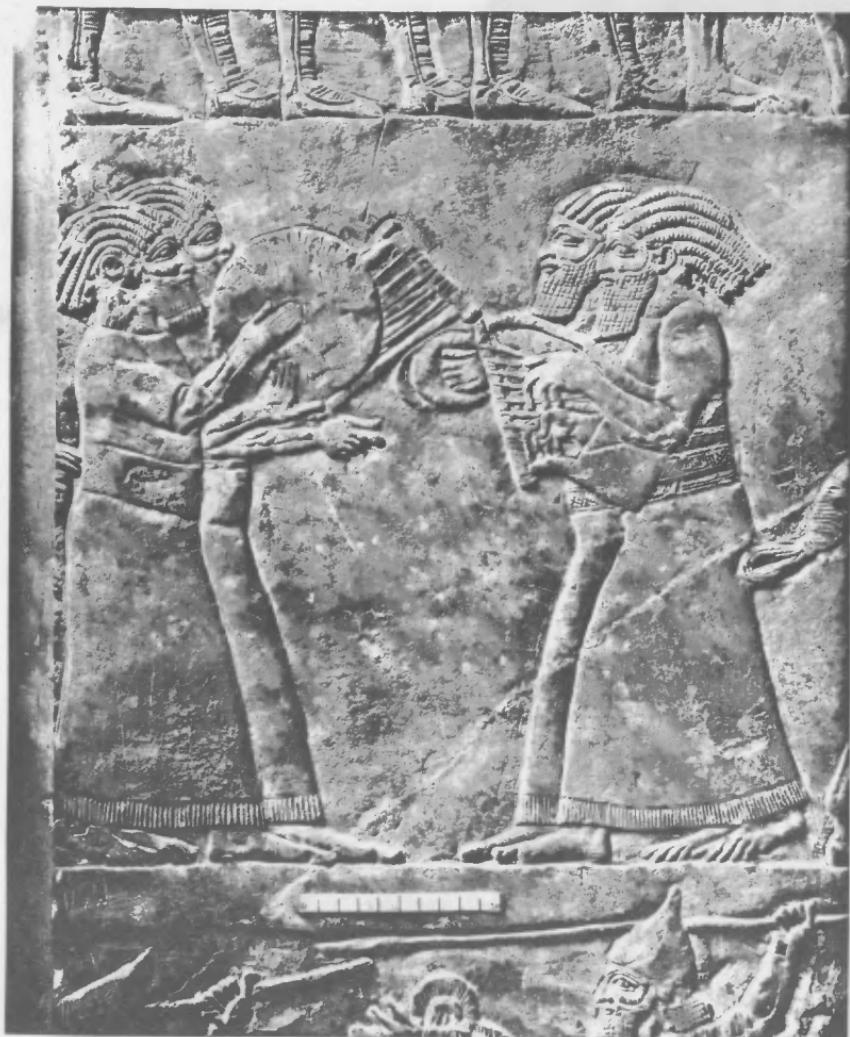


PLATE XVI

MUSICIANS OF THE ARMY OF ASSUR-BANI-PAL (ASSYRIA)

7th century B.C.E. — Louvre Museum

Tambourine, harp(?), cymbals, lyre

Typical vestige of the "military music" of a people devoted to war

Photo Giraudon

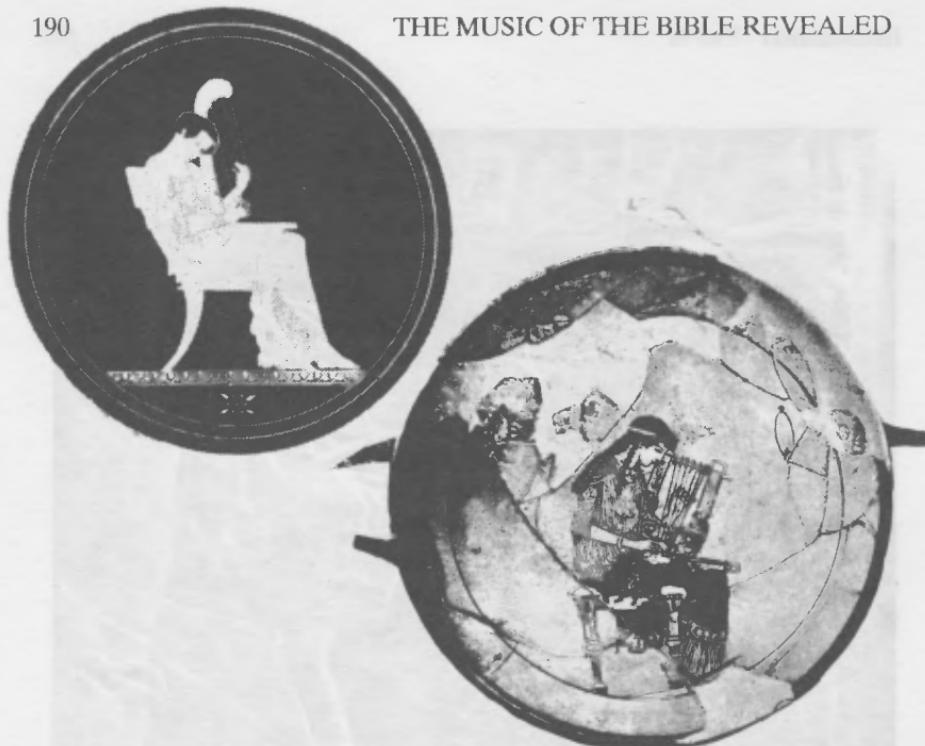


PLATE XVII
INSTRUMENTS OF ANCIENT GREECE

A magadis player (cf. p. 422) — Photo Giraudon
A lyre played with five fingers — Photo Roger Viollet



ETRUSCAN MUSICIANS FROM TARQUINIA
Photo Anderson-Giraudon

It is not necessary to elaborate further on the beauty and expressiveness of plain chant. Certainly it is monody*, but of a more recent epoch, and appears to have more advanced technical means than its ancient counterpart. These transformations, however, are but superficial and an esthetic affair.

Certain persons (such as Machabey) recognize, under the scholarly "labels" affixed by the Byzantines, the development of melodic forms familiar to the ancients (cf. p. 142). R. Bragand sets forth a more adequate modern conception of ancient scales, not attributing to them an intrinsic modal significance as pure theory would suppose. For him the "finale" or tonic note lies on one of the *central notes* instead of the first note of the scale.¹⁰ In the absence of texts, experimentation is impossible,¹¹ but the remark is plausible and is uniquely confirmed by our discovery.

3) A MORE RESTRAINED MELODIC CONFIGURATION

So it appears quite clearly that ancient cantillation, including that of the Bible, could be closely related to plain chant. There are some differences, however—the primary one being that the former was syllabic* and non-melismatic, even though it contained cautious embellishments (as the Greek notation [4th century B.C.E.] testifies). This is the essential difference which must have existed between the two forms of liturgical music; but this does not exclude the belief that the older was a legitimate musical cousin and of equal perfection of form.

The magnificent Israelite liturgical chants that tradition offers us (which was not bound, as we should remember, by the constraint of respecting a problematic notation) are characterized by the use of diatonic modes, a continuous melody, and the restrained use of chromatic modes. Do not these considerations incite us to place the origin of this configuration in the distant past?

4) THE TWO SOURCES OF ALL RHYTHM

Tonality is a vast "crossroads," and without the details brought to light by recent excavations, the evocation of the tonal canvas of ancient monody would have remained quite vague and impenetrable. The study of its rhythm does not require such a concourse of circumstances, since it

was only (as certain rhythms yet today) the *servant* of the text. What characterized it, according to Machabey, was the particular accent of different syllables of the word: primary or secondary "tonic accents" interspersed among unstressed syllables, plus the use (to state it in modern terms) of **caesuras*** and the *dynamic accent*.¹²

In reality, these are the completely natural inflections of verbal discourse which are thus defined. The rhythm of Chaldean music would have already been "constructed by the accents of the text."¹³ The same construction was used in Egyptian litanies, in the first Christian hymns in Syria and even in ancient Germanic poetry.¹⁴

We find yet today in the folk music of Syria, Israel, and elsewhere, songs in which the accentuation of privileged syllables *motivate* a rhythm measured in rapport with them. This is rhythm truly *subordinated* to the expression and the emotion of the poetry. This rhythm is to be distinguished from all proportional meter and necessitates no theory. This is not a case of abnormal evolution, but of a survival. Was not music originally an art of expression rather than a science, and above all else destined to emphasize the steps of the dance, or the words?

Greece, to which Western music is indebted for a great part of its creative curiosity, made a more sophisticated use of rhythm. It employed rhythm to construct an autonomous structure for ancient monody, comprised of a variable alternation of measurable **longs*** and **breves.*** Dactylic rhythm (♩♩♩) had been imported from Asia, where it presided over the dance.¹⁵ The Greek "meters," as a consequence, are a subtle borrowing from the art of gestures for poetic purposes. Apparently this was an independent occurrence in antiquity, in which some see the roots of all architectonics of our classicism.¹⁶

The other method of handling rhythm, common to so many peoples, is by *free syllabification*. We have every reason to believe that this usage was in large measure representative of the monody we are attempting to sketch in this historical evocation.¹⁷

5) ESTABLISHED FORMS AND PROCEDURES

All that we have said thus far seems true for the *elements* of ancient music; but could the *forms* have remained unchanged? The Bible was written over an entire millennium, a span of time which ended shortly before our era.¹⁸ Can we imagine that its liturgical music did not evolve in its presentation during these long centuries? How many generations

succeed each other, in a single, interminable millennium! Tastes and techniques, at least in our modern times, evolve! What a world of difference there is between our "contemporary music" and that of the Renaissance, just a few centuries distant!

We have mentioned a very characteristic fact which should reassure us: traditionally, ancient art was quite circumscribed—not just in Israel, but elsewhere. In Egypt and Greece, sacred art was especially preserved in its spirit as well as its forms.¹⁹ The consecrated creators were treated as if invested by divinities; their works would have been accepted and respected as a testimony granted by the gods. Combarieu thought so.²⁰

One might have believed it; but, technically speaking, we have already pierced the mystery (cf. p. 89): the chironomical representation of music *imposed its indispensable constraint*. These artists could not pretend (as those of modern history) to express themselves in an original manner, to create new forms or languages. They had to exercise themselves to avoid any deviation from required norms, to express personal sentiments within the same structures (at least in liturgical music).²¹

Thus, based in consecrated modes, a restrained melody and a rhythm without surprises, the ancestral invocations of pagan worship—*litanies, hymns, etc.*—could be closely reproduced, without sensible modifications. And it is due to this persistence of procedure and form that we can claim to discern the characteristic visage of antique sacred monody (of the countries which interest us here—which, let us not forget, were the cradle of our civilization). With stronger reason could the above be said for the biblical cantillation, and we will not at all be surprised to see that the notation under discussion applies to all the books of the Old Testament; it represented a music similar in its norms, despite the lapse of the centuries. This was a comprehensible tradition of *efficacious methodology*.

6) A MUSICAL MESSAGE ACCESSIBLE TO US

In conclusion to these preliminaries, let us acknowledge that with all these assembled facts, if someone before us had claimed to reproduce the original music of the Bible, we would not have been without reference points for evaluating his affirmation. This music, reasonably, would have given evidence of being conceived according to the melodic

and rhythmic norms of the deeply rooted patrimony, the natural channel of human expression, presenting similar norms as it issued from one biblical book or another.

Such music would not have been the first example of a music of great age, yet close to us. Dom Parisot pointed out this effective remark in 1898 concerning Christian monodies. It is a precedent worth reporting. During a conference on Gregorian chant,²² he presented to his audience unpublished melodies, coming from the authentic oriental tradition. He stressed:

"Do these melodies, of which several are as pure in expression as the best formulae of Greek music and Gregorian chant, represent the ancient artistic tradition—or rather were they given to the peoples who possess them by a European influence? Some people will be disposed to think the latter, without considering that the musical phenomena that are being presented to you here belonged to peoples far distant from Western civilization. Peoples do not at all change so easily in their musical traditions."

Further on he adds: "Separated from the Christians in Syria by political and religious circumstances, the Christians in Mesopotamia and Persia, Chaldeans and Nestorians, have maintained their rites, their language, their ecclesiastical and secular practices. Why would they not have kept their ancient musical traditions?"

It is established then that our misappreciation of ancient music made us consider plain chant, an occidental art, as being "developed" since it is European.²³ Here, however, the Eastern Christian liturgy proves to be equally perfect, even though of an independent tradition.

Was the Hebraic liturgy untouched by this tradition? Rather, was not this tradition the common patrimony of the civilizations of the past?²⁴ One can see therefore in the biblical cantillation of antiquity, not an "under-developed" music (as the actual traditional synagogal tradition would lead us to believe), but a *mature art* in an archaic form. This is what it really was.

COULD SUCH MUSIC BE "INSPIRED?"

Thus, an archaic music of a country untouched by European influence could be related to ours. Was this not exactly our primary conclusion in our discussion (abstract though it was) of the probable

cantillation of the ancient Hebrews, as supported by history? Do not certain concrete vestiges of ancient art lead to the same conclusions (cf. pp. 20ff.)?

But there is another aspect to the question. Pure in form, of elevated aspiration, the occidental plain chant that we know so well has a purely contemplative expression. Would we find a similar sort of expression in its most direct source — the Hebraic music of antiquity? Or would we rather believe the proposition that the modernism of certain texts of the Bible (laying aside their restrained means of expression) "makes us imagine an art for which the point of comparison would have to be, it seems, not the calm plain chant, but the Venetian compositions of a Gabrieli or a Schutz?"²⁵

We do not possess any certain material vestiges, any written testimony of a truly sensitive, brilliant music of antiquity. Historically speaking, musical expression had its source in that so-particular efflorescence that is Gregorian chant, in its total detachment from the earth.

Offhand, it was gratuitously believed that musical expression such as we know today could not have existed before the development of our occidental society in recent centuries. Did not Monteverdi upset the crowds with his *Orfeo*? But that was at the beginning of the 17th century. Harmony was born and in full development; and it seems natural to impute to Monteverdi this tenfold stronger power of music that his genius was able to draw, for the first time, from its mysterious rapport.

Is it conceivable that a musical art of archaic simplicity is capable of stirring our emotions? Yes. A truly "human" expression is already to be found in the skillful music of the Troubadours; let us also cite (among others) the under-appreciated music of Hungary.²⁶ Would the music of contemplation have been the base of these art forms, or would there have been (farther back in time) traces of musical sensitivity that would be familiar to us?

It is striking that the songs which surface one after another through our deciphering process should possess, despite their simplicity, a power of expression which directly touches us more than twenty centuries later! This unknown music (unknown because it was enclosed in a lost interpretation of the Masoretic signs), solidly structured like the ancient Eastern Christian chants, seems (like them) to have been created recently. *Moreover, it moves us deeply!*

Of an equally perfected style, and moreover the servant of the sentiment of the words, is not this music the testimony of a particular form of ancient music—less "formal" than that of the Greeks, perhaps also less masterful, but closer to the heart, and standing the test of time like the texts they underscore?

It is the integrity of the reconstitution, first of all, which must be proven. And since we have already placed in prominent position the various connections which link together historically this notation and the monodies resurrected from it, the next important step will be a meticulous examination of this music, studying separately the different elements of its syntax in order to prove (from a *technical* point of view) that it is *actually* anterior to all known music today, in spite of its unparalleled power of expression.

NOTES

¹ The relationships between the primary numbers are attested by the intervals* (cf. p. 128).

² A. Machabey, "La musique Suméro-chaldéene," in *La musique des origines à nos jours*, p. 59: "A wind instrument discovered at Ur (2800 B.C.E.) gives the sounds of C3, D, E, F#, and G. Blowing harder, we obtain G, A and B. These quasi-diatonic scales were intended to be reproduced on stringed instruments."

³ In antiquity, the first degree of the mode did not coincide (such is the current deduction—cf. p. 185) with the first degree of the scale. Let us bear in mind that this is confirmed by our deciphering key.

⁴ All proportions being maintained, our "equal-tempered" scale contains twelve equal half-steps to the octave (for instruments with fixed pitches). We do not know how the scales of antiquity were tempered. With Pythagoras the relationships of numbers to music gave rise to numerous theories, describing minute and only hypothetical differences between tunings. Such are the notions of the music theory of ancient Greeks. [The famous Babylonian tuning texts, however, describe the tuning of a "just" diatonic scale by means of fourths and fifths. It is reasonable to assume this was the *practical* basis of tuning in antiquity. —Ed.]

⁵ J. Combarieu, *Histoire de la Musique*, vol. I, p. 52. See also A. Machabey, "Musique égyptienne," in *La musique des origines à nos jours*, p. 61.

⁶ F. Gevaert, *Histoire et théorie de la musique de l'Antiquité*, vol. I, p. 4.

⁷ The augmented second* is characteristic of chromatic music. In a way, it is "an alteration of a diatonic kind of music" (cf. F. Gevaert, *ibid.*, p. 295).

⁸ Cf. F. Gevaert, *ibid.*, p. 297.

⁹ Dom Parisot, "La musique Orientale," in *Tribune de St. Gervais* (1898), pp. 82-83.

¹⁰ Cf. *Larousse de la Musique*, vol. 1, p. 411.

¹¹ There are not even ten extant notated monodies of ancient Greek music.

¹² A. Machabey, "La musique des Hébreux," in *S.I.M.* (1912), p. 5ff.

¹³ A. Machabey, "La musique Suméro-chaldéene," in *La musique des origines à nos jours*, p. 59.

¹⁴ A. Machabey, "La musique des Hébreux," *S.I.M.* (1912), p. 13: "Julius Ley relates this melopoeia to ancient sung Germanic poetry."

¹⁵ A. Machabey, "Musique Grecque," in *La musique des origines à nos jours*, p. 64.

¹⁶ R. Westphal, cited by J. Combarieu in *Histoire de la Musique*, vol. I, p. 166.

¹⁷ This is the framework (as we have already noted) of the original biblical cantillation, in the prosodic system (cf. p. 35).

¹⁸ From the 13th to the 5th centuries B.C.E. See also p. 128.

¹⁹ F. Gevaert, *Histoire et théorie de la musique de l'Antiquité*, vol. II, p. 316.

²⁰ Cf. F. Gevaert, op. cit., vol. I, p. 65.

²¹ The Greeks had created a specific notation for their instrumental compositions, which pieces furnished the occasion for famous contests in the classical period (6th - 5th centuries B.C.E.).

²² Dom Parisot, "Essai sur les tonalités du chant Gregorien," in: *Tribune du St. Gervais* (1898), p. 104.

²³ Cf. p. 143.

²⁴ Attesting their common source (cf. p. 14).

²⁵ J. Combarieu, *Histoire de la Musique*, vol. I, p. 53.

²⁶ C. Brailou, S. Corbin.

CHAPTER I

THE EXPERIMENTAL INVESTIGATION OF THE MUSICAL NOTATION OF THE BIBLE

— Summary —

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a) The best way to clearly explain this notation is to follow the deciphering process	
b) The transliteration of the Hebrew text into Latin characters	
c) Reading the examples—phonetic chart	
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1) INTRODUCTORY REMARKS

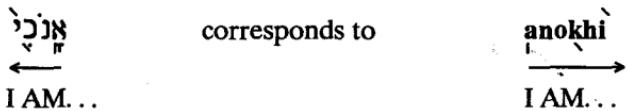
- a) **The best way to clearly explain this notation is to follow
the deciphering process**

We put forth at the beginning of PART ONE that the system of the *te'amim* appears to be a conception of "exceptional clarity." However, it is not only this notation which is clear, but through it the entire musical system which motivated it finally appeared just as limpid; the numerous examples encompassing this study makes this plain.

This system emerges out of nothingness; and it is a whole world of music that we penetrate—unknown and very different from the world to which we are accustomed. In order to be truly edified by it, this "other world" needs to be thoroughly understood. It is also important to lead the reader through the different episodes through which the author passed.

On one hand this is the best way to explain the deciphering key. For if we proceeded otherwise—writing up some sort of treatise both for the notation and the ancient music deriving from it—this would necessitate nonetheless (as a truly edifying approach) the elucidation of the same points concerning the key as are here treated in the order in which they emerged during our investigation. Moreover, presented in this manner, the real value of this study is preserved—that of discovery. And this is an attraction in itself.

b) The transliteration of the Hebrew text into Latin characters



The cantillation accents transcribed into modern musical notation:



יְהוָה אֱלֹהֶיךָ מֶלֶךְ אֲשֶׁר הוֹצַאתִיךָ

... the Lord your God who brought you out of the land. . . (Exod 20:2)

A do_nay 'e_lo_hé kha 'a_shér hō_tse'_ thi_kha me'e_ rets

Hebrew is written from right to left. In the transcription into Roman characters, the syllables, words and cantillation signs are presented in reverse order, but the form of the signs is strictly respected in our investigation. This is highly important (as we know) because of their evocative morphology in the respected inverse direction of reading Hebrew (cf. p. 102).

c) Reading the examples—phonetic chart

Consonant	Final Form	Name	Transliteration	Pronunciation
א		'Aleph	'	(Silent)
ב (ב)		Beth	b (b)	b (v) ²
ג (ג)		Gimel	g (gh)	g (hard)
ד (ד)		Daleth	d	d
ה (ה)		He	h	h
ו		Vav	v	v
ז		Zayin	z	z
ח		Heth	h	ch as in Bach
ט		Teth	t	t
ׁ		Yod	y	y
כ (כ)	כ	Kaph	k (kh)	k (like ח)
ל	ל	Lamed	l	l
מ	מ	Mem	m	m
נ	נ	Nun	n	n
ס	ס	Samech	s	s
ׂ		'Ayin	'	(Silent) ³
פ (פ)	פ	Pe	p (f)	p (f)
ׂ	ׂ	Tsade	ts	ts as in cats
ׂ	ׂ	Qoph	q	q as in unique
ׂ	ׂ	Resh	r	r
ׂ	ׂ	Shin	sh	sh
ׂ	ׂ	Sin	s	s
ׂ (ׂ)		Tav	t (th)	t (th)

Vowels	Value	with ' or ׁ distinctive sign ⁴	
ַ	a	' ַ	â
ָ	a		
ֹ	e ⁵	' ֹ	ê
ֻ	e ⁵	' ֻ	ê
ִ	i	' ִ	î
ְ	o	' ְ	ô
ּ	ou	' ּ	oû
ֵ	e ⁵		

Transcription of the *te'amim* into modern notation

In the transcription of the pictographical system of Tiberias into modern musical notation, the *square* notes correspond to the cantillation signs, which are found either below the line (representing basic scale degrees) or above it (representing isolated added notes or melismas). The *round* notes mark only the *prolongation* or *reintegration* of the *basic scale degrees* symbolized by the lower signs.

The *alterations* are valid only for the *single note* they affect. However, to avoid needless repetition, if the same note is *directly* repeated, the alteration is not. (Let us remember that the *rhythm* of prosody is *non-mensurable*; that of psalmody is *mensurable*—cf. pp. 35-36.)

2) The similarity and complementarity of the two systems comprising this notation

In reality, the biblical texts are accompanied by not one but two notational systems. Their distribution is unequal; the first system, employed in the Pentateuch, is also used in all the other books save two—Psalms and Proverbs (where only the second system is to be found).

The synagogue tradition has rejected the correlation of the two systems. Their correlation, if one may say so, is nevertheless total, because the two systems are complementary. The first system very specially suits the historical accounts, Mosaic doctrine and the Prophets; the second represents a more poetical style of music, less ornate, more propitious to prayer, such as that found in the Psalms.

This complementarity is concretely evidenced by the utilization of *both systems* in the same book—the Book of Job. The first system is found in the first two chapters, where Job's situation and the succession of his misfortunes introduce the story. Beginning with the third chapter (verse 2) the *second system replaces the first* as Job's laments alternate with the declarations of his friends. Finally, when his trials are over and, as his new blessings are enumerated, the first system reappears—right in the middle of the chapter (Job 42:7).

How can the discontinuation and recurrence of the first system within the same book be explained if these systems are total strangers to each other?

Moreover, there is a great similarity between them: 1) the same particular position of the signs *above and below* the written text; 2) the same economy of formulation; and 3) the use of identical signs, with the same disposition, in both systems. Furthermore, it is curious to observe the exceptional presence of two unique signs from the second system throughout the books where only the signs of the second system are otherwise employed. These intrusions would be a disconcerting anomaly if the two systems were not correlated.

NOTES

¹ For the incurved shape of the corresponding signs as found in the text of the printed Hebrew Bible, see chapter 1, note 19.

² Pronounced b in certain communities.

³ 'Ayin is a guttural sound without equivalence in Western languages.

⁴ The pronunciation does not change.

⁵ The pronunciation of .. and .. differs slightly from community to community. The vowel , *shewa*, is pronounced only in certain cases (like e as in "item"). We have chosen to simplify the transliteration of these Hebrew vowels, assigning e to all three.

CHAPTER II

THE PROSODIC SYSTEM: THE LOWER SIGNS

The lower signs represent basic degrees of a diatonic scale.

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1) FIRST DEDUCTIONS

Let us examine the first system separately, since each system is undeniably complete in itself.

The same signs are not indiscriminately located above and below the written text. Some are never to be found above, such as: T ḫ ፳ ፻ ፿ ; certain others, never below: ≈ ፻ ፾ etc. Moreover, these lower signs are much more numerous than the others. Another interesting fact is that they are *never absent*, whereas entire verses are deprived of upper signs (e.g., in the opening verses of the Bible, Genesis 1:3, 8, 17, 19, etc.). This would presage the greater importance of the lower signs. However, it must be remarked that the lower signs are rather sparsely scattered throughout the biblical text. If the majority of the words, in effect, are actually provided with a lower sign—rarely more than one—many words are totally devoid of any sign whatsoever.

It is hardly thinkable that the words deprived of signs are consequently deprived of music. Most likely there is a latent convention in this notation: certain sounds should be prolonged *beyond* the syllable under which they are located, into the next syllable or even into the ensuing words.

2) TONAL FRAMEWORK – THE DISCOVERY OF THE TONIC, EVIDENT TRACES OF ABBREVIATION, SEVERAL DOMINANTS APPEAR (THE 4TH AND 5TH DEGREES IDENTIFIED)

We know the tonal importance of persisting sounds. Therefore we could foresee that these sounds, extending through several syllables and even several words, constitute the *framework* of the musical phrases. From this perspective we observe that there is not a particular, determinant sign which always precedes the word or words deprived of signs. Thus, supposing that each lower sign symbolizes a *melisma**, each sign would consequently and necessarily have to indicate the tonal value of the note ending the melisma. Otherwise, *on what degree of the mode would the signless word or words be expressed?*¹

However, if we test this new supposition, is there not reason to note which specific lower sign is most frequently found at the end of the verses, either on the last word or on one of the words just preceding it? This sign could actually certify a formula leading to the ending note, if it

is not the final note itself. Is not the respect for the final "tonic" note normal for the coherence of every conclusive musical phrase (unless the music is *avant-garde*)?

The discovery of the tonic

Now, it is in fact the same lower sign which one always finds at the end of the verses. It is the most simple of the signs: I. It is also present in the middle of the verses and even rather often at their beginning.² It is quite enlightening that it should be thus, for this situation confirms that this sign represents the *tonic* note—the only note of a scale which can retain so many different privileges.

This important observation has also led us to conclude that the lower signs do not symbolize melismas. Can one imagine the near-totality of verses beginning and ending with the same melodic formula? Can one imagine some verses ending with the use of the same formula twice in succession on the same word, as would often be the case? (One can find this same sign as many as three times under the same word!)

Evident traces of abbreviation

We have said that there must be a latent convention in this notation concerning the prolongation of the value of a lower sign beyond the word under which it is located. If one adopts this point of view, another convention comes to light.

We notice furthermore that often the first word of the verse does not possess a lower sign (nor an upper one for that matter), and this deficiency could seem problematic. But, in considering abbreviations, and assuming that the tonic note is represented by the sign I, we can see in this particular omission evidence of an economy of signs which appears at once: it seems that, conventionally, each verse commences with the *tonic* (unless another sign is given indicating another scale degree).³ Consequently this new economy of signs would justify itself, without any harm at all to the precision of the notation.

Several dominants appear (the 4th and 5th degrees identified)

Thus the lower signs could be identified as fixed, constituent degrees. As for the upper signs, could they be *secondary* degrees, perhaps even *subordinate* degrees?

Without deviating from the main subject, let us pursue our examination of the lower signs. Our first deductions already form an acceptable basis for continuing our research of the significance of the various signs, since the only sign for which we have discovered the meaning is what we call the *tonic*, the most important sign of all.

The next most important degree of the scale (apart from the tonic or "final," the tonal rallying point of melodic evolution) is the degree or degrees on which occur what is called the **half cadence***: the suspensive pause.

Fortunately for this kind of analysis, the literary text is always present. To determine the **caesuras***, we need only comprehend the sense of the Hebraic sentences. For this, obviously, we need to be thoroughly familiar with the language. However, certain songs, such as that of the *Crossing of the Red Sea* [Exodus 15], indicate the hemistichs of their verses by means of blank spaces. With the aid of this song, it appears that certain lower signs (fixed degrees according to our deductions) are found more frequently than others at the end of different parts of the sentence. These two signs are \wedge and \sqcup . This observation, moreover, is verified throughout the rest of the biblical texts.

For the majority of diatonic scales, it is the **tonal notes***,⁴ the "good notes" (excluding the 1st degree) the 4th and 5th, which are the most favored support for the **half cadence***. Would the mode employed here therefore present at least two **dominants***?

There is no anomaly in this. The tyranny of a single dominant is only imposed in Western European music, and that but shortly before the Renaissance, when polyphony and harmony, in their early development, were created on solid foundations. The 4th degree, like the 5th, can fulfill this function; in certain cases, so can any of the other degrees. All the more here since this is *monodic* music, thereby escaping any potential ambiguity of the accompaniment. And moreover in that in these ancient realizations, musical meaning should have had the predominance over hypothetical theory. Are not all satisfying effects linked to the often-undefinable correlation of verbal and tonal syntaxes?

But *a priori*, nothing indicates which of these two signs represents the 4th or 5th degree. Consequently, there is but one solution: the analysis of countless texts possessing the same series of three or four signs culminating in half cadences. The *verbal meaning* of the phrases, calling for the presence of one or the other of these two degrees; the

confrontation of hypotheses, keeping in mind the *ethos**—the only real point of support in this tangle of possibilities—finally lead to the discovery that \wedge represents the 4th degree and \sqcup the 5th.

3) BY WHICH PREDILECTION SHOULD THE REMAINING SIGNS BE APPROACHED? THE TONIC SEEMS MEDIAL; A SUGGESTIVE MORPHOLOGY

The "main tonal pillars" having been identified, it will certainly not be easy, but no longer impossible either, to discover the significance of the remaining lower signs. They are eight all told, and we think we know the three principal ones:

	\wedge	\sqcup	/	\vee	<	s	\backslash
1	4	5					

Eight signs. This number curiously corresponds to the number of degrees in a *non-gapped** diatonic scale. Encouraged by this coincidence, we continue our examination. Now the order of the succession of the degrees must be determined. How can this be done? There is but one means: the use of exhaustive tables of comparison.

Series of three with one unknown

First we isolate all series of *three degrees* for which only the *middle* degree is unidentified, with the two outside degrees being always in the same order. For example:

	/	\wedge	or		\vee	\wedge	or		<	\wedge	etc.
(I)	?	(IV)		(I)	?	(IV)		(I)	?	(IV)	

The most frequently occurring formulae are obviously the most *common*, vocally speaking; for, in principle, small intervals are more common than big ones. These first observations will constitute a reserve for future reference.

An exhaustive study limited to a single sign

Separately, each sign to be identified is considered by itself. Straight away \backslash and $/$ seem to appear very frequently before or after the tonic (or again, before or after the 4th degree—an important detail not to be neglected).

Each sign is then studied separately, considering its relationship with one of the already-known signs, either preceding it or following it:

$\begin{matrix} \backslash / & \backslash / \wedge & \backslash / \downarrow & \downarrow / \downarrow & \text{etc., then } \end{matrix}$ etc.
 ? ? ? ? ?

The frequency of the elucidated relationships can aid (although minimally) in discovering the *tonal function* of the sign in question, e.g., the sign that most frequently precedes the tonic, or the **subdominant***, etc. In this research, the *beginning* and *end* of hemistichs are taken by themselves, for these particular "situations" in the verse limit the diversity of possible functions of the signs found there. These sections are less evasive—when they are purposely isolated—than the middle part of the hemistich.

Of course, it is not forbidden to sketch out a melody with the aid of these few signs, while regarding the precise words which they underline; a correlation could point revealingly to something. But in the total absence of knowledge concerning the *modality*, tied to the incertitude as to which degrees of the scale indicate this aspect, such an effort is still just a source of illusion!

It becomes evident, however, that \backslash and $/$ are probably degrees *higher* in pitch than the tonic, even though there is still no certainty of this. Nevertheless, in the eventuality of one mode or another, \backslash seems to represent a *third* degree rather than a second.

The lucky "false leads" of this research—this is what the labeling of the frequent groupings of signs helps to determine, as well as those which are rare or even rarisms. And this too is important: the most infrequent groupings cannot concern **conjoining*** degrees! Thus, it is evident that \backslash and $<$ are not neighbors; \backslash and \downarrow are not either; \backslash and $<$ even less, and so on.

As can be seen, none of these observations brings a solution in itself. Still, each one is an important stone added to the edifice, a primary support, raising the prospect overlooking the assembly of computed relationships whose significance is vital, yet must be discerned without the slightest outside support.

**The systematic attribution of each sign
to a particular tonal function**

We now have a knowledge of the greater or lesser frequency of each sign's relationship with one of the three "pillar" degrees of the tonality—and the frequency of these relations is hierarchically brought to light; e.g., \diagup has a stronger relationship with \mid than with $_$; \diagdown has a stronger relationship with $_$ and \wedge than with \mid (the tables of examples have to be numerous, classified, lending themselves to frequent, rapid consultations).

In this manner we can test each *sign*, one after another, for a specific tonal function. For example: is \diagup (a sign frequently present) the third degree? If so, it should often be found near \wedge (which does not appear to be the case). However (for we must not hastily discard the idea, since obviously limited evidence may be a source of error), if we insist on wanting to consider it the third degree, the sign $_$ should consistently follow it rather often, after the tonic (1, 3, 5 being a normal formula)—but this is not the case. And so the careful examination of the comparative tables continues.

Certain relationships known to be *rare* will consistently eliminate a sign from a proposed function. For example, $_$ and ς are almost never seen together. Therefore ς cannot be the 6th degree since $_$, the 5th degree, has very limited contact with it.

The tonic seems medial

But we do not know the location of the "pillar" degrees in this yet-virtual scale! Is the *tonic* the *lowest* note of the scale, and thus by force the highest note also?

This ignorance is the greatest obstacle to the comprehension of the system. Nevertheless, the observed scarcity in the relationships between ς and $_$, or ς and $<$, or again between \diagup and $<$, or \diagup and $_$, permit us to foresee that the degrees represented by these signs are *distant* from each other in the adopted scale system.

On the other hand, \mid seems to possess multiple relationships with \diagup and \diagdown and ς and \wedge . Could the location of the tonic then be *central*? But if that is the case, the tonic would not appear, as in our scales, as both the *bottom* and *top* notes (which seems to be confirmed, since no other sign exhibits the same functions). Nevertheless, if this is true, how

can we detect the *intermediate* position of the tonic without the aid of the musical staff? Would then another degree be represented by two signs, which would symbolize its use at the octave?

Study on the composition of a hemistich

Thus armed with all these references, it becomes possible, thanks to this "baggage" in hand, to venture to reconstruct the music for an entire hemistich. In assigning particular functions to a series of signs in the sentence, in light of all we know in each sign's case, the conditions for a satisfying interpretation are less aleatory. Little by little the reality is surrounded.

With the assistance of the words themselves, a glimmer of "correlation" can appear—all the more since we have identified the "pillar" degrees of the tonality (the knowledge of the important cadence points of the phrase is really primordial for the interpretation of degrees which, in spite of the evidence, still remains quite tangential). It becomes necessary to give a "trial run" to the supposed melodic formulae *in several modes*; for one mode can give a barely acceptable result and another proves to be appropriate by the very life it bestows on the words. But, of course, any satisfying results could be mere coincidence! In order to authenticate them, the same satisfying results must be consistently and unfailingly reproduced in every test case.

A suggestive morphology

The morphology of the signs is not totally foreign to the reality they symbolize. Creativity seems to have been employed here. All the more because of the existence of this imaginative precedent: the figuration of the tonic by a simple, laconic vertical line: I.

The figuration of the 5th degree (normally at the interval of a perfect fifth* from the tonic, since we have discovered its suspensive function), with its curious right angle L, speaks to the eye when we know that this degree presents with the tonic the closest rapport after that of the octave—the ratio 2:3 (these ratios were not unknown in antiquity).⁵ On the other hand, no doubt / and \ present an analogy—but what kind? The same with < and S, no doubt.

4) THE IDENTIFICATION OF THE ENSEMBLE OF LOWER SIGNS

If I have been able, after long and difficult research, to determine the following classification, in ascending order, as the only valid solution for all the texts to which the first system is attached, it was in following the criteria of countless confirmations. I must add that this classification proves itself *infallible*.

$\overline{5}$	$\overline{7}$	\overline{T}	$\overline{7}$	$\overline{\wedge}$	$\overline{\wedge}$	\overline{J}	$\overline{\wedge}$
6	7	(1)	2	3	4	5	6

ascending order →

It has been observed that the tonic is *medial*. This is a capital discovery for the understanding of the remaining lower signs which give their allegiance to it (musically speaking). Everything becomes simple and clear through this revelation, even to the form of the signs which are justified by this symbolization: the analogy between \wedge and \vee , both being degrees adjacent to the tonic, the one above \wedge , the other below \vee ; the similarity between $\overline{5}$ and $\overline{\wedge}$, the former being one octave below the latter.⁶

There still remains the question of which mode—or rather, *which modes*—are used by this scale system. Undoubtedly, the music for all the twenty-one books which use this system is not painted on the same tonal canvas!

NOTES

¹ It is simply a matter of seeking a coherent system.

² Certain printed editions deliberately suppress this sign in the middle of verses, even though it is given in the first manuscripts containing the Tiberian notation, and also in the first printed Hebrew Bible (cf. Annotation).

³ Whenever the sign | is present on the first word, it is exceptional, and is there for a very good reason (cf. p. 236).

⁴ The first and last notes of the "tetrachords" in Greek theory.

⁵ The proportionate lengths of strings or columns of air; later, the ratios of vibrational frequencies (inversely proportionate).

⁶ The etymology of the names for the signs proved these deductions to be correct. My technical study, however, preceded this particular historical confirmation. It is true that these correlations finally became evident after thorough investigation.

CHAPTER III

HOW THE MODE IS ASCERTAINED

— Summary —

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1) THE PRESENCE OF THE "CHROMATIC-DORIAN" MODE

With the greatest of ease one particular mode suits the most important passages of Genesis, for Mosaic doctrine. It is the **chromatic Dorian*** with its characteristic *augmented second* interval between the 2nd and 3rd degrees.¹



Curiously, this is the *typical mode par excellence* of Jewish tradition; and here it is found in a circumscribed **ambitus*** [range].

That the tonic is neither the top nor bottom note in the series is not an exceptional fact. It is known today, as we stated earlier (cf. p. 185), that the ancients made use of this kind of structural configuration.

We are going to be able to judge for ourselves that in the most characteristic texts of the Pentateuch, this particular mode is *necessitated* by the meaning of the passage. It is an enlightening experience to be able to ascertain this thoroughly, with only texts *deprived of upper signs*—the musical meaning of which is consequently totally enclosed in the lower signs alone.

These texts, arrayed once again in their specific intonations, resurge endowed with *unsuspected power*. The resultant cantillation, according to this present interpretation, confers on each word, each syllable, an appropriate color, often amplified tenfold by the mysterious power of the interrelationship of tonal values.

There are equivalences which leave no room for doubt when they occur repeatedly. Thus, in the following text, the 3rd degree (↖) is imperiously set apart by the **augmented second*** from the preceding degree (↗), whereas the second degree must be maintained at a half-step interval from the tonic,

THE DECALOGUE: EXODUS 20:7²

[7] You shall not take the name of the Lord your God in vain.

Without this interval created by the characteristic augmented 2nd, the same musical phrase would be insipid; one need only try it for himself to demonstrate this [sing it without the G[#] to omit the augmented 2nd].

The same is true for this verse from the opening chapter of Genesis:

THE CREATION: GENESIS 1:17³

[17] Granted them / God / in the expanse of the heavens

vay_yi_ten 'o_tham 'E_lo_him bir_qi_a' hash_sham_yim

to give light to the earth.

le_ha_ir 'al ha_a_rets

To represent here this word *leha'ir* (to shine) by a third degree constructed a whole step from the 4th would make it seem *quite "pale!"* Moreover, the word '*Elohim*' would be barely touched.

The same text incorrectly interpreted:

[17] Granted them / God / in the expanse of the heavens

vay_yi_ten 'o_tham 'E_lo_him bir_qi_a' hash_sham_yim

to give light to the earth.

le_ha_ir 'al ha_a_rets

Such attestations abound. This concordance is not the effect of chance; it happens *too frequently*.

We began our investigation in total ignorance; now we are bordering on "unity." Here a structure asserts itself because it confers on the music not only an undeniable expression, but one which *corresponds* to the expression of the words. Can we simply ignore all this? The unity and complementarity produced by a conspicuous *directing thought* are elements too important to be neglected. And this complementarity is all the more flagrant in that it is attested by the most prominent, significant passages of the Holy Scriptures.

The beginning of the "Shema Israel," that solemn exhortation of the Hebrew people, takes on, with the resultant cantillation, a benevolent gravity and a depth of sentiment which are really prophetic:

"HEAR, O ISRAEL": DEUTERONOMY 6:4

[4] Hear, O Israel, the Lord (is) our God, the Lord (is) one!

Let us alter just one degree—the 3rd, lowering it a half-step, taking away from it the augmented-second quality so characteristic of the chromatic genre.

The same text incorrectly interpreted

[4] Hear, O Israel, the Lord (is) our God, the Lord (is) one!

The musical phrase is not disfigured, but the result is simply "weak." There is no longer the transcendent exhortation in the word *shema* when thus expressed by a minor third. On the other hand, *yisrael* is highlighted by the *major* second which, in this incorrect realization, takes our attention away from the preceding word.

The rest of the same example is just as incompatible when interpreted in this fashion. *'Adonay 'elohenou*: this latter word is then accented by the 3rd degree placed a minor third from the tonic; the solemn proclamation loses all its vigor. If it were only thus in this verse, one would have room for doubt—but the end of this call is also very instructive. The tone is not peremptory; mercy dominates. However, the 3rd degree must be placed at the interval of a major third from the tonic:

"HEAR, O ISRAEL": DEUTERONOMY 6:8-9

[8] You shall bind them on your hand; they shall be as frontlets before your eyes.

ouq_shar_tam le_ 'oth 'al ya_de_kha ve_ha_yoù le_ to_ ta_ foth bén 'é nê_kha

[9] And you shall write them on the doorposts of your house and on your gates.

oúkh_thab_ tam 'ai me_ zou_zoth bê_te_ kha oú_bish_ 'a_ ré_ kha

The exhortation is thus set forth prominently. Moreover, the word *le'oth* ("as a sign") is astonishingly highlighted by the carefully sculpted melodic contour.

In the appropriate mode the beginning of Genesis is majestic:

THE CREATION: GENESIS 1:1

[1] In the beginning / created / God / the heavens and the earth.

be_re'_ shîth ba_ra' 'E_lo_hîm 'eth hash_shâ_ma_yim ve_ 'eth ha_ 'a_rets

Thus the 3rd degree—characterized either by the augmented 2nd separating it from the 2nd degree, or by the major 3rd which separates it from the tonic—"responds" exactly to the expression of the words in certain well-delineated passages. This is no ordinary fact; one might think it of no importance; yet another mode could not take its place. Without daring to modify the 4th and 5th degrees, the "tonal notes," inviolable in principle (the ancient Greeks calling them "harmonies" in making them so early the permanent supports for the tetrachords of their scales), let us modify the 2nd degree as a test, raising it a half-step.

The same text incorrectly interpreted

[1] In the beginning / created / God / the heavens and the earth.

A musical staff in G clef with four measures. The first measure has two notes. The second measure has three notes. The third measure has two notes. The fourth measure has three notes. Arrows point from the words 'In the beginning / created / God / the heavens and the earth.' to the notes in the following manner: 'In' to the first note of the first measure, 'the' to the second note of the first measure, 'beginning' to the first note of the second measure, 'creat' to the second note of the second measure, 'ed' to the third note of the second measure, 'God' to the first note of the third measure, 'the' to the second note of the third measure, 'heavens' to the first note of the fourth measure, 'and' to the second note of the fourth measure, and 'the' to the third note of the fourth measure.

be_re'_ shîth ba_ra' E_lo_ him 'eth hash_shâ_ma_yim ve_ 'eth ha_ 'a_rets

What sudden banality from such a slight modification! Let us continue our investigation by bringing the 3rd degree closer to the 2nd degree, placing it at the interval of a *minor third* from the tonic, and a *minor second* from the 2nd.

Another defective interpretation

[1] In the beginning / created / God / the heavens and the earth.

A musical staff in G clef with four measures. The first measure has two notes. The second measure has three notes. The third measure has two notes. The fourth measure has three notes. Arrows point from the words 'In the beginning / created / God / the heavens and the earth.' to the notes in the following manner: 'In' to the first note of the first measure, 'the' to the second note of the first measure, 'beginning' to the first note of the second measure, 'creat' to the second note of the second measure, 'ed' to the third note of the second measure, 'God' to the first note of the third measure, 'the' to the second note of the third measure, 'heavens' to the first note of the fourth measure, 'and' to the second note of the fourth measure, and 'the' to the third note of the fourth measure.

be_re'_ shîth ba_ra' E_lo_ him 'eth hash_shâ_ma_yim ve_ 'eth ha_ 'a_rets

Doubt is now insinuated, in this proclamation of the creation of all things! Here the text is belittled, veiled with sadness and mourning.

Such is the power of tonal interconnections, that one mode *abandons* the words, while another seems *designated* for them! Certainly, if this music did not have the biblical text for its basis, it would have been difficult if not impossible (because of its tendentiousness) to assign a particular "manner of hearing." Personal tastes differ and

influence our judgment. But in our experimentation, the words are the guarantee. The interconnecting links are too conspicuous. Enclosed in a minimum of musical means (*no modulations, no harmonizations*), in themselves so efficient, these interconnections must be taken into consideration. Furthermore, these interconnections present themselves in profusion in the most representative yet diverse texts of the biblical message.

The expressiveness of the "chromatic-Dorian"

Let us expand our investigation and we will be surprised at the richness and diversity of this mode's expressiveness. If some of its characteristic formulae (as we have seen) possess an extraordinary power, it is also capable of expressing a restrained grief:

DAVID'S ELEGY: II SAMUEL 1:26

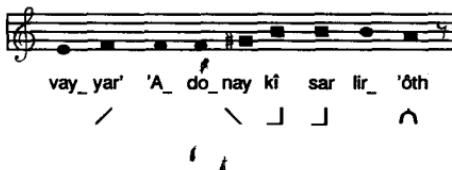
[26] you were precious to me so much.



It unites just as easily with the expression of a mysterious plan:

THE BURNING BUSH: EXODUS 3:4

[4] Saw / the Lord / that he turned aside to look.



Earlier this mode seemed particularly suited to expressing exhortation, while the melody masked, after a fashion, the mode's seductive potential. But it is just as capable of bursting forth in exultant thanksgiving:

SONG OF THE RED SEA: EXODUS 15:19

[19] brought back / the Lord / on them / the waters of the sea;

vay_ya_shéb 'A_dó_nay 'a_le_hem'-éth mè hay_yam
s y \ 4

but the children of Israel walked on dry land through the midst of the sea.

oub_né yis_ra'_el hal_khoú bay_ya_ba_shah be_thôkh hay_yam
s y | / \ / |

A mode of ancient and continuous tradition

Is it possible, historically speaking, that this particular mode could have been in use in such distant times? Does not its chromaticism demand a more recent construction? *Not at all!* We already mentioned at the beginning of our technical *exposé* that history strangely confirms what our discovery proposed. The origin of this form of chromaticism (mingled with cautious touches of diatonicism), according to the theoreticians of ancient Greece themselves, is as old as music itself (cf. p. 184). More precisely, the most authoritative musicologists confer on this "chromatic-Dorian" mode (characterized by the augmented 2nd between the 2nd and 3rd degrees) not only an oriental character but an oriental *origin*. They name it accordingly: oriental **chromaticism***⁴.

This is moreover confirmed by Hebraic tradition, in which this mode figures in first place. Numerous liturgical chants and folk songs are constructed with this mode as their base; and they are counted among the most representative, the most stirring and beautiful of their genres.

2) THE HYPODORIAN, OUR "DIATONIC MINOR" SCALE

The systematic investigation of the mode

The highly pronounced character of the chromatic-Dorian mode is far from befitting every biblical text. One perceives (not without uneasiness) that in applying it to certain verses, even though the melody remains coherent, it somewhat loses its substance and its expressive relationship to the words is clearly less convincing. Evidently the cantillation of these verses was conceived in another mode. In this case, there is reason to try out several others and enlarge our investigation. For there is nothing that forces this particular mode to be the only one employed wherever the prosodic system is applied. The contrary is more probable. Would not an intolerable monotony result from such abuse?

In fact, this question posed concerning other structures—*without leaving the norms*—produces results surpassing our hopes! In the strongly supported tonal framework as constituted by the "good notes,"⁵ the alteration of an intermediary degree is a common thing, of which the ancient Greeks did not deprive themselves! *It changes everything*; they did not ignore this fact.⁶ They exploited it to the depth of its resources for their monodies. And in this they were far from being less sophisticated than we! But until now, we were lacking examples to prove this to ourselves.

Just as the presence of the "chromatic-Dorian" confirmed itself earlier by the correlations offered by its *ethos** with certain passages of the Bible, the presence of another mode is indicated just as clearly in other chapters, other books of the Bible.

In effecting this structural modification, we see other passages coming to life—and not just for a short phrase, but for long sections and entire chapters. Thus the fifth chapter of the Book of Esther fits the **Hypodorian*** mode. Its characteristics are:



T

The 2nd degree is a *whole step* from the tonic, the 3rd degree is a *minor third* from the tonic (and a half-step from the 2nd degree), all coordinating *perfectly* with the expression of the words. Applied to the verses of this chapter, the **Hypodorian*** exhales a truly impressive and evocative suavity (although we are still limited to the cantillation formed uniquely from the *lower signs*).

ESTHER 5:2

[5] She obtained sympathy in his eyes.



nas _ ah hen be _ 'ē_ nāv
| / \ /

The melodic refinement here is equaled only by its extreme elegance.

ESTHER 5:3

[3] Even to the half of the kingdom, it will be given you!



'ad _ ha_ tsf ham_mal_khoūth ve_ yin_ na_ then lakh
(?) / \ / / |

It is said, with reason, that the surest way to understand a civilization is by its artistic values. This is even more true for music than for other arts because of its ability to reflect a more nearly complete picture. In effect, by these several melodic phrases, one is capable of judging the prestigious effect that the *court of King Ahasuerus* — and the quality of its luxury — had over Israel more surely than by any other description or representation.

How far distant we are from the style (itself such a faithful reflection) of the above musical citations. And yet we cannot contest these realizations any more than the others. The life which resurges from them is too real, too intense!

That the variable position of only two degrees of a "modal" scale produces such wonders should not astonish us. How many works of our great composers, sublime in "minor," would be inexpressive or even unbearable in "major!" It is exactly the same in these few passages which already delight us. In the **chromatic-Dorian*** they would not only lose their charm, the meaning of the verses would be *denatured*.

The same text incorrectly interpreted

[3] Even to the half of the kingdom, it will be given you!

'ad_ha_tsi ham_mal_khoooth ve_yin_na_then lakh
(2) / \ / \ / \ |

How can we doubt the *appropriateness* of one mode over another in a specific realization, when one provokes such degradation while the other, like a perfect mirror, reflects the words?

Several books require the presence of the **Hypodorian*** mode. Part of the book of *Lamentations* is composed in this mode. But how different is the spell it reveals. Our sensitivity is moved by the profound grief (how else can such misery be sung!) with which the cantillation is impregnated:

LAMENTATIONS 1:2

[2] No one / she has / to comfort her among all her lovers .

'en_lah me_na_hem mi_kol o_ha_be_ha
| / \ / \ |

This mode is used in several books—but we will not give further examples. The total profusion of those we set forth in this study is sufficient to give the reader a cogent idea of these interpretations.

3) THE DORIAN MODE

Our "diatonic minor" is appropriate for numerous verses of the *Song of Songs*; but not all of this unequalled love song is composed in the same mode. Many passages call for the Dorian, the favorite mode of the Greeks. They viewed it as *noble* and *austere*.



Plainer than the preceding mode, more *concentrated* with its "leading tone" a half-step *above* the tonic (a melodic attraction specific to the music of antiquity), this mode gives the following "preface" a reserved tone, free of all pomp:

SONG OF SOLOMON 1:1⁷

[1] The Song of Songs composed by Solomon

It lends itself marvelously to translating a strangely pure passion.

SONG OF SOLOMON 7:3

[3] Your two breasts (are) like two fawns, twins of a gazelle.

It emphasizes equally well an overwhelming sorrow:

LAMENTATIONS 5:1

[1] look, and see our reproach!

ha_bî_ta oûr'_eh 'eth_ her_pa_the_noû
(˘) \ / ' | /

4) OTHER DETECTABLE STRUCTURES

The principal tonal structures that one can encounter in the twenty-one books of the first system are not limited to these three modes of such diverse expression. But they translate the essential texts—apart from a few exceptions.

The sacred *Priestly Benediction* can only be appropriately expressed in the following strange mode, wonderfully becoming:

PRIESTLY BENEDICTION: NUMBERS 6:24-25

[24] "Bless you / the Lord / and keep you!"

ye_ba_rekh_kha 'A_do_nay ve_yish_me_re_kha
| / \ |

[25] Make shine / the Lord / His face on you and be gracious to you!"

ya'_er 'A_do_nay pa_nâv 'e_lâ_kha vi_houn_ne_kâ
S / \ | |

Encased by exhortations which normally find their expression in the chromatic-Dorian, such power of serenity emanates from this mode that the musical sounds, laden with the density of the words which they support, decelerate the *cadence** as though coerced.

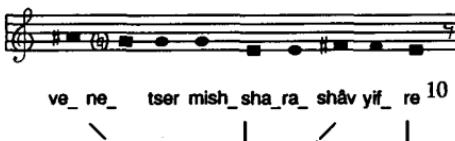
The following well-known passage from the prophetic Book of *Isaiah* requires another mode no less strange (at least to our ears). It also is of chromatic essence, but the augmented 2nd, placed here between the 3rd and 4th degrees, renders the expression totally different from what it imparts to a mode when it is placed between the 2nd and 3rd degrees. Consequently it is less peremptory, being propitious to the vision.

ISAIAH 11:1

[1] Then will spring a shoot from the stem of Jesse,



a branch from his roots will bear fruit.



If these two very unusual tonal structures have been retained, it is because through them alone the monodies found an undeniable expressive meaning, whereas in another mode, they would lose all character befitting the words.

It is important to see this before claiming that a mode fits the words it accompanies—in a word, reassuring oneself that it really enhances them (cf. Postface).

5) HISTORICAL JUSTIFICATIONS FOR A MODE WITHOUT SPECIFIC INDICATORS

It might have appeared tendentious and subject to caution (before seeing these examples) to decree without proofs that an unknown kind of music was conceived in a particular mode rather than another. This objection now falls of its own accord.

The particular mode befitting a monody nearly always asserts itself after several tests and comparisons. If a particular passage remains in doubt, especially between the **Dorian*** and the **Hypodorian*** (which are very close to each other), following verses confirm the presence of one over the other, and thus make it prevail. For it was not the custom in ancient times to change the mode frequently in the middle of the piece. The Greek theorists themselves state this.¹¹

This is why, in the absence of signs indicating the modality, we are not disarmed for the deciphering of this music. Having been able to conclude that the lower signs represent *the degrees of a diatonic scale* (in light of their consistently coherent relationships); and having realized, moreover, that certain passages (when interpreted in particular modes) are *endowed with life* and a musical expression corresponding faithfully to the text, we have reason to be convinced. Bear in mind also that these modes and their formulations are consigned in the ancient writings of the countries neighboring Israel (cf. pp. 183-185) and that they were in use (as tradition proves) from earliest times by specifically Jewish music.¹² That these modes particularly suit certain reconstituted monodies, therefore, receives the support of history.

That the *verbal text* should be our indicator is also justified. At an epoch when musical art was already judged by the Greeks themselves as being "decadent" (cf. p. 86), Aristotle stated that the sentiment to be expressed *dictated* the choice of mode.¹³ Regarding the particular sentiment to be expressed, the words in the verses are the first receptacle. So it is intentional on our part that we *subordinate the mode to the meaning of the words*. It is quite conceivable that the Hebrews had this concept before the Greeks, whose music was strongly influenced by that of Asia Minor.

Should we really be astonished that the lack of signs indicating modality in the deciphered notation could stimulate us to a certain reserve? At the distant epoch when this notation was given to us (9th century C.E., cf. p. 45)—a notation created (as we think) far earlier—the

practice of indicating different intervals between the modal degrees was not yet in use. Our modern "tonalities" and "modulations" were then unknown, and it was these which rendered our various key signatures and alteration signs indispensable.

In the few attempts of this kind there is a part (a more or less restrained one) given to speculation.¹⁴ Musicology, which feels itself concerned, bears this in mind, and far from stigmatizing this kind of approach it encourages it.

At the end of the 19th century, certain decipherers (legitimately consulting composers of music)¹⁵ undertook to decode and transcribe into modern notation several musical notations figuring in ancient Greek manuscripts. Their methods produced different versions, which were carefully compared by the critics.¹⁶ One of them, Combarieu, delicately phrases a very serious reservation: "One has the impression of a '*petite violence*'¹⁷ exercised by M. Rieman on the text in order to make it enter into a preconceived, arbitrary framework."¹⁸ My deciphering is authentic, as the rest of my explanations will prove. Nowhere do I "force" the reclaimed melodies to enter a "preconceived, arbitrary" framework. They are animated instead by the breath of life! There, once again, is the surest justification of a scrupulous approach for which more than one person will be grateful.

Furthermore, the modal question was never considered a compromise sufficing the denial of a tradition's authenticity.¹⁹ Nor does it put into question the resurrection of a lost music which is reborn from a notation whose meaning has been rediscovered.²⁰

The sobriety and concision of this monody

Some might have thought that the modes employed by the Hebrews were more *pronounced*, even *bizarre*, saturated with that exotic quality found in certain synagogue cantillations. This is not at all the case. The modes of our classical music already figured among those of earlier civilizations, as history confirms,²¹ and as these realizations prove as well.

The expressive and even ethical meaning attributed to modality in those ancient times, the great part that music played in social life (and at the university of Athens in particular), were certainly a clue to the judicious use of these modes described in the treatises. In the absence of musical testimonies, these realizations seemed hypothetical! How much is already made clear in these still fugacious, yet penetrating realizations.

Since those passages that are constituted exclusively of lower signs are rare, our range of investigation is about to broaden.

NOTES

¹ Of course, only the relationships between the pitches are to be retained in our modern notational transcription; it is not a matter of absolute pitches being stated. [It is common musicological convention to place the tonic on *E*—just where Haïk-Vantoura places it here—when transcribing an ancient notation into modern terms.—Ed.]

² The prosodic rhythm remains dynamically linked with the expression of the words (cf. chapter 5).

³ A word-for-word translation is adopted in our analysis, thanks to which the correlation and the finesse of the prosody can be fully understood.

⁴ A. Machabey, "La Musique Byzantine," in *La Musique des origines à nos jours*, p. 63.

⁵ This is how theoreticians designate the degrees *I*, *IV*, *V*, because they confirm the tonality.

⁶ "Among the Greeks . . . the correct, precise determination of the intermediary tones of the tetrachord (e.g., the *F* and *G* in the first tetrachord at the bottom of the Dorian scale) did not exist. The notes between the first and last notes of the tetrachord were only "notes of passage." Not only was it unnecessary to give a fixed position to these transitory degrees, but one found a great advantage in their mobility. Along with his intonations, it was the poet-musician's most powerful means of varying the character and expression he wished to give to his song." J. Combarieu, *Histoire de la Musique*, vol. I, p. 88.

⁷ Already cited in PART ONE, p. 171.

⁸ In contrast to other examples of the prosodic system, the syllables of the Song of Solomon are mensural (one beat per syllable), as in psalmody (cf. p. 54).

⁹ The meaning of this sign is explained in the next chapter.

¹⁰ This structure actually contains two augmented 2nds, placed between the 3rd and 4th and the 6th and 7th degrees.

¹¹ Plutarch affirms: "It was not anciently permitted to perform pieces in the modern manner, nor to change the mode or rhythm in the middle of a composition." Cited by J. Combarieu, *Histoire de la Musique*, vol. I, p. 148.

¹² "It turns out that the primitive synagogal music was strictly monodic and modal. . . . To the most ancient modes came to be progressively added (often mixing with them) chromatic scales with one or two augmented 2nds, situated either in the lower tetrachord (between the 2nd and 3rd or 3rd and 4th degrees), or in the upper tetrachord (between the 6th and 7th degrees), or in both at the same time." (Notice that this is exactly the case in the music reconstituted here.) L. Algazi, *Histoire de la Musique* (Gallimard), vol. I, pp. 366, 369.

¹³ J. Combarieu, op. cit., vol. I, p. 86.

¹⁴ In that which concerns my work, this part is reduced to a minimum.

¹⁵ Including Gabriel Fauré himself.

¹⁶ Cf. J. Combarieu, op. cit., p. 173.

¹⁷ Emphasis ours. (Literally, "a small forcing.")

¹⁸ J. Combarieu, op. cit., p. 173.

¹⁹ Concerning modal imprecision in the various deciphered manuscripts dating from the early Middle Ages, containing neumatic notations; and concerning different modal versions, the Benedictine Monks of Solèsmes conclude: "This question of modes is delicate, difficult, scabrous, perhaps never to be resolved! In the meantime we can chant in a new mode the several antiphons modified by time." "Paléographie Musicale" (Bénédictins de Solèsmes), *Les Principaux Manuscrits de Chant Grégorien*, Part 2, tome I (21st vol.).

²⁰ The mode was not precisely indicated in antiquity (cf. p. 239, note 1). The same was true for altered notes right up to the end of the Middle Ages. "The composers did not indicate the accidentals; the singers had the habit and instinct of restituting them." A. Machabey, *Genèse de la tonalité musicale classique*, p. 140; cf. also J. Combarieu, op. cit., p. 456.

²¹ Cf. p. 184.

CHAPTER IV

THE SIMPLEST UPPER SIGNS

**The upper signs represent simple melismas or ornamentations
subordinated to the meanings represented by the lower signs.**

— Summary —

- 1) The upper signs also concern the tonality 234
- 2) How can the tonal value of similar signs differ according
to their position? 234
- 3) \searrow A degree "subordinated" to the 2nd degree above the
preceding lower sign 235
- 4) \swarrow An "appoggiatura" to the 3rd degree above 237
- 5) This new form of abbreviation also specifies the
accentuation 239
- 6) $\underline{\cdot}$ A note subordinated to the 2nd below the preceding
lower sign 240
- 7) $\dot{\underline{\cdot}}$ The simplest of melismas, an ornament related to the
"mordent" 242
- 8) These added notes never exceed the allotted time value of
the syllable they affect 243

1) THE UPPER SIGNS ALSO CONCERN THE TONALITY

Having identified the lower signs with certainty (as evidenced by the realizations), we wonder what the *upper signs* signify. Do they concern rhythm? If so, we have found no precursor sign thus far.

The answer is no, for two essential reasons. First, if the upper signs concerned rhythm, why do certain verses, including some of the most important ones, have no upper signs at all? Would the rhythm of the cantillation be marked sporadically? That would be completely unreasonable! Secondly, the simplest observation shows that two lower signs, \nearrow and \searrow , have their equivalents above the written text. Can we alternatively attribute a melodic, then a *rhythmic* function to analogous signs, solely because of their location? This notational procedure would denote an evident lack of imagination.

Consequently, there is reason to believe the upper signs also concern the *tonality*.

2) HOW CAN THE TONAL VALUE OF SIMILAR SIGNS DIFFER ACCORDING TO THEIR POSITION?

The upper signs can be classified in two categories: *simple* and *complex*. We commence with the simple signs as is fitting. First of all, we observe that two of these signs, \swarrow and \searrow , have an obvious analogy to two lower signs already identified: \nearrow and \nwarrow . This double position of equivalent signs undoubtedly has a meaning, and its discovery will be important to our research.

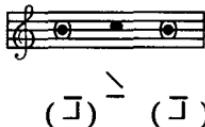
Logically there must be a *correlation* of meaning between a sign placed above the text and its equivalent below. Just as logically, they cannot have identical meanings; otherwise, why would there not be a unique position for both signs as for all the others?

Let us examine the question more closely. Two diagonals leave the word in the same direction (left or right): \nearrow \nwarrow . (This identity of direction appears peremptorily when these particular signs are presented in a *curved* form—which is the case in many printed editions, including the first: $\nearrow \nwarrow$.)¹ It is against all probability that there is one, *unique* meaning for these similar signs, situated above and below the text. How could there be the *same significance* for both signs appearing *simultaneously* in these two different positions? Is it possible to have two equivalent signs *superimposed*: מְאַרְךָ מִצְרָיִם as in the second verse of the Decalogue (cf. p. 40)?

**3) Δ A DEGREE "SUBORDINATED" TO THE 2ND DEGREE
ABOVE THE PRECEDING LOWER SIGN**

If an *identical* meaning for such a pair of signs is inadmissible, a *correlation* between their meanings is not. But we must discover *how*. After many hypotheses and in-depth analysis—now that we are certain of the *real* meaning of the lower signs—this mysterious correlation becomes obvious.

Let us consider these two corresponding signs \triangleright , one above, the other below. The lower sign represents (as we already know) a specific constituent *degree* of the tonal scale—the degree immediately following the tonic in ascending order (being the 2nd degree of the *mode*). The corresponding upper sign Δ also represents the *upper neighboring* degree, but of the *constituent degree just preceding it* (like an *ornament* of our modern notation, it is *subordinate* to it). Herein lies the correlation. There, furthermore, is the *cause* of the difference signaled by the position of the signs *above* or *below* the text. In the case of this sign Δ , it is a neighboring *upper degree*, but only "transient." Without a predetermined specific pitch, it "*adjusts*" itself in relation to the last specific constituent degree (or lower sign) encountered in the text,



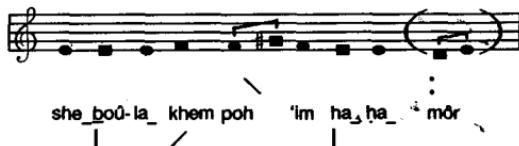
returning afterwards to this same degree of the scale. This form of notation is not unusual. It is similar to our modern way of notating "ornaments" of which the pitch is also not fixed, but *relative*, referring to the note which affects them without dethroning it.

What was certainly confusing was the use of an equivalent sign. But it must be admitted that this correlation was important to us in detecting the meaning of these two upper signs, and will undoubtedly be so in detecting that of the others as well.

This next excerpt is suddenly endowed with life, thanks to these different interpretations of the same sign implied by its two successive positions:

ABRAHAM'S SACRIFICE: GENESIS 22:5

[5] "Stay here with the donkey."

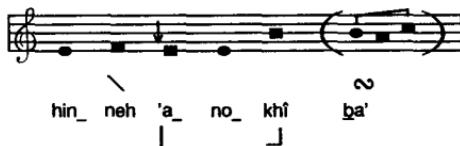


Let us carefully note (for it is an important concept) that the constituent degree in question reenters *immediately on the next syllable*. And this, even though the sign symbolizing it may not be present—which is generally the case, as in this last example.

However, when the constituent sign is indicated, it then concerns the accentuation.²

THE BURNING BUSH: EXODUS 3:13

[13] "Behold, I, I am going . . ."



Another extremely important fact: this sign in particular (and most of the other upper signs as well) does not always affect the beginning of a syllable. It can be placed either on the *second consonant* or even on a *vowel*. And this retardation provokes a different melodic configuration. To not take this into account would deprive the monody of one of its principal means of expression.³

In this verse from *Lamentations* this simple "procedure" generates an intensity of sentiment multiplied tenfold:

LAMENTATIONS 5:1

[1] Remember, Lord, what has befallen us.

A musical staff in G clef. A transient upper sign (a diagonal stroke) is placed above the note corresponding to the vowel in the word 'do'. Below the staff, the lyrics are written with vertical arrows pointing to specific notes: 'ze_khor' points to the first note, 'A_donay' points to the second note, 'meh-ha_yah' points to the third note, and 'la_nou' points to the fourth note. The number '4' is centered under the 'do' note.

4) ↘ AN "APPOGGIATURA" TO THE 3RD DEGREE ABOVE

Of course, in its position above the words, this sign ↘ offers with its corresponding lower sign < the same correlation as the preceding sign. We believe the affixed subordinate note is not an **appoggiatura*** to the 2nd but to the 3rd transient upper degree (in relation to the *constituent* degree for which it temporarily substitutes):

A musical staff in G clef. A transient upper sign (a diagonal stroke) is placed above the note corresponding to the vowel in the word 'do'. Below the staff, two lower signs are shown: a left-pointing bracket < under the first note and a right-pointing bracket > under the second note.

ABRAHAM'S SACRIFICE: GENESIS 22:6

[6] Took / Abraham / the wood of the burnt offering...

A musical staff in G clef. There are several transient upper signs (diagonal strokes) placed above specific notes in the melody. Below the staff, the lyrics are written with vertical arrows pointing to specific notes: 'vay_yiq_qah' points to the first note, 'ab_ra_ham' points to the second note, 'eth-' points to the third note, 'a_tsé' points to the fourth note, 'ha_o_' points to the fifth note, and 'lah.' points to the sixth note. The note 'ha_o_' is circled with a small circle containing a dot.

Invariably, the length of these *subordinate* notes does not exceed the syllable affected by their sign. It is indispensable that we interpret them in this manner. Otherwise, the melodic line would nearly always lose its cohesion and the incidence of the transient degrees would appear doubtful. They would then become assimilated with the fundamental degrees, and the notation would become equivocal. Only the lower signs have a value which may be prolonged beyond that of the initial syllable under which they are located.

This important rule verifies itself, for without an immediate return to the basic degree the melody would be deformed—in this particular case, even made incomprehensible.

SONG OF SOLOMON 1:3 Defective interpretation

[3] To smell / your oils (have) a pleasing fragrance.



It appears that when these two upper signs are correctly interpreted (as we will see further on), they give a musical phrase all its meaning; *without their help*, it would be totally inexpressive.

The same text, with another defective interpretation



We must not see in these subordinate degrees just simple embellishments with which one can dispense without denaturing the text. They participate with the other signs in the melody. They are part of all normal music. In a way they are the musical *texture*, having the same importance as the lower degrees on which they are *based*.

5) THIS NEW FORM OF ABBREVIATION ALSO SPECIFIES THE ACCENTUATION

But why notate these meanings, inherent to the melody (as we have just clarified), by means of upper signs necessitating a rule regarding the time value of their effect? Would it not have been simpler and just as creative to notate these interventions by signs also placed *below* the text?

Another defective interpretation

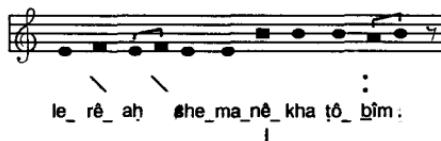


Well, no. While appearing to be more complete, this notation would have had a double inconvenience:

- the *needless overburdening* of the biblical text. For each subordinate note, two signs would be required instead of one (compare the last example with the next).
- the *ambiguity* so far as the suspected presence of an appoggiatura goes, for this would not be differentiated (as is clearly shown above).

The same text with correct interpretation

[3] To smell / your oils (have) a pleasing fragrance.



Made explicit by this ingenious device which is also a special form of abbreviation, these subordinate degrees are infinitely numerous throughout the entire Old Testament. They give life and dimension to the melody, but remain attached to the basic degrees. They are dependent on them, in themselves having *no assigned pitch position*. To give sonorous form to an upper sign, it must be considered in relation to the last *lower* sign or basic degree immediately preceding it.

**6) A NOTE SUBORDINATED TO THE 2ND
BELOW THE PRECEDING LOWER SIGN**

The idea comes to mind that since these two signs positioned above the text represent upper appoggiaturas, certain others must represent lower appoggiaturas. In the prosodic system there are the following upper signs:



Apart from the first two now identified and the cautious diamond shape, the different signs can be arranged into two groups:

- 1) Signs composed with a *stem*:
- 2) Signs composed of *dots*:

We have already noticed the effect of an accompanying dot in a lower sign where it characterized a relationship below the tonic instead of above it:



Would the dot composing an upper sign portray a similar relationship? It must be observed that in this case, just a dot above the text would be too succinct and equivocal; the isolated vowel-point in the Hebrew graphism is also located above and below the written text. No doubt this is why the sign \checkmark (symbolizing the 7th degree) carries its dot in the center, thus avoiding confusion. Consequently this upper sign of double dots would symbolize the transient digression to the *lower neighboring second*.

The beginning of the following verse was cited on page 236. Notice how it continues its musical picture with graceful undulations. The "tone" remains suitably grave—which is another proof of the correctness of the interpretation.

ABRAHAM'S SACRIFICE: GENESIS 22:5

[5] "Stay here with the donkey;

5.

she_boō la_ khem poh 'im ha_ ha_ mōr
(l) | / |

I and the lad will go yonder,

va_ 'a_ nî ve_ han_na_ 'ar nê_ khah 'ad koh
| | | |

we will worship and return to you."

ve_ nish_ ta_ ha_ veh ve_ na_ shoō_bah 'a_ lē_ khem
| | | |

It is the same for each intervention of this sign: the chosen interpretation avers itself appropriate in every instance. These affirmations, uniquely deduced, might seem to be arbitrary at first. Nevertheless, it is undeniable that this melody, so majestic in its simplicity, owes its meaning to the intervention of the upper signs. It could not have done without them.

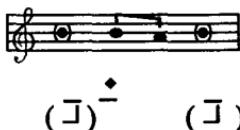
On the other hand, we have already given many examples in which the melody, issuing from only the lower signs, evolves intelligibly from them alone, having *complete meaning*. The twenty-one books using this system are emblazoned with other equally convincing examples.

7) • THE SIMPLEST OF MELISMAS,
AN ORNAMENT RELATED TO THE "MORDENT"

These three signs \searrow \swarrow $\dot{\cdot}$ represent (as we have amply demonstrated) simple appoggiaturas, being a *single note* subordinate to the affected basic degree, and lasting only as long as the particular syllable over which they are placed. The remaining upper signs excepting one seem to be *composite*, and we can imagine they represent "melismas:" groups of notes constituting a particular melodic figure.

The sign we examine now is somewhat between the first group and the second: \bullet . It has a most unobtrusive shape; nevertheless, it is the very simplest of melismas and is frequently encountered. The melodic figure symbolized by this sign is just as unobtrusive as its pictographical appearance. The affected basic degree itself becomes an appoggiatura to its lower neighboring second. And since it is a repeated note, it is hardly noticeable:

Example:



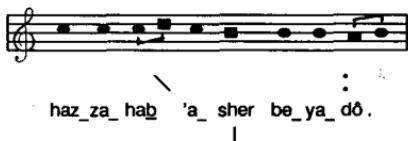
In classical music this ornamental figure is picturesquely called a "mordent." But this correlation is not identical. This "appoggiatura of the appoggiatura" is not rhythmically like the two grace notes comprising our classical mordent. The texts show a shared syllable time value which makes this sign the simplest of **melismas*** according to the ancient etymology of that term.

ESTHER 5:2

[2] extended / the king / to Esther the scepter

Musical notation in G clef. The lyrics are: vay_yô_shet ham_me_lekh le_ 'es_ter 'eth- shar_bit. The note under 'Esther' is a melisma consisting of a bullet symbol (•) above two notes, as shown in the previous example. There are also other melismas and grace notes throughout the line.

of gold which (was) in his hand .



What subtlety this captivating phrase acquires, thanks in part to this sign.

If I unhesitatingly brought up this sign, it is because its anticipated interpretation clarifies numerous passages. Let us add that it is wrong to imagine that one can attribute with impunity any meaning whatsoever to a specific sign. The false interpretation of just one sign spoils the entire phrase. It even literally denatures it most of the time. If we *inverse* the meanings, however painstakingly constructed, a particular realization may fortuitously be passable; but how many others will reveal themselves inappropriate, indeed even incoherent!

8) THESE ADDED NOTES NEVER EXCEED THE ALLOTTED TIME VALUE OF THE SYLLABLE THEY AFFECT

These principal upper signs now identified with certainty, let us remind ourselves of the rules necessary for their correct interpretation. The lower signs have an effect which *prolongs* itself, in principle, until the appearance of a new lower sign. Each upper sign only *incidentally* interrupts the effect of the lower sign in action—after which the basic degree (as represented by the lower sign) is reintegrated.

It has already been mentioned that the time value allotted to these appoggiaturas and this melisma is the duration of the *syllable* which one or another of them affect. It will be the same for the rest of the unidentified signs. The time value of an upper sign never exceeds that of the length of the syllable it affects.⁶

Speaking of the "time" value of the syllable, though we have already divided it up, apparently nothing in the notation suggests the length of the note value. How can we determine the duration of a syllable without specific signs? The upper signs which remain to be explained do not concern the amount of allotted time, as we have already seen (cf. p. 234).

Therefore, the music we are reconstituting is devoid of such indications. Is this not a regrettable handicap when we are trying to

resuscitate this music? It does not seem so. But here we touch upon another facet of the problem, and it is time to discuss it.

NOTES

¹ Cf. Annotation.

² Identified in our transcription by the square notes. We will return to this question shortly.

³ We will treat this subject in detail in BOOK II, Chapter II below (p. 329ff).

⁴ In our transcription, two notes linked together in this fashion belong to the same syllable.

⁵ The return to the basic degree during the same syllable is "anticipated" here (cf. p. 445ff).

⁶ We have observed that its resolution can be anticipated if a new sign affects the next syllable (in certain other cases also—cf. p. 305).

CHAPTER V

THE UNNOTATED RHYTHM OF BIBLICAL PROSODY

The system does not include a specific rhythmic notation.

— Summary —

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2) The interdependence of the various syllabic accent-times arising from the syntax	249
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1) THE RHYTHM OF BIBLICAL PROSODY IS LINKED TO THE VERBAL MEANING

Without specific indicator signs, how can we assign the right rhythm or cadence to this cantillation whose melodic curves are revealed to us by the principal signs we have deciphered? We know nothing about its rhythm; it was not handed down to us!

No doubt, some people are inclined to think this a serious lack. Let us remember, however, that this mental disposition is linked to our habits. For centuries, we have only had music that was regularly *cadenced**, with rhythms in *proportional* values, and the audacities of our present century force us to leave our conventions; but these audacities also require a notation just as rigorous, given the complexity of their conception.

This resurgent music is completely different. In the twenty-one books of the Bible where the present system applies, the cantillation is *prosody**.¹ We use the term in an enlarged sense here. The prosody of the Greeks was quasi-melody, which resulted from the series of different syllables being sung according to their phonetic meaning. The prosody of the Bible also serves phonetics—the tonic accent—but its primary mission is to carry the prose text into a tonal field in order to appropriately express it and punctuate it.

How does this archaic prosody, so different from what we are accustomed to hearing, behave? It is *coupled with* the verbal text. It does not pretend to have an autonomous meaning separated from its context. It is subordinate to the spoken words; it limits itself to bringing them out distinctly, giving them various degrees of importance by its particular means.

Are its characteristics, quite appropriate for its purposes, the same as those of the cantillations of other ancient civilizations, such as Sumer and Egypt? We would not be capable of proving it.² But in the radius of its circumscribed action, why should we be surprised that Hebrew prosody does not impose its own original rhythm? The delivery of its course is related to the verbal phrase, as it would be declaimed without musical intonations. It is the function of the latent expression in each term of the language. Such rhythm does not need notation.

The verbal accent as rhythmic support

It must be clearly understood that the signs we just examined nearly always concord with the *tonic accent* of the word. Each new tonal meaning generally underscores an accent of the text.³ This form of musical participation is known to be the oldest; it is also the most simple.

Throughout the centuries it has always had⁴ its faithful adherents. Saint Ephrem of Syria (in the 4th century) thus set the rhythm of his hymns "*in the ancient manner*".⁴ We still find this influence, as we have already mentioned, in the extant folk traditions, notably in the Eastern Semitic countries (cf. pp. 191-193). A. Machabey reports in fact:

"Secular folk music...with which we are acquainted because of an increasing number of transcriptions, reveals to us a characteristic fact: the melody is not shaped according to a particular beat or rhythm, but it emphasizes or rather rises to points corresponding to the tonic accents of the words. Moreover, a highly variable number of syllables and, consequently, secondary accents can flow between these points of emphasis."⁵

He goes on to add:

"If we exclude the more complicated rhythmical science of the Greeks and the Romans, we see that everywhere else it is the same principle which dominates: the tonic accentuation determines the melodic inflections."⁶

This is not completely true, as we will see shortly. But as we analyze it, there seems to be an extremely obvious correlation between the ancestral customs of the various civilizations, as testify their traditions, and the practices unveiled by the notation that concerns us here.

We are far from the **strong beat*** so common in our symmetrical beat patterns, which is only a marker or reference point for the amount of time in which is constructed a particular, rather familiar rhythm. The rhythmical structure for biblical prosody, however, is *born from the verbal phrase*.

This prosody is direct; it does not trouble itself about science. One would seek in vain to make it **mensural***. There is nothing "metric" about it, neither in the series of syllables nor in their relative duration. This prosody also eludes every other constraint foreign to that of the words

themselves. This then is what one might believe music was like at its origin. But this is not the whole story, for it could have been otherwise for music accompanying the dance. More often than not, dance music is subject to *meter*. This is easy to understand, since the series of dance "steps" impose a *cadence* where proportional rhythmic values easily took their place and rhythmic patterns proliferated.

That the Greeks had early brought together these two opposing sources of music—the gesture and the spoken word—and that they imposed upon it⁷ the constraint of proportional rhythmic values, is the work of their particular genius.⁸ But that the Hebrews would have dispensed with this is perfectly plausible. Especially when the analyses called for by these texts coincide with the tradition; and all the more because these realizations—products of an art different from ours—are no less masterful than our own.

The varied dynamic values of the verbal accent

How can this kind of rhythm be constructed on the simple basis of the verbal accent? Schneller gives us a hint, coming directly from the traditional music still in use in the land of Israel. "The rhythm is very whimsical; it can have up to eight accents in a single line and three syllables between two successive accents. Symmetry, like asymmetry, depends on the emotion and sentiment to be expressed."⁹ (Let us remember that this refers to traditional folk songs.)

Let us carefully examine a biblical verse. There is really a complete hierarchy of *diverse rhythmic values* which governs the verbal phrase, being the *varied* potential of the syllabic accents. This is the *dynamic* nature of the accent. We can also find these variations of intensity of the *tonic accent* in our own language. One need only exchange a few words with someone else in order to be convinced. Our accents are "nuanced" according to our particular intention.

The prosody we are investigating here takes into account the dynamic variety of the accents, not only by giving an appropriate melodic line, but by a *subtle rhythm* utilizing such a natural means that it goes by unnoticed—this means being the "time value" allotted to the accent.

The spontaneous double valuation of the syllable: the "accent-time"

When we declaim (or even when we converse), it is undeniable that the expression "modulates" the delivery of the discourse. The *time* value of the syllables (in prose) is relatively *long or short*; but it is in an indefinite manner, according to the accent, or lack of accent characterizing them. This is already sensed in an isolated word: the syllable provided with a tonic accent is *longer* than the others.

The *dynamic accents*, dominating the sentence, *vary in intensity*. The required "time value" *varies along with them* according to similar gradations. The dynamic accents make the general "tone" more or less prominent; the relative "time" *spreads out* more or less within the available duration.

Let us return to the prosody of our study. It is the same in this rhythmic structure which wants "everything in "nuances." It is the particular accent animating the syllable which spontaneously requires (for the sound or sounds supporting it) the *relative* time necessary for its *intelligible* expression at the heart of the message of which it is only a part. This is why in fact there is no intrinsic rhythm to be anticipated in the recovered prosody. Free of all **meter***, it is subordinate to other constraints. We have sufficiently discussed them; it is important now to underscore them and illustrate them with examples.

2) THE INTERDEPENDENCE OF THE VARIOUS SYLLABIC ACCENT-TIMES ARISING FROM THE SYNTAX

We stated earlier that this acknowledged liberty for the syllables cannot be likened to an *authorized "fantasy"*. Quite the opposite! Fanciful rhythm is absolutely *excluded* from the revived cantillation. The totality of the restitutions demonstrates this. The important words are so clearly emphasized by the musical degrees, the melodic contours are wedded to the meaning of the verbal phrase, the expression is so precise and intense (and yet lacking the slightest "emphasis") that it really seems that this biblical prosody, rising above all contingencies, is dedicated only to enhancing the various accents of the sentence in the most efficient manner.

The syntax presides over this; for brought into play is the simplest of means: *the interdependence of the various syllabic "accent-times."* A practice which, in our Occidental music (itself devoted

to proportional time values), has been too often ignored while constructing an independent musical work. Biblical prosody takes no notice of proportionality; *it serves the inherent syntactical rhythm.*

This is the strongest basis of declamation and consequently also of prosody (when one associates proportional time with it) that this potential "charge" or weight conferred on certain words because of favored syllables focuses the attention on meanings which should be highlighted. Here is a significant example, *par excellence*, of this:

ABRAHAM'S SACRIFICE: GENESIS 22:10

[10] Stretched out / Abraham / his hand took the knife.

The musical notation consists of two staves. The first staff begins with a treble clef, a common time signature, and a key signature of one sharp. It contains six notes. The second staff begins with a treble clef, a common time signature, and a key signature of one sharp. It contains five notes. Below the staves, the Hebrew text is written in a cursive script with vowel points. The text is divided into two lines by a vertical bar. The first line ends with a downward-pointing arrow under the word 'dō'. The second line ends with a vertical bar under 'ma' and an upward-pointing arrow under 'khe_leth'.

vay_yish_ lah_ 'ab_ra_ ham_ 'eth_ ya_dō vay_yiq_ qah_ 'eth-ham_ma'_a_ khe_leth

< | ^

There is no question that the word *hamma'akheleth* (the knife) in this moving narrative, is the trustee of the expressive "charge" of the phrase. However, we could pronounce it *mezzo voce* [softly] without affecting its power—which really proves that *dynamics* and *volume* are not equivalents. The *degrees* of the melodies have entered the action; the *time duration* granted to the accent completes and polishes it.¹⁰

Of course, the subservience of some words to others does not at all deprive them of their expressiveness. Their expressive value is simply *less*; the allotted time values are adjusted accordingly.

JOSEPH: GENESIS 45:3

[3] but / could not / his brothers / answer him,

The musical notation consists of two staves. The first staff begins with a treble clef, a common time signature, and a key signature of one sharp. It contains seven notes. The second staff begins with a treble clef, a common time signature, and a key signature of one sharp. It contains six notes. Below the staves, the Hebrew text is written in a cursive script with vowel points. The text is divided into three lines by vertical bars. The first line ends with a downward-pointing arrow under 'hav'. The second line ends with a vertical bar under 'noth' and a downward-pointing arrow under 'thō'. The third line ends with a vertical bar under 'o'.

ve_ lo_- yakh_loū_ 'e_ hav_ la_ 'a_ noth_ 'o_ thō

(^) | < | | ^

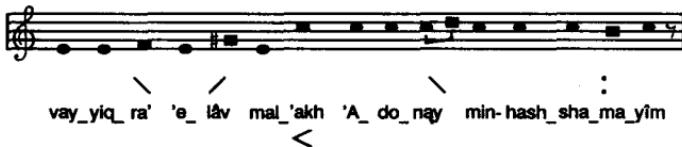
for they (were) dismayed at his presence.



The evolution of discourse itself influences this accentuation and the *prolongation of the duration of the syllable* is relative to it. Thus, the beginning of the following verse, on which bears the agony of the imminent sacrifice of Isaac, cannot be stressed (as it would be in other circumstances), that the emphasis may be placed on the transcendent intervention which follows. As a result, the time allotted to it is relatively limited. It is only when Abraham's name is pronounced *twice* that, intensifying the picture, the two words are vividly set off and their delivery slows down considerably in relation to what precedes them.¹¹

ABRAHAM'S SACRIFICE: GENESIS 22:11

[11] Called to him / the angel of the Lord / from heaven,



saying: "Abraham! Abraham!" He replied, "Here I am."



Was it necessary to signal this double salience in the expressive force and the duration with *metrical* precision? Certainly not. There exist important phrase members that are nearly void of accents for the ensemble of their words. Hardly accented, their delivery is alert.

THE CREATION: GENESIS 1:11

[11] And / said / God: "Let / produce / the earth / vegetation,

vay_yo'_ mer 'E_ lo_ him tad_shé' ha_a_ rets de_she' 'e_ seb

plants yielding seed, fruit trees bearing fruit after their kind

maz_rf_ a' ze_ra' 'ets pe_rf //12 'o_ seh pe_rf ie_mi_nó

Does not this *melody* itself, evolving in light inflections to upper and lower 2nds from a center note, suggest only the barest emphasis upon the words? Everything proves it: the "expression" is the primary concern of this cantillation, and it is not drawn from itself, but from the *verbal text*.

Let us now recall this real rhythmic "cadence" or beat as dictated by the skillful use of the words in their own *music* (cf. p. 116).

SONG OF THE RED SEA: EXODUS 15:9

[9] Said / the enemy: "I will pursue, overtake! divide the spoil!

'a_ mar 'ó_ yeb 'er_ dof 'as_sigh 'a_ hal_leq sha_lal

my desire shall be gratified against them!"

tim_la_ 'e_ mō naf_shí

The words, of which nearly every one is accented in its last syllable, imply "their own rhythm" (their non-accented syllables are very abridged). Here it must be remembered that Hebrew by nature is a *rhythmic* language. The vowels, which were represented by graphical signs at the same period as the accents we are studying, already somewhat specify different durations of the syllables: "long, short or furtive." But, of course, we do not *measure* these differences. They are an affair of *tact*.

I was privileged to hear a young Israeli sight-read the above *Song*. He was unaware of my reconstitution, yet he intuitively stressed the words just as the restored music invites one to, carried along only by the power of the alternating lengths of the syllables and the poetic arrangement of the words.

It is important to call attention to the relative *non-proportional* durations of the syllables throughout the monody. Actually it is these which constitute the indefinable but real time values of this rhythm. He who comprehends the text he is interpreting will stress it appropriately!

Here we present, among so many others, one last example — one of the most characteristic. The words of this final colloquy, possessing a transcendental worth, have been accented in each syllable by the prosody (a treatment which is extremely rare).

THE BURNING BUSH: EXODUS 3:14

[14] Replied / God / to Moses: "I AM WHO I AM!"

vay_yo'_ mer 'E_ lo_ him 'el- mo_sheh 'eh_yeh 'a_ sher 'eh_yeh

Of course, the "time values" of these last six syllables — a bit galvanized by the series of new notes — have the same dynamic value. The flow of the notes is greatly *slowed* while the notes are of *equal length*. In this manner the melody finds its rhythm: the expression has its prolongation in the length of the notes.

Let us briefly summarize the characteristics for the performance of the biblical prosodic rhythm:

- 1) The *dynamic accent*, the primary word accent, normally the only one to be marked by a basic tonal degree,¹³ is necessarily executed by a *prolongation* of the syllable in proportion to its intensity. Succeeding syllables, devoid of accents, are produced on the same musical note, with a *quicker delivery*.
- 2) The subordinate degrees, also generally located above the syllables carrying the dynamic accent, benefit from the same syllabic extension.
- 3) Moreover, a *hierarchy* of dynamic values is set up among the syllables having accents, to which is linked their allotted time.

As can be seen, it is a matter more of indefinable nuances than of "measure."

In conclusion, is it not rather an *appropriate* particularity of the biblical prosody not to impose a metrical framework on the words? Its expressive worth, in such a *confined* situation, would probably direct the attention away from the words themselves. However, this is not its goal. The biblical cantillation is the *servant* of the words, and it is important not to forget this.

Machabey was right then when he insisted upon the necessity, in describing the music of the ancient Hebrews, of renouncing the Hellenistic meter formed by the proportionally determined "longs and shorts," retaining but one important notion: that of the "accent."¹⁴ Ancient Hebrew music, of course, was completely unknown to him—but it is startling to realize how much our magnificent reconstituted examples confirm this correct observation.¹⁵

3) THIS MONODY IS A LIVING SYNTAX; EVEN THE RESTS ARE INDICATED BY IT

All the preceding in this chapter had to be stated in order to make us sensitive to the most important aspect of this music: the particular capacity of its syntactical meaning to serve the punctuation of the text.

Obviously we cannot blame the *hazzanim*¹⁶ for their defective cantillation (cf. p. 4). But it would be much too simplistic to believe that a melody is capable of punctuating a text merely because it has been decreed that one particular sign corresponds to a phrase ending, another to a temporary rest, or even a simple incidental clause, permitting oneself to modify (sometimes in one way, sometimes in another) the meaning of the signs, and consequently the values which would

constitute the melody. This is to attach little importance to the obvious syntactical power of the music as such, as testifies the traditional cantillation itself.¹⁷

The resurgent cantillation is vested with the *power to punctuate*. Detached from the words, it still conserves in its intrinsic elements the same phrase members in their subtle relationships, and (which occupies us presently) the same punctuation as the verse to which it adheres.

Let us verify this for ourselves in the following example, which possesses an intensity of expression rarely found.

DAVID'S ELEGY: II SAMUEL 1:19

[19] "Oh, your pride! Israel, (there) on your high places lies!

How have fallen the mighty!

Let us consider the music by itself in order to fully comprehend its *equivalence*. It is *complete*. At the point where the melody corresponds to the word *Israel*, the musical phrase by itself demands a medium stop, a **caesura***. Four notes later, under the word *halal*, a longer rest is required. At its conclusion, corresponding with the end of the verse, a more prolonged stopping point is called for.

Every verse in prose gives this same *hierarchy* of "interruptive" time-values in its various phrase members, as dictated by its particular physiognomy.¹⁸ And the melody by itself testifies to it with just as much force.

Let us also notice that the first four notes group together naturally; they are musically "linked." Here again one does not need the words in order to feel the correlation between these first four notes and the next four (also linked together). If we consider the example as a whole, together with the words, we discover that the verbal meaning demanded this particular melodic shape.

This musical phrase is not an isolated example of success; there is a *constant* correlation between the biblical cantillation and the text it encompasses. Let us judge again for ourselves in this next example, with its subtle contours.

ESTHER 5:3

[3] Said to her / the king / "What is troubling you, Esther / queen

va_yo'_mer lah ham_me_lekh mah_lakh 'es_ter ham_ma_lkah

what is your request? Even to the half of the kingdom, it will be given to you."

oÔ_mah_baq_qa_shá_tékh 'ad_ ha_tsi ham_ma_lkhoÔth ve_yin_na_then lakh:

In this verse each hemistich is composed of two parts which the musical phrase, taken by itself, conspicuously *restores*.

Equivalence of thought, equivalence of form; a work created to be a *complement*. How many of our classical vocal melodies, even the most exquisite, dispense with such total equivalence? For them, the music takes precedence. One could almost leave out the words and perform them instrumentally!

The biblical cantillation really cannot honestly be taken away from the text it illustrates. If it literally "espouses" the syntactic inflections, it is because long ago it served to punctuate the text. The punctuation now has its own notation in our modern languages; the signs (period, semicolon, question mark, exclamation mark, etc.) guide us in

interrupting the discourse, in raising or lowering the tone. They indicate various lengths of rest. Yet here it is the *music* which has this role, by its expressive power alone (which moreover *amplifies* the meaning of the verses).

We owe this model prosody to these archaic practices. How far are the disordered inflections with which our *hazzanim*¹ decorate the biblical readings from this art! To attain this *transparenc*y, it is necessary to have not only an undeniable musical unity, but also a *total comprehension* of the verse to be expressed in pure song. One must have the candor of ignorance to minimize this perfect success. Such success demands an accomplished art, poetic genius, and an exceptionally large vision.

Furthermore, with these combined qualities, the musical phrase, restored after centuries to each verse, not only indicates the syntactical form beyond the punctuation in later use, but breathes forth the very particular "soul," the otherwise inaccessible *state of mind* which dictated these words.

NOTES

¹ According to the ancient etymology: "*Prosody* (from the Greek, 'prosodia'): the song which is added to the common pronunciation of a vowel. The Latin translates *prosodia* by its equivalent *accentus*. This accent was melodic, among the Greeks and the Romans alike, being the rising, then falling of the voice." (Cf. "Prosodie," *Larousse de la Musique*, vol. II, p. 223.)

² They are not really like those of plain chant, even though the latter had its source in the synagogal cantillation, since it soon departed from these principles. "The chants of Israel, preserved by Jews converted to the Christian faith, constituted the foundation." (A. Gastoué, "La Musique Byzantine," *Encyclopédie de la Musique* (Delagrave), vol. I, p. 541.) See also Dom J. A. Bescond, *Le Chant Grégorien*.

³ That is, the primary accent of the word (sometimes a secondary accent also).

⁴ "The versification of his hymns is not metric but 'tonic.' It does not have as its basis the long or short 'quantity' of syllables, but their number, and the alternation of accented syllables with unaccented ones. This form of poetry (which W. Meyer and Bickell believe has a Semitic origin) is the one used by all Occidental hymn writers." J. Combarieu, *Histoire de la Musique*, vol. I, p. 204.

⁵ A. Machabey, "La Musique des Hébreux," *S.I.M.* (1912), p. 12.

⁶ *Ibid.*, p. 13. It is evident these viewpoints confirm what we were proposing above, that the signs and rhythmic accents always coincide in principle.

⁷ They were perhaps the first to do so.

⁸ Cf. p. 192.

⁹ A. Machabey, *ibid.*, p. 13.

¹⁰ Here the work *hamma'akheleth* "stretches out" the length of this phrase. Its expression would be minimized were one to pass over it more quickly.

¹¹ This is the "syntactic" aspect of the phrase, dictated by the disposition of the words in the heart of it.

¹² See Chapter VI for the meaning of this sign.

¹³ It is not always the tonic accent which is emphasized by the cantillation sign. Often the melodic expression decides otherwise.

¹⁴ A. Machabey, "La Musique des Hébreux," *S.I.M.* (1912), p. 5.

¹⁵ Let us remember that the psalmody obeys different, but equally appropriate rhythmic laws.

¹⁶ Cantors.

¹⁷ Cf. Supplement II.

¹⁸ The stop marking the end of the verse is generally the longest.

CHAPTER VI

THE COMPOSITE UPPER SIGNS

**These too represent melismas
subordinate to the basic constituent degrees.**

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1) SIGNS IN COMMON USE

Now that we are initiated to the particular rhythm of biblical prosody which shuns "measured beats" and conventional rhythmic signs, we can calmly approach the remaining signs of this system: the *composite* signs. The shape of these signs suggests that each one symbolizes a *melodic figure*, a *melisma*, rather than a simple added note.

 The most expressive sign of all, in this sense, will be this one which we already understand in part, since it is represented *doubled*: 
Its effect will also be *doubled*, a double incursion to the upper 3rd from the basic degree preceding it:



This melisma, comprised of a repeated interval of an ascending third, is endowed with a certain imperative significance when it is properly employed.

"HEAR, O ISRAEL": DEUTERONOMY 6:6

[6] Shall be / these words which I

ve_ha_ you // had_ba_rim ha'_el_ leh 'a_sher 'a_no_khî

am commanding you today.

me_tsa_ve_kha hay_yôm

It should be remarked that here the musical meaning calls for a follow-through to the 3rd degree without any retard. A specific rhythm is attributed naturally to the melismas (cf. p. 299).

It seems that its location on the *1st degree* of the **chromatic-Dorian*** mode gives it this uncommon power—a power more or less accented, moreover, by the context:

THE DECALOGUE: EXODUS 20:5

[5] for I, the Lord your God, (am) a God / jealous

Musical notation on a single-line staff with a treble clef. The melody consists of a series of eighth-note pairs, with the first note of each pair being longer than the second. The lyrics are written below the staff, aligned with the notes. There are vertical bar lines under the first two pairs of notes, and a vertical bar line under the last pair. Brackets and arrows indicate specific rhythmic and melodic features: a double slash under 'ki' and 'a', a bracket under 'no', a bracket under 'khî', a bracket under 'A', an arrow under 'do', a bracket under 'nay', an arrow under 'e', a bracket under 'lo', an arrow under 'hê', a bracket under 'kha', a bracket under 'el', and a bracket under 'qan'. A colon is placed above 'na'.

ki 'a_ no_ khî 'A_ do_nay 'e_ lo_ hê_ kha 'el qan_na'

This sign takes on an altogether different significance (even though still constructed on the tonic) when it appears in the **Hypodorian*** mode (our diatonic minor).

ESTHER 5:1

[1] put on / Esther / her royal robes, and presented herself

Musical notation on a single-line staff with a treble clef. The melody consists of a series of eighth-note pairs, with the first note of each pair being longer than the second. The lyrics are written below the staff, aligned with the notes. There are vertical bar lines under the first two pairs of notes, and a vertical bar line under the last pair. Brackets and arrows indicate specific rhythmic and melodic features: a bracket under 'va', an arrow under 'til', a bracket under 'ba', a bracket under 'sh', an arrow under 'es', a bracket under 'ter', a bracket under 'mal', a bracket under 'khoûth', a bracket under 'va', a bracket under 'ta', and a double slash under 'mod'. A bracket is also shown under the first note of the first pair.

(-) < va_til_ bash 'es_ter mal_khoûth va_ta_ 'a_ mod

In this example the melisma is characterized by gracefulness. It vividly portrays the "fluttering" fullness of Queen Esther's sumptuous attire. It is true that here the two 3rds which the sign symbolizes (being minor 3rds) are more restricted.

With its degrees in a similar relationship (two minor 3rds) it plays (when departing from the augmented 4th degree of another mode) the role of a *pointed finger*.

ISAIAH 58:2

[2] as a nation which (practiced) justice

khe_ghôy 'a_ shér- tse_ da_ dñah
(^)

But on the *same degree* (this time with minor 3rds), it may be vested with a vitality just as strong as earlier, in the **chromatic-Dorian*** mode (the example from the Decalogue, where the 3rds were major):

THE CREATION: GENESIS 1:28

[28] rule over the fish of the sea, the birds of the air

oûr_doo bid_ghath hay_yam oôb 'ôf hash_shá_ma_yim
(^) < - : -

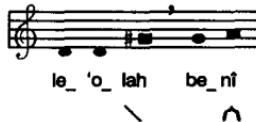
It all depends, actually, on its situation in the context, a matter of imponderables. In the following excerpt, far from underscoring a peremptorius order, does it not here characterize a nearly fatalistic abandonment to the will of the Almighty?¹

ABRAHAM'S SACRIFICE: GENESIS 22:8

[8] Said / Abraham: "God will provide / Himself / the lamb

vay_yo_ mer 'ab_ra_ ham 'E_lo_ him yir_ 'eh- lô has_seh
\\ \\ : / // - / \ -

for the burnt offering, my son!"



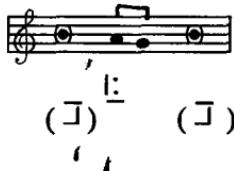
Although escaping analysis, the relevance of its presence is affirmed each time it is encountered. It should be noted that this sign is found frequently in the books of Jeremiah and Nehemiah.

l: Let us examine the elements of this more complex figure formed by two superimposed dots followed by a vertical bar (bearing in mind that Hebrew is read from right to left). The two superimposed dots (as we have already appreciated) symbolize the lower neighboring tone of the *basic degree* which is temporarily interrupted. As a result, the *lower 2nd* from this degree will be our note of departure for this melisma. We see in this vertical line an effect of *movement*. Three of the composite signs yet to be studied are so provided: l z z; and their analysis carries the same conclusions, which are moreover unexpectedly confirmed.²

Certainly nothing indicates whether it is an *ascending* or *descending* effect represented by this vertical line. But an ascending movement would not have an appreciable melodic sense (it would serve to *anticipate* the resolution, nothing more):



On the other hand, a descending motion gives the formula a particular physiognomy:



This kind of melodic "recoil" always presents a beautiful transition in the middle of musical phrases where it is placed; but curiously as well, it confirms the meaning of the words it highlights.

Here we see it located in two of the most significant verses of the first chapter of Genesis, *The Account of the Creation*, which hardly suffers from an overabundance of ornamentation. It is the same melisma, but also the same melodic phrase.

THE CREATION: GENESIS 1:14

[14] to separate the day from the night

Musical notation on a single-line staff. The melody consists of eighth and sixteenth notes. Below the staff, lyrics are written with vertical bar lines indicating pitch levels. The lyrics are: |: le_ hab_dil bén hay_yôm oâ_bén hal_lay_lah | () 3 / \ - ^

THE CREATION: GENESIS 1:18

[18] and to separate the light from the darkness

Musical notation on a single-line staff. The melody consists of eighth and sixteenth notes. Below the staff, lyrics are written with vertical bar lines indicating pitch levels. The lyrics are: |: oû_hab_dil bén ha_ 'ôr oû_bén ha_ ho_shekh | () / \ - ^

The word *oûlhavdîl* ("to separate, distinguish") is certainly enhanced by this kind of "vocal trench" scooped out by the inflection of these two lower notes.

In a completely different sense, the word *vehikekh* ("and your mouth") is rather "set apart," as for the two preceding examples, by the same movement of recoil.

SONG OF SOLOMON 7:9

[9] And your mouth (is) like a fine wine which flows for my beloved smoothly.

Musical notation on a single-line staff. The melody consists of eighth and sixteenth notes. Below the staff, lyrics are written with vertical bar lines indicating pitch levels. The lyrics are: |: ve_hi_kekh ke_yên hat_tôb hô_lekh le_dô_dî le_mê_sha_rim | / \ / \ - ^

In the next two verses, this same melodic figure again appropriately highlights the words it accompanies. It makes them stand out in the middle of the phrase.

SONG OF THE RED SEA: EXODUS 15:17

[17] The Sanctuary, O Lord, established by your hands.

Musical notation for Exodus 15:17. The melody consists of a series of eighth-note chords. Above the music, the text "miq_q dash 'A_ do_nay kō_ne_noū ya_dē_kha :" is written. Below the music, there are three sets of vertical markings: a colon (:) above "dash", a downward-slash (＼) below "do_nay", and a downward-slash (＼) below "ya_dē_kha". The first two sets have a small circle (○) under them, while the third set has a small triangle (△) under it.

JOSEPH: GENESIS 45:1

[1] he cried: "Make / go out / everyone from me!"

Musical notation for Genesis 45:1. The melody consists of eighth-note chords. Above the music, the text "vay_yiq_ra' hō_tsī_ 'oū khol_ 'ish me_a_ lay" is written. Below the music, there are three sets of vertical markings: a colon (:) above "yiq_ra'", a downward-slash (＼) below "khol", and a downward-slash (＼) below "a_lay". The first two sets have a small circle (○) under them, while the third set has a small triangle (△) under it.

In spite of its appearance, it is in an analogous sense that this melisma occurs on the word *ve'atah* spoken "in an aside" by the Creator in His decision to rescue Israel from the Egyptian bondage:

THE BURNING BUSH: EXODUS 3:9

[9] And now, behold, the cry of the sons of Israel has come to me.

Musical notation for Exodus 3:9. The melody consists of eighth-note chords. Above the music, the text "ve_a_tah hin_neh tsa_a_qath be_nē_yis_ra_el ba_ah_e_lay" is written. Below the music, there are four sets of vertical markings: a colon (:) above "tah", a downward-slash (＼) below "qath", a downward-slash (＼) below "nē", and a downward-slash (＼) below "e_lay". The first three sets have a small circle (○) under them, while the fourth set has a small triangle (△) under it.

To my knowledge, there is no example where the presence of this unusual melodic figure weighs down the musical phrase or contradicts the meaning of the words.⁴ And yet the relevance of a specific melisma in a phrase is not a banal fact. Let us intentionally modify the interpretation of this now-identified sign, replacing it by that of the preceding melisma //.

The same text incorrectly interpreted

[9] And now, behold, the cry of the sons of Israel has come to me.

A musical staff in G clef. The first note is a vertical line with a half-circle at the top, followed by a vertical line with a small crossbar. This is followed by a series of vertical lines with small black squares at their midpoints. The lyrics "ve_ 'a_ tah" are written below the staff, aligned with the first two notes. The next group of notes consists of vertical lines with half-circles at the top, followed by vertical lines with small crosses. The lyrics "hin_ neh tsa_ 'a_ qath be_ nê- yis_ra_ 'el ba_ 'ah 'e_ lay" are written below the staff, aligned with these notes. Below the staff, vertical lines with small crosses are placed under the first two notes of the second group, and vertical lines with small crosses are placed under the last three notes of the second group.

The resultant aggressive pretension is hardly worthy of the outstanding speaker who gave Moses this affirmation! The meaning is deformed. Every arrant inversion of the interpretation for each of the other signs would provoke similar nonsense.

Let us now look as this new sign, formed of a vertical *shaft* topped by a *half-circle*: . As in the preceding case, the vertical line appears to be the *terminal part*. But here, the *descending motion* of this vertical line offers no doubt. This half-circle immediately reminds us of  or  or their equivalents,  and , with which we are already acquainted. The descending terminal line would symbolize a return to the temporarily abandoned constituent degree.

In this hypothesis we must lay aside the possible analogy with , for this appoggiatura's resolution is *immediate* and does not necessitate a complementary indication. But is it illogical to liken the half-circle with which this sign begins, opening upwards , to the sign turned to the right, which represents at this point an *interval of an upper 3rd* (basic or transient)? The position of the half-circle would be born in consideration of the terminal line. In this position the continuity of the sign (its conjoint movement) is equivocal . But in this fashion  the descending movement unmistakably asserts itself after the degree of departure.



(—) [¶] (—)

This upper "curl" is rarely encountered and moreover, it is rarely isolated. Let us note that the words it affects are not particularly expressive.⁵

In the following excerpt, without making itself conspicuous, it helps avoid monotony in a melody devoted otherwise to a monochord.

JEREMIAH 8:1

[1] "At that time," declares the Lord, "they will bring out of their graves the bones. . ."

ba_ 'eth ha_ hî ne_ 'oum- 'A_ do_ nay ve_ yô_ tsî_ 'oo 'eth- 'ats_ môth.

Therefore this sign is generally seen in close proximity to other melismas, given its lightly marked effect; and apparently without any particular problem. Nevertheless, it is given to me to cite a remarkable example of its use, providentially discovered while this book was being written.

It occurs in the book of Nehemiah. This particular sign figures no less than five times in a row! Here, as elsewhere, the meaning which I have attributed to it is confirmed – and thanks to its repetition, in a most striking manner.⁶

NEHEMIAH 12:36

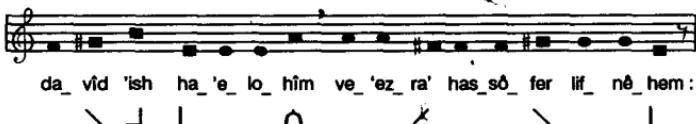
[36] His kinsmen: Sherniah, Azarel, Milalai, Gilalai,

ve_ 'e_ hav she_ma'_yah va_ 'a_ zar_ 'el mi_ la_ lay gi_ la_ lay

Maai,Nethanel, Judah, Hanani, (with the) instruments of music



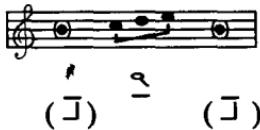
of David, (the) man of God. And Ezra the scribe (went) before them.



The above enumeration suits particularly well this melisma. After being repeated five times, stressing the movement of the procession, without any transition it allows the phrase to conclude lightly and melodiously in remembrance of David, the inspired poet-musician, under the illuminated direction of Ezra *hassopher*.⁷

 An ascending diagonal,⁸ terminated by a small circle, forms this picturesque sign  (its patent equivalent is this inverse sign ). The movement apparently *rises* by conjoined degrees, culminating on a specific note. This terminal note does not seem to be the upper 3rd, already symbolized by  in the composite sign . Furthermore, does not the position of the line or diagonal suggest a sequence of more than two notes? The straight lines already in use represent two notes.

It will effectively incorporate *three*, including the terminal note. So it is to the 4th degree above the basic degree that this melodic figure reaches; afterwards, it then normally reintegrates:

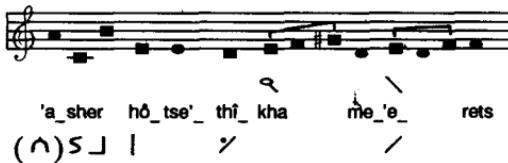


This transport of the voice, which can be related to certain determined conjunctures, certainly does not suit every circumstance. However, it must be observed that it is always in conditions that are particularly favorable to it—which in a way make it explicit—that this melodic figure is presented.

Almost exclusively found on the last part of a word, it often sets off a verbal text having the trait of movement. This excerpt from the opening of the Decalogue (cf. p. 147) particularly underscores this:

THE DECALOGUE: EXODUS 20:2

[2] who brought you out of the land



The following notes what can only be a movement of the eyes:

ESTHER 5:2

[2] When / saw / the King / Esther the Queen



standing in the court



But it can also be a kind of declaration of *power* which it magnificently emphasizes.

THE CREATION: GENESIS 1:26

[26] let him rule over the fish of the sea, over the birds of the sky

ve_yir_dou bid_ghath hay_yam eub'_ot hash_shama_yim
(^)

These three examples have not been painstakingly selected. *All the texts* where this sign is found are enhanced with precision and unrivaled finesse by this sign's attributed formula. And this concordance is all the more confirmed in that the sign is widely utilized throughout the twenty-one books.

What is startling, as we have already mentioned (cf. p. 146), is that various Oriental traditions give an interpretation identical to that which we attribute to this sign (it must be acknowledged that these traditional interpretations are not always consistent); whereas more dissimilar interpretations are distributed to the other signs. The occurrence of this fact is only a verification of our proof; not only of the right melodic transcription of this pictographic figure, but also of the others related to it.

P A further step in our research confirms (although this would be superfluous) the correct interpretation of the preceding sign. Since its opposite exists L, beginning this time with the small circle and terminating with the descending diagonal line, what could be more natural than to give it the inverse interpretation? Consequently, the note of departure for this melisma is the 4th above the basic degree, followed by a descending, conjoined movement returning to the first note:

Corroborating this double musical translation of the two signs, the second sign is not found at the end of words as is the case for its counterpart, but at the *beginning*. And this is quite normal. The effect of four ascending notes at the beginning of a word would be quite

mediocre. I have not found a single example of this, and I judge that if one exists, the affected word must require a most unexpected accent.

On the contrary, the descending melodic movement gives itself to very different expressions. On the accented degree, it confers an interpretation replete with nuances.

THE CREATION: GENESIS 1:12

[12] Brought forth / the earth / vegetation, plants yielding their seed



Often the verse itself begins with this sign; and this is plausible, even if the character of the phrase is otherwise full of mystery.

THE BURNING BUSH: EXODUS 3:2

[2] Appeared / the angel of the Lord / to him in a blazing fire

Musical notation for Exodus 3:2. The melody starts on a high note and descends through several notes, ending on a lower note. The lyrics are: vay_ ye_ra' mal'_akh 'A_do_nay 'e_lâv be_la_bath-esh. The melody shows a clear downward trend, characteristic of the composite upper sign. Below the melody, the text "from the midst of a bush" is written. At the bottom, there is another musical line with the lyrics mi_tôkh has_s_neh, featuring a fermata over the last note.

But this melodic figure fills its role equally well if the affected word is in some way interjected, as in the following example.

ESTHER 7:8

[8] What! will he even assault the queen in my presence, in my palace?"

ha_gham likh_bôsh 'eth-ham_mal_kah 'im_mi ba_ba_yith
(↓) S Y ~ N

And it is again designated for initiating a single, incidental remark, which will yet be no less a fatal augur:

ESTHER 7:9

[9] Then said Harbonah, one of the eunuchs (who were) before the king

vay_yo'_mer har_bô_nah 'e_had min-has_sa_rî_sîm lif_nê ham_me_lekh
↓ Y N

Is not this suppleness of expression, like that of the previous sign, extraordinary? Could the melodic formula be inverted without harming the interpretation of the text? No! It is pointless to prove it.

It is even more strange to see these two signs grouped together composing a rare, double melisma in isolated verses. We are certainly curious to discover how the melodic movement, to which this *conjugation* gives rise, handles itself in the context:

(D) (D) 10

In this case, as in every other, the effect adapts itself perfectly to the phrase in spite of its strange melodic design. Actually, in this text (which is the rest of the preceding example), the exceptional sting of the words now enjoys this sinuous vocalise.

ESTHER 7:9b

[9] Behold indeed the gallows which / erected / Haman for Mordecai

gam hin_neh-ha_ets 'a_sher- 'a_sah ha_ man le, mor_de_khay

11 12

However, it must not be concluded that this double sign suits only this kind of expression. This fervent prayer is equally enhanced by it.

NEHEMIAH 1:6

[6] Let be / your ear / attentive and your eyes

te_hi-na 'oz_ne_kha qash_shé_beth ve_ 'é_né_kha

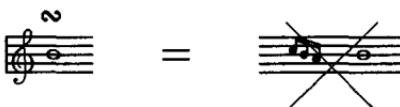
open to hear the prayer

fe_thou_hoth lish_mo_a' 'el_te_fil_lath

of your servant which now I

'ab_de_kha 'a_sher 'a_no_khî

Here is a familiar sign to us. It is a part of our classical ornamental notation. It is the "grupetto," a kind of *coming and going* effect surrounding the basic degree on which it is constructed:



It was already employed with the same meaning by musicians of ancient Greece.

However, it has but an *analogous meaning* in the Tiberian notation. First of all, the fact that it is to be read left to right along with the Hebrew text means that this sign will be interpreted in an *inverse* manner—the *lower* note preceding the upper note. Furthermore, the pivotal note is omitted, leaving only the notes below and above it:



As one might suspect, this melodic figure is not improvised. It comes as the result of tedious experimentation (via tables of comparison). As a result this melisma is inserted with naturalness and ease in every verse where it is found.

In nearly every case, in the prosodic system, it is located at the *end of the word*. It rarely appears by itself, and I had difficulty finding this next example.

EZEKIEL 37:1

[1] Was upon me / the hand of the Lord / and transported me



hay_thah 'a_ lay yad- 'A_ do_nay vay_yô_tsî 'e_ nî

by the Spirit of the Lord



be_roû_ah 'A_ do_nay

... This next melisma is never far away when we encounter the previous sign ∞. In a way, it is its *complement*. And if the first sign ∞ might be found by itself, as an exception,¹³ this is not the case for this new sign we are examining. For my part, I have never seen it without being announced by its sinuous predecessor.¹⁴

It reminds us of another sign in the *vowel-pointing system* which is conspicuously located under the words ... It distinguishes itself first of all by being located above the words. But we observe it does not have exactly the same composition, despite the resemblance: .. (..). The two horizontal dots in the vowel sign are placed above, whereas those of the melisma are below.

Regarding other *te'amim*, its shape is related to the appoggiatura to the lower 2nd ..; *the melodic figure which it symbolizes is equally related*. But it will touch this lower 2nd twice (the two lower dots justifying this return):



This complementariness between this melisma and that which precedes it is a unique situation, which leaves one rather perplexed. Actually this is not a single melodic formula in two separate parts, since these "inseparables" can in fact be separated by means of one or more signs, lower degrees and well as upper. Consequently, this sort of oscillation is sometimes effected in relationship to a pivotal degree:

THE CREATION: GENESIS 1:28

[28] Blessed them / God / and said to them / God

Thus the two formulae perfectly complement each other. Here the resultant melodic line is imprinted with majesty.

But the combination can also begin on a higher pitch, then conclude in a lower register of the voice.

THE CREATION: GENESIS 1:7

[7] Made / God / the expanse, (and) separated the waters

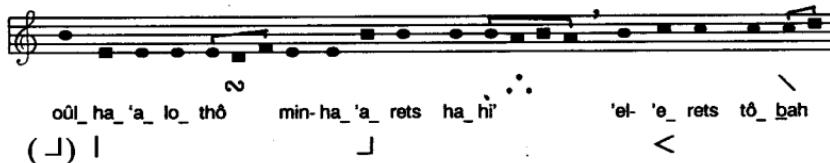


Far from altering the meaning of the phrase, this double melisma reinforces the sensation of created space in this verse.

In reality, there are no specific relationships of pitches in the linking of these two figures; the first may even be placed lower than the second.

THE BURNING BUSH: EXODUS 3:8

[8] and bring them out of that land into a fertile land



The effect is always satisfying. The two formulae remain melodically "linked together" in every situation. And it is precisely this conjugation which called for a similar formula.¹⁵

The reader will have noted the particular position of the two signs. The first w is always in the *middle* of a short, incidental phrase, while the second . is always at the *end* of the same phrase member. This is a special case which we will treat in the next chapter.¹⁶

2) THREE SIGNS RARELY ENCOUNTERED IN THE PROSODIC SYSTEM



Finally, here are three signs that we rarely encounter in the twenty-one books employing the prosodic system. The first two signs, and , belong to the psalmody system. Their meanings do not change; we will examine them when we present the second system. The last sign belongs exclusively to the prosodic system, but it only appears fourteen times—very few, in comparison to the others.

After following it in its various contexts, it is necessary to rank it among the melismas, in spite of its *lower* position. It is based on the 2nd degree, but *doubled*. No lower sign (basic degree) can be double. This sign is obviously related to , an upper sign whose meaning is already identified. But the *intermediary return to the basic degree* can only be effected when the sign is applied to a degree which is itself *constituent*.

An explanation becomes evident when we realize that this sign only appears in the following precise circumstances:

- 1) It always follows the lower 6th degree .
- 2) It always leads (except once where it remains on the same note) to the 3rd degree, which itself immediately, or nearly so, precedes the tonic note.

The analysis of all the phrases in which this sign announces the conclusion finally reveals that this is a conventional form of abbreviation:

- the first sign represents the basic 2nd degree;
- the second sign marks the upper appoggiatura of this degree (a sign normally placed *above* a word).¹⁷

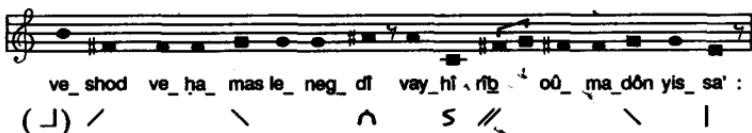
Thus are conjugated *both meanings* of this sign in its double representation:



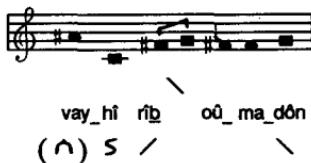
In every text containing this sign, the interpretation is very satisfying, as it is here.

HABAKKUK 1:3

[3] destruction and violence (are) before my eyes,
everywhere disputes (break out) and contention arises!



The normal notational procedure would have been like this:



In fact, this is consequently more an economy of movement (*of the hand*)¹⁸ than of signs.

3) A FINAL PROOF: THE DECALOGUE

All the signs comprising the prosodic system are now identified. It is not out of place to carefully look at these interpretations. For the lower signs, fundamental degrees, there is no doubt concerning the strict exactitude of their interpretation. If one of them had to be put into question, every relationship between this degree and the rest would also be put into question and the system would crumble. *But that would be to destroy the life of the melody!* The simple upper signs, subordinate degrees which integrate themselves so completely to the melodies constructed by the lower signs, *call for the same conclusions*.

As for the melismas, the assurance seems *a priori* less peremptory. These melismas occur less frequently than the principal signs. Chance correlations could have occurred, blindly connected to the examples and thus creating a false situation. The response which asserts itself is this: the experimental testing of these retained interpretations has not been limited to the few examples found on these pages. *Nowhere in the countless scrutinized texts are they found to be incorrect* (cf. Postface).

This concordance is like that of a *puzzle*. In putting it all together, when one little piece "fits" the special shape of a presumed position which is also shaped in the same way, then they were both designed for each other.

For our research here, the "game," even though *much more complex*, is no less convincing. *It is the multiplicity of concordances which gains credence*. A specific formula "slips into place" in the monody, not only without uncomfortably attracting attention to itself, but in successfully completing the overall shape of the tonal phrase. *This fact is most remarkable* (a suitably balanced melody is not a negligible coincidence). Furthermore, the inflection provoked on specific words by this melodic idea not only does not shock, but correlates with the verbal meaning. *This is a powerful additional security*. These two proofs, important and indispensable, reappear each time a particular sign is found, and *there is no longer any question of doubt*.

It must be acknowledged that the melismas for this monody are *reserved* and *succinct*, besides being *factors of expression*, each in its own way. This is what has permitted the decoding of their meaning. Our reconstitution would not have been possible had they happened to be serpentine vocalises designed to embellish the phrases in the *bel canto* style. But let us recognize that this monody which we have come to know would not have known what to do with superimposed, purely ornamental elements. A model of efficiency, tact and sobriety, it is by its contents and not by its form that it proves itself.

The Bible itself gives us the most unexpected proof of this scrupulous restitution in the *Decalogue* (cf. p. 147). In these verses—which does not happen in any other text—the lower signs and upper signs intercross, overlap, and even straddle each other. What could possibly result from such a scuffle?

The synagogal tradition itself abandons the game at this challenge; the melismatic meaning it confers ambiguously on each sign, upper or lower, does not permit it to explain the simultaneous presence of two similar signs straddling each other. This is why the *hazzanim*, when they begin to read the *Decalogue*, confine themselves to interpreting *only the lower signs* on some words and *only the upper signs* on others. We will not dwell any further on this proof of indigence.¹⁹

What is extraordinary by contrast is that this unique, primordial text constitutes the *ultimate proof* of the exactitude of the interpretations given in these pages. These same signs, which are generally distributed

with a certain parsimony, forming the beautiful, expressive melodies with which we have become acquainted, still form a perfect music, with an expression just as completely intense here in their *intermingled, superimposed state*. Is this not a startling document, an undeniable proof of the authenticity of my deciphering key?

Let us judge for ourselves in this excerpt.

THE DECALOGUE: EXODUS 20:10

[10] shall not / you / do any work, you,



your son, nor your daughter, your male servant, your female servant,



your cattle, nor the sojourner who (is) in your gates.



Every verse of the Decalogue, without the least exception, is marvelously enhanced by the melodies springing from these heretofore forgotten symbols (the position of each sign being strictly respected).²⁰

If this is not the ultimate proof of the exact identification of the signs, complementing and confirming each other as shown throughout this analytical section, how then can we explain this last testimony crowning the whole?²¹ A coincidence? A miracle yet greater than all the others? It seems more rational to admit that the original biblical prosody was very, *very close* to these realizations that we have deciphered.

NOTES

¹ Yet, it is located on the 1st degree of the **chromatic-Dorian*** mode, at the very place where (in the excerpt from the Decalogue) we pointed out its particular strength!

² We purposely pass over in silence, here in this technical section, the stupefying confirmation that etymology gives to our deciphering key.

³ The resolution is avoided here, while a new degree appears at the beginning of the following word (we will treat this subject later in greater detail).

⁴ One may judge this particularly in the book of Ezra, where this sign frequently appears.

⁵ With rare exceptions, e.g., I Kings 19:11, where the words "great and strong" (wind) are expressively accented by this melisma, used twice in a row.—Ed.

⁶ We gave on page 123 a passage from Chronicles whose correlation with this verse is obvious and which carries nearly the same melody, employing the same sign [¶] several times in a row.

⁷ "The erudite." [Literally, "the scribe"—which implies more than it states.—Ed.]

⁸ It rises from the word in question.

⁹ When the sign occurs at the end of a syllable, the melismas follow suit (cf. p. 312).

¹⁰ Obviously, it would be illogical to interpret this double sign any differently.

¹¹ The sign  really belongs to the psalmodic system, and its use in the twenty-one books is a rarism (cf. p. 277).

¹² Here the two signs do not affect the same syllable as they do in the next example. [Here the printed Letteris Edition differs from other editions, which place both signs on the last syllable of "haman". In manuscripts this composite sign—the ancient name of which is *pazer gadol*, "great dispersing"—is a single sign like a capital "V." But the interpretation still fits the form of the written sign in MSS. and of the corresponding hand-sign noted by the *Manuel du Lecteur*. Moreover, were the whole melisma sung on the last syllable of *haman*, it would be equally effective.—Ed.]

¹³ Specifically in prosody.

¹⁴ There is at least one case where this sign  is found twice in a row: Jeremiah 31:11 (Heb.), where the combination avows itself to be apt.—Ed.

¹⁵ It very frequently appears in the book of Nehemiah. On the other hand, certain texts (often of poetic nature) do not have them: David's Elegy, Esther 5, Song of Solomon 7, and others.

¹⁶ Cf. p. 299.

¹⁷ In the inverse direction , given its position above the words.

¹⁸ That is, of the gesture, as in chironomy.

¹⁹ [This "double accentuation" is treated, in synagogue chant, and by Hebraists, as if the text were equipped with *two separate melodies*, in theory to be sung on different occasions (or, two separate "series" of "disjunctives" and "conjunctives"). However, this leads to contradictions; some words are given by one "series" a "disjunctive" sign, by the other "series" a "conjunctive!" It is quite possible to decipher these "series" separately via the melodic key, creating one melody which is "weak" in its expression, the other almost a monotone! But several verses of the Decalogue have only a "single" accentuation, which yet carries all the expressive power of the words. These verses "flow out of" the same directing thought that governs the use of the "double accentuation;" words requiring greater-than-normal emphasis are given extra musical signs, while those that require less are not. Why doubt that only *one* melody is given here when the results of the key clearly demonstrate this fact?—Ed.]

²⁰ Cf. p. 147 with an excerpt of the Decalogue (p. 40) from the Hebrew Bible. The complete restoration of the Decalogue is found in Volume II of the recordings and its corresponding score (cf. Postface: Realizations).

²¹ Certainly, we are not taking into account, in this technical section of the book, the etymology of the symbolized meanings which confirms the deciphering key.

CHAPTER VII

THE SYNTAX OF THE BIBLICAL PROSODY

— Summary —

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 - b) No form for the sake of form
 - c) These polished works of music attain the heights of musical expression

1) TONAL PARTICULARITIES

a) The structure is succinct only in appearance

At the beginning of our study we stated that the structure of biblical prosody is related to that of our "classical" melody. The ancient melodic phrase, like our common melodies, shows itself to be solidly constructed on the "good notes" of the tonality: I, IV, V. But it has this particularity in that it *reintegrates the tonic note* at the end of the verse.¹ We add to this that it also totally ignores all changes of tonality and *modulation*.

That it easily avoids being monotonous, under these fragile conditions, comes close to being a prodigious feat. But this feat is a patent fact! It deserves our attention. If we were to limit a modern-day composer to writing in this same manner, without the slightest modulation—even if we granted him the addition of harmony—his melody would not get off the ground; its "wings" would be "clipped." Biblical prosody attains the heights of expression.

Let us examine this practice which, although archaic, is capable of producing so much with so little!

b) Diversity of cadences

From a tonal viewpoint, as we mentioned earlier (cf. p. 208), there is a great variety of cadences that occurs within the verse. Actually each degree of the scale is propitious for a *suspended cadence*. Each one of them, whenever we stop for a caesura or a "rest," is a "panoramic view" from which we discover the phrase from a particular angle.

The ancients, it seems, admirably exploited this simple means of variety. The limitations of classical "harmony" are far removed from this. The *modulation* which modern harmony especially demands for blazing its own pathway requires a reduced "axiality." **Tonic*** and **dominant*** are abandoned, then reintegrated in the various related tonalities. This then, roughly, is the entire "classical" structure. It is true that it benefits from a vast expressive complement constituted by the chords, taking account of their highly diverse **positions***. A complete science in itself! To what incredible degree of perfection the great composers utilized these *extrinsic* means to shape the "classical" melody. Ancient monody was unaware of those means—but it exploited the precarious means at its disposal (as we have testimony here) with a consummate art!

Could we have imagined such a surety of touch? The fact that they employed the same scale system as ours does not allow us to assume a similar subtlety on the part of the ancients. We have caught a glimpse of it in the examples in this book. The cadences in the middle of the verses are far from being "stereotyped." They occur *according to the verbal syntax*, preferring certain degrees.

Consequently, the fifth chapter of *Lamentations* has no cadence on the 4th degree. This degree itself figures nowhere in these twenty-two verses. Upon closer examination of this text (marked by overwhelming grief), its prosody in the **Dorian*** mode, we see that a resting point on the subdominant, in the middle of the verses, would not really suit the particular tension characterizing it. On the other hand, the 5th degree, suspensive *par excellence*, marks the first hemistich of each verse.

LAMENTATIONS 5:6

[6] To Egypt we have submitted, and to Assyria, to get enough bread.

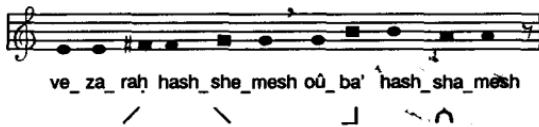
Neither does the 4th degree figure in the beloved *Priestly Benediction* (Num. 6:24). Here again, its appearance (we are convinced) would completely break the spell of this liturgical melody *par excellence*.²

There is great diversity of cadences in the middle of the verses of the dynamic *Song of the Red Sea*. Neighboring the normal resting points on the 4th or 5th degrees, certain ones occur on the 6th or 3rd, or even on the 1st degree. This diversity always takes place in relationship to the *particular meaning* of the affected phrase members; this is patent.

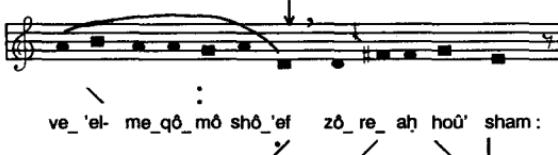
In this same song we notice that not one caesura is punctuated by the 7th degree and very rarely by the 2nd. The 7th degree is nevertheless propitious to certain cadences. It confers on the monody an *equivocal* or *paradoxical* sense, the effect of which was artfully exploited by the originators of this language of sounds.³

ECCLESIASTES 1:5

[5] Rises / the sun, sets / the sun



hastening to its place (of return); it rises again from there.



We have already encountered another no less significant use of this 7th degree for the suspensive cadence (cf. p. 256). Whether it is the fact of well-developed technique of expressivity or of pure intuition, the degree marking the various verbal endings are really appropriate.

c) The choice of musical meanings composing the phrase

The same is true for the tonal meanings found in the middle of phrases. The choice of degrees or formulae avers to be very subtle. It is not *melodic beauty* (although this is not excluded) that determines the choice; its motivation is something else. This or that degree may be *lightly touched* or *accentuated* according to the very particular nuance it brings to the unity of the phrase, in which words and tones cooperate.

Here is an example containing this infinitely "light touch," reduced to a minimum of melodic movement.



SONG OF SOLOMON 7:7

[6] How beautiful and delightful you are, my love, with all your charms!

Musical notation for the text "How beautiful and delightful you are, my love, with all your charms!" The music consists of a single melodic line on a staff with a treble clef. The lyrics are written below the staff, aligned with the notes. The melody uses quarter and eighth notes. The lyrics are: mah- ya_ fifth oo_mah-na_ 'amt 'a_ ha_bah` ba_ta_ 'a_ noo_ ghim:. The music includes several fermatas and rests.

The most charming melody in the world could never express with as much "correctness" the intimacy of these words. Moreover, it brings out the inexpressible spirituality which is less evident from the words alone. It is an inspired effect, in a total simplicity of form.

At the opposite extreme of the light nuance given to the text by the music, we have the following example.⁴ These three words, undoubtedly the most heavily charged with meaning of the entire Bible, are forcefully set forth by the *four most powerful degrees* of the tonality.

THE BURNING BUSH: EXODUS 3:14

[14] Said / God / to Moses: "I AM WHO I AM!"

Musical notation for the text "I AM WHO I AM!". The music consists of a single melodic line on a staff with a treble clef. Above the staff, four vertical lines labeled I, III, V, and IV indicate specific notes or chords. The lyrics are: vay_yo_ mer 'E_ lo_ him 'el_ mo_sheh 'eh_yeh 'a_ sher 'eh_yeh. The music includes fermatas and rests.

The same is true in these foundational verses of the Decalogue.

THE DECALOGUE: EXODUS 20:13-15

[13] You shall not murder. [14] You shall not commit adultery. [15] You shall not steal.

Musical notation for the first part of the Decalogue: "You shall not murder." The music consists of a single melodic line on a staff with a treble clef. The lyrics are: lo' tir_ tsah: lo' tin_ 'af: lo' tigh_ nob:. The music includes fermatas and rests.

The *expression* is the permanent feature of the melody. Its **ambitus*** itself is exploited in order to "picture the words."

THE DECALOGUE: EXODUS 20:2

[2] who brought you out

'a_shér hō_tse'_ th̄ kha
(^)S | /

On just this one word, '*asher*', this characteristic design, already cited⁵ marvelously depicts the transcendent power of the Creator dominating His work—*centrally, below, above*—everywhere.

Finally, nothing here is the work of chance, the source of imprecisions. Unquestionably these *master-composers*, like our own, possessed a sharp sense of the specific quality of tonal values, in their multiple relationships.

The determination of the mode

Moreover, in examining this prosody, if the *mode* asserts itself most frequently in regard to the words, it is because the life released by the melody, in its right mode, is so intense. And this intense life only exists because each note gives to the word or syllable its particular prominence within the context of the phrase.⁶ This is what provides this simple monody with its descriptive contours: *emergences* made from the *particular densities* at the heart of the signs' interpretations.

Of course, in the choice of these interpretations the structure is primordial. One mode is more propitious than another for musically enhancing certain relationships between the words. Moreover, the melodic formulae of and by themselves can sometimes reveal the mode which gave birth to them. A closer examination reveals in which mode an entire chapter was composed, simply by the melodic configurations which are present, whereas they are never found in other modes.

In this same line of thought, one notices that monodies in **chromatic-Dorian*** rarely have the *direct passage* of the 7th degree to the 1st (the tonic). With few exceptions (e.g. Exodus 3:9 and 15:19), the 7th degree *bypasses* the 1st degree, reaching the 2nd, 3rd, or even the 4th degree before falling back to the principal note, the 1st degree.

THE BURNING BUSH: EXODUS 3:6

[6] "the God of Abraham, the God of Isaac, and the God of Jacob."

These are characteristic formulae of this particular mode. This is not the same for other passages in other modes. For example, the passage from the 7th to the 8th degree is found frequently in certain chapters of Zechariah. The mode is completely different; it is **Phrygian*** with an augmented 4th degree, propitious for prophetic vision.

ZECHARIAH 1:10

[10] Answered / the man who was standing among the myrtle trees, saying:

"These are those whom / has sent / the Lord to patrol the earth."

It must be remarked how much this structure highlights the text, compared with that of the **chromatic-Dorian*** mode (which does not coincide with the meaning of the words):

The same text incorrectly interpreted

[10] Answered / the man who was standing among the myrtle trees, saying:

vay_ya_ 'an ha_ 'ish ha_ 'o_ med bén-ha_ ha_ das_sim va_ yo'_ mar
VII II

"These are those whom / has sent / the Lord to patrol the earth."

'el_ leh 'a_ sher sha_lah 'A_ do_nay le_ hith_ hal_lekh ba_ 'a_ rets:
< _ _

We also notice the "exaggerated" 4th, at the interval of an **augmented 4th*** from the tonic (in the correct interpretation), suits especially well (contrary to all expectation) the power of the transmitted message—a power intended for convincing. This is a curious realization, one where beauty is forgotten in the fire of the mission to be accomplished.

Let us emphasize in passing that it was the medieval Church that prohibited the augmented 4th, calling it *the devil's interval*. Ancient Greece did not make such a distinction.⁷ If the recovered monody makes use of it (cf. p. 221), is there reason to disapprove of it? Whenever it is present, the interval is justified.⁸

The same may be said for the **augmented 2nd** between the 2nd and 3rd degrees of the **chromatic-Dorian***. If it offends certain sensitive ears, is this not really a question of "custom?" Our "classical" **minor** melodies readily accept the augmented 2nd between the 6th and 7th degrees (a melodic concession to harmony).⁹ Certain minor melodies are nonetheless very successful. The biblical cantillation, with its augmented

2nd in another place, is just as successful. What makes one location any more legitimate than any other? Only the final result is to be taken into consideration.

If the preceding mode, the **chromatic-Phrygian***, takes an abrupt tone which fits so perfectly certain passages of the prophets, it is completely different with the next mode: a veritable "spring bouquet." Its structure is hardly novel, being the *natural mode of G* without alterations.

We would have perhaps described this mode as "insipid," whereas the ancients judged it "enthusiastic."¹⁰ But thus presented in the following example, the latter epithet fits. The words are imprinted with a penetrating charm; the melody is perfect.

SONG OF SOLOMON 7:12-13¹¹

[12] Come, my beloved, let us go out into the country, let us spend the night in the villages.

le_kah dō_dī ne_tse' has_sa_deh na_lī nah bak_fa_rim:
 < | \ |

[13] Let us rise early (and go) to the vineyards, let us see whether / has budded / the vine,

nash_kī_mah lak_ra_mīm nir_ēh 'im: par_hah ha_ge_fen
 | \ // | <

(whether) / have opened / the blossoms, (and) / have bloomed / the pomegranates.

pi_tah hass_ma_dar he_ne_tsoū ha_rim_mō_nīm
 | \ | | ^

Perhaps some will be surprised that these biblical melodies restituted by our deciphering key do not have an "oriental" character that one would have easily expected. But oriental music as we know it today is an art of embellishment and was probably not yet born at the time of

biblical history. At any rate, its "ornamental" character would certainly not have suited the eminently spiritual message of the Bible, nor corresponded to what commentators have written about the music of the Hebrews.

d) A syntax defying analysis.

Music theory has dissimulated the problem of tonality under the simplistic rubric of **dominant-tonic***. Tonality is really far more subtle. Analysis is incapable of scrutinizing the depths of tonality or harmony. Fundamental physical laws govern tonal relationships, forming a unique bridge between abstract calculation and our spontaneous perception of the concrete through our senses. We have simplified these fundamental laws to excess, since they concern *primary relationships*. These relationships remain in fact *impenetrable*, for their interaction is too dense (cf. p. 128).

Analysis loses itself here, but not *intuition*. Our intellect feels right at home here. The two have "the same *physiological bases*," states Gevart. Sagacious philosophers, conscious of this phenomenon, call our attention to it. "My ideal would be to construct the scale and the chords in which the thought, generally speaking, would be music," says Valéry.¹² That the *thought* be *music* is a bold vision! But truly, all the better to regard it. Bergson evokes the inverse point of view, with equal legitimacy: "To each new kind of music adhere new sentiments, created by this music and within it, defined and delimited by the very design, unique in its kind, of the melody or symphony."¹³

Monodic, without artistic convolutions and without a characteristic rhythm in itself, this music has the same potential of "thought" as our own. For we have already observed¹⁴ that although this music was conceived in conjunction with the words, it still carries, when detached from them, the imprint of their syntactical relationships. Can we be astonished, after this brief but edifying examination, that ancient monody was able to avoid being monotonous, despite its apparent precariousness? It is an established fact that art begins where science leaves off.

e) The expected example of ancient prosody

The *antiquity* of this music is obvious to us, despite the fact that its efficiency seemingly relates it nearer to our time. Its contexture proves to us that it is *anterior to plain chant*. A unique tonality subsists throughout all the verses. Changes of mode are rarisms. Not one modulation is indicated. Its line often produces the same formulae (how could it be otherwise with just eight or nine notes at its disposal?).

In spite of this, a surprising capacity to exploit certain modal particularities is evident, especially for expressive purposes (for which theorists and philosophers of ancient Greece made themselves spokesmen). Concerning this, it must be recognized that since it is free from all harmonic restraints (chords being powerful arches embracing the melody and allocating values to it), the melody takes an unsuspected contribution from the tonality, such as it can make use of, in its solitary line.

In addition to these characteristics, the melody actually terminates (as the medieval treatises on the *te'amim* state) by progressing from *high* to *low*, rather than low to high. Nearly every verse begins with a *rising* melody, starting from the tonic. All concluding cadences, without exception, depict a *descending* movement as they rejoin the same tonic note. Furthermore, this tonic note's attraction is not to a *lower leading tone** but an upper one.¹⁵ And finally, as the recent deductions of musicologists would lead one to presume, the *finale* or tonic has an invariable *median* position in the tonal scale·from whence it governs the relationships.

This then briefly is what we can say about the tonal aspect of this music. But we must mention its exceptional peculiarity, constituted by the constant interventions shaping it by means of subordinate degrees, stressing certain syllables of the words. Our modern occidental melody takes from itself all its substance, in its tonality *imbricated* with *proportional* rhythmic values. Ancient prosody differs. Its syntax overlaps verbal meanings from whence it *takes* its rhythm; not the rhythm of the words alone, as we have already remarked,¹⁶ but a specific rhythm with the words as its basis. The technique of this art form is surprising.

2) HOW A NONMENSURAL RHYTHM IS CONSTRUCTED

We have just given a glimpse of this: far from being content with this delicate "tonal palette" which are the *degrees* of the mode, biblical prosody (like our "classical" melody) appropriately sheds light on its values through *rhythm*. But while our modern musical phrase is *symmetrically* cadenced in two-, three-, and four-beat measures (its rhythm constructed on this regularity), to confer a constructive meaning to the rhythm of ancient prosody seems an abuse.

The rhythm of biblical prosody seems in effect to be the "speech-rhythm" of the words, which it would purely and simply "espouse." *This is not completely the case.* Though *dependent* on the words, the melody nonetheless does provide a form, a particular accent, for the verbal phrase — which in fact it animates *extrinsically*, just as our "classical" melody does.

Independently of the constituent degrees (which generally only occur at the beginning of syllables),¹⁷ the subordinate, added notes also work together. The individual and original rhythmic contribution of the melody resides in the manner which the transient degrees present themselves, for this particular rhythm *interprets* the words.

Certainly, all the rhythm of biblical prosody is centered on the syllable which especially carries the tonic accent or, more precisely, the dynamic accent;¹⁸ but how the rhythm plays with the accent, how easily it masters it! What delicate interventions, if one compares this form with that of certain "classical" melodies with their conventional, "unsurprising" rhythms. There is a whole moving, fluctuating life in the rhythm attached to the accent. We shall try to draw out its essential elements.

a) Masculine and feminine endings

We discover first of all, after the fashion of our classical melody (based as it is on symmetrically cadenced strong or weak beats), the ending of phrase members in biblical prosody is by turns *masculine* or *feminine*. One wonders no doubt what method is involved here. Actually, the masculine and feminine endings of our "typical" modern melodic phrases are not perceptible except when strong and weak beats *alternate* in the given measures, these being invariable for long sections (in 2/4 time, 3/4 time, 4/4 time, etc.). In the framework conventionally determined by the *time signature* to which we unknowingly submit by

habit (the strong beats recurring at regular intervals), is inserted the particular degree of the tonality, chosen for clarifying the function of the phrase member.

In this familiar universe, this degree can be presented in different manners. It can be accentuated by a strong beat, or be toned down, "retired," by a weak beat. Terminating on a strong beat, the ending is *masculine*; on a weak beat, it is *feminine*. Was it necessary to recall these facts? Yes, perhaps, for the single purpose of comparison; for we are focused on this particular kind of rhythm and are unaware of any other.

How does this ancient form of prosody produce masculine and feminine endings for its musical phrases? It uses the accent, especially that of *the last word of the incidental clause* or *hemistich** concerned. When the degree terminating the tonal cadence sets off the dynamic accent of the last word of the phrase member, the ending is *masculine*. The great majority of the verses terminate *on the tonic* in this fashion.

ECCLESIASTES 1:2

[2] Vanity of vanities, says the Preacher; vanity of vanities, all (is) vanity.

↓

ha_be_l ha_ba_llm 'a_ mar qo_he_leth ha_be_l ha_ba_llm ha_kol ha_be_l:
 < | 19

When it is retarded by an *appoggiatura** or a melisma interposing on an accented syllable, the cadential degree terminates upon a *more "modest" syllable*, and the ending is *feminine*. This is specifically true for the cadence on the 5th degree.

DAVID'S ELEGY: II SAMUEL 1:20

[20] Tell it not in Gath, proclaim it not in the streets of Askelon.

(F) (5th Degree)

'al- ta_ gi_ dou be_gath' 'al- te_ bass_roū be_ hoū_tsoth 'ash_qe_kōn'

The masculine or feminine endings "chiseled out" by our poets offer some analogy with habitual musical procedures. Silent syllables ending a verse give it a feminine aspect. But one must make a distinction here. If the alternation of masculine or feminine endings easily appears upon the hearing of a poem, it derives from the fact that *the number of syllables* of the verses comprising the piece is generally *equal* (and we know that the punctuation is not always best served by the imperatives of the versification!). The correlation between the "classical" melody and versification is quite clear. They possess the same method of procedure: the creation of a propitious framework by foreign, secondary means, for developing a rhythm to which the syntax must accommodate itself.

The prosody we are studying ignores these *artifices*. It does not accept "plays" on rhythm or words. Only the meaning of the phrase is highlighted by the use of masculine or feminine endings, the former decisive, the other evasive. There is no rule save that of *serving the punctuation, or more exactly, the syntax* (and if the two endings alternate, so much the better for attaining this goal).

For this reason one sometimes sees the final cadence of a verse—which terminates on the tonic and is always masculine—take on a curious form, a "rebounding" so to speak, with the sign for the tonic appearing two and sometimes three times in a row.

SONG OF SOLOMON 7:1 (6:13, English versification)

[1] Why should you gaze at the Shulammite, as at the dance of two companies?

mah- te_ he_zoô bash_shôu_lam- mîth kim_ho_lath ham_ma_ha_na_yim
 (↑) | : | ↘ | ↗ | | | ↘ | ↗ | ↘ | ↗ | ↘ | ↗ |

This compositional method of having two or three accents in a row on the final note *reinforces* the conclusive characteristic of the cadence, as when we repeat the last chord in a "classical" piece for the same purpose.

The resting point on the 4th degree, comparable to our **half-cadence***, in principle²⁰ always presents this masculine ending (even though it is not given in "reinforced" form as is the final cadence of the verse).

THE PRIESTLY BENEDICTION: NUMBERS 6:23

[23] Thus you shall bless the sons of Israel: you shall say to them

koh the _ba_re_ khoû'eth- be_nê yis_ra_ 'el 'a_môr la_hem:
 / | \ | ↘ | ↗ | ↘ | ↗ | ↘ | ↗ | ↘ | ↗ |

The other degrees, indicating less prominent cadences, give rise just as often to masculine endings (highly frequent in the *Song of the Red Sea*) as to feminine endings.

The 5th degree is an exception: the cadential endings constructed on it are almost exclusively *feminine*.

JOSEPH: GENESIS 45:5

[5] And now, do not be grieved, do not be angry with yourselves



because you sold me here



Let us bear in mind that the cadential significance of the 5th degree, compared with that of the 4th degree (when it is part of the ancient prosody), is more *suspensive* (deprived as it is of harmonic support); from whence comes the feminine ending which affects it so naturally.

This ending generally takes one of two characteristic aspects: one being a simple flection —, the other a more shaded flection ◆. This ending's reserved contours not only give a particular twist to the word concerned, but at the same time to the *phrase* it terminates. It is a sort of cautious "commentary," justified by its special location at the caesura in relationship to the context.

Now we can see the *functional* meaning of the different melismas as "instruments" of the punctuation, although we must not generalize nor lose sight of the *primacy* of the tonal function in this office. Let us summarize them here. This melisma — often introduces the *first word* of a phrase, whereas this one ~ produces a prolongation, as does moreover this next one !—. This sign !— sets off the word like a "curl" in the middle of the discourse. This next melisma ◆—, which never appears in the middle of the phrase, distinguishes itself from the others by a recognized characteristic: it does not mark a consequential rest, but a *simple caesura*, and it is always preceded by this sign ≈ which delicately shades the *middle of the same incidental clause*.

**b) The approximate rhythmical time value
of the appoggiaturas and melismatic figures**

Earlier we gave a brief indication concerning the "possible rhythmic notation" of these different figures. Normally they fit within the *approximate time value* allotted to the syllable. But we have seen that syllabic time itself is variable, according to its potential interest in the phrase. In principle, the introductory melisma on the first syllable of a word is briefly enounced,



as well as those at the end of a phrase, being "plumes" of a sort:



However, the simple appoggiaturas $\swarrow \searrow \dot{\cdot}$, and the other melismas, $\bullet \text{!} \text{!}$, will instead *share* the allotted syllabic time. But there is no fixed rule, except that of good taste and appropriateness. The art of "cantillation" is being closely related to the *art of speaking*.

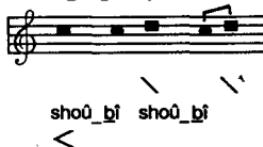
So it is certainly not a case of systemization; *the expression is the deciding factor*. This is why with a minimal set of "props"—just a handful of notes and several melismas—biblical prosody can powerfully objectify the words. True, its rhythm has its source in the dynamic accent of the word, but the cantillation *restores to the word its own accent*, marked with its undeniable imprint!

c) A syncopated rhythm without a symmetrical cadence

At the beginning of our *exposé* of the upper signs, we signaled their variable positions. They can affect, not the *entire syllable* from its beginning, but rather the end of the syllable. Many of the examples presented in the preceding chapters show this particularity.

So far as rhythm is concerned, let us observe the concrete effects of this particular notation. When the appoggiatura represented by the upper sign does not mark the *beginning* of the syllable, but only

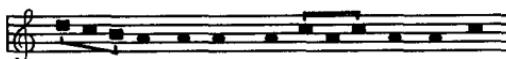
intervenes in the middle of it, the allotted time value of the syllable is *divided*. It is *pronounced* on the preceding basic degree, being *prolongated* on the subordinate degree symbolized by the upper sign (the time allotted to both signs being *equal*):



Notice the rhythmical singularity that results from this *simple delay* in the sign's appearance. Actually, the *dynamic accent*, generally set off by a musical value which makes it prominent, is not emphasized in this case. It is somewhat *camouflaged* by the absence of an accent (actually there is *tonal uniformity*). This lack of accent is then *compensated* by the new sound, intervening in the "empty part" of the syllabic time. The result is a retardation of syncopated character.

ESTHER 5:1

[1] and the king (was) sitting on his throne /



(^)
 ve_ ham_me_lekh yō_ shēb 'al- kis_ sé'
 (^) <

royal / in the throne room



This is not a true syncopation according to the strict definition of this term: "an accented note on a weak beat carrying over to a strong beat" (which is therefore unaccented).



Here it is exactly the opposite: a note intervening *after a strong beat* (the tonic accent) insufficiently set off, and in a sense compensating for this lack by the *unexpected accent* it introduces (in the middle of the syllable, no less). It seems, in fact, that there is *competition* between the unaccented tonic accent and the delayed tonal meaning. This is what determines the *syncopated* character.

The intrinsic rhythmical value of the characteristic figures is **mensural***, arising from the particular position of the sign in the middle of the syllable. Musical time, like syllable time, is divided up; even in the absence of the words, the impression remains the same. A specific "rhythm" is created.

Independent of the variety which they bring to this prosody (less elementary therefore than it would appear), these inflections delicately shade the various fractions of the syllables, thus highlighting the words themselves to various degrees. Moreover, this particular sculpting of the melodic line has an incidence, not only on the word which it clarifies, but on the *entire phrase member* to which the word belongs.

We observe that it does not occur at the end of a phrase, but at the beginning or in the middle somewhere. It "fills out" the phrase, giving it "a puff of wind" and "volume." It marks a *climax point*. Like a sail swollen by the wind—a gentle breeze or a flustered north wind—by this simple delay of a customary contrast, the phrase is developed to the maximum, then diminishes, is used up and vanishes.

ABRAHAM'S SACRIFICE: GENESIS 22:9

[9] built there / Abraham / the altar,

vay_yi_ ben sham 'ab_ra_ham 'eth- ham_miz_be_ah
(l) <

arranged the wood

vay_ya_ 'a_ rokh 'eth- ha_ 'e_ tsim
| < | □

As we were suggesting, both power and grief are underscored by this simple process.²¹

And even this simplicity is exemplary. It testifies to the efficiency of the least representative means when they are appropriately employed. It incites us to praise these ancient master-composers who, deprived of the inexhaustible technical resources at our disposal today, nevertheless attained their goal, making optimum use of their available, limited means.

3) TWO COMPOSITIONAL FACTORS PERFECTING THIS MONODY

a) The diversified but precise locations of the upper signs

We just saw for ourselves that the position of a single upper sign, marking a simple appoggiatura, can totally modify the turn of an entire phrase. Therefore it is highly important that their symbolized meanings *only intervene* at the *precisely designated spot*, often by designated allusions—in the verbal text.

The degrees represented by the lower signs are indifferently placed at the beginning of the syllable.²² The position of a sign characterizing a degree, in the midst of the signs of vocal nature, therefore has no transitory meaning. Its execution poses no problem. The upper signs themselves may be found in most *unusual* locations; these positions are determinants of the melodic configuration. *It is paramount to respect these locations.* When one first takes notice of this particularity, after having formerly ignored its presence, one tends to imagine that these are slight typographical imprecisions; this is not at all the case.

A closer examination of the texts permits the observation that these varying positions are to be found in every book of the Hebrew Bible, and that their incidence in the melody is not only accounted for but perfectly justified. Furthermore, every printed edition has them, including the first printed Bible.²³ Besides, they are also in the early manuscripts, the sources for this first edition (cf. Annotation).

This indispensable verification permits us to settle a question that could appear specious. In this regard, it seems tribute is due to those "master-craftsmen" responsible for these successive editions,²⁴ recopied

manuscripts from earlier centuries, and for their scrupulous respect for the misunderstood details of which the embarrassed tradition took no account.

Actually, the tradition, linked to other sources,²⁵ had never been able to attribute to the upper and lower signs anything but a melismatic significance which was incapable of interpreting these subtleties. Consequently the tradition was constrained to disregard them. Fortunately this is no longer the case (it is good to emphasize this), now that the lost meanings of the signs are rediscovered. These various positions make complete sense, and from the scrupulous exactitude of realization results a revelation of concealed treasures in these delicate monodies and a sometimes-unrestrained expressiveness.

Without a doubt, the ancestral meanings, sources for the notation in question, possessed these subtleties. Why else would the Masoretes have been so troubled by them? Moreover, how can we explain the near total perfection these signs give to the reconstituted texts if they were not originally intended?

This almost microscopic perfection gives the monody its genuine physiognomy. To be persuaded, it suffices only to reconstitute several phrases, deliberately taking into account, or not, the particular positions of the signs, so scrupulously transmitted.

ABRAHAM'S SACRIFICE: GENESIS 22:7

[7] Speaking / Isaac / to Abraham his father, said: "My father?"

This realization, with its words so beautifully inflected, would lose its worth if the "added note" set off the tonic accent:

Same text incorrectly interpreted

[7] Speaking / Isaac / to Abraham his father, said: "My father?"

Note the vivid expression in this next verse.

DAVID'S ELEGY: II SAMUEL 1:21

[21] for there was defiled the shield of the mighty, the shield of Saul

It would be irremediably destroyed if the **appoggiatura*** intervened at the *beginning* of the syllable.

Same text incorrectly interpreted

[21] for there was defiled the shield of the mighty, the shield of Saul

But it is the *last consonant* which it concerns. And here are countless formal proofs of this finesse of expression and style.

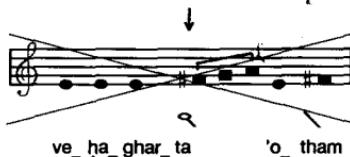
In the same vein, the sign for a **melisma*** can affect just the *last part* of a letter. This is the only way of marking the same particularity if, as in the following example, this is the only consonant in the syllable (placed on the *beginning* of the letter, it would incontestably burden the musical phrase).²⁶

EXODUS 29:9

[9] You will put caps upon them



[9] You will put caps upon them



The interpretation must take into account these legitimate positions. In this manner each verse finds its exact complement in the music.²⁷ What imagination the scrupulous originators manifested in these creative pictographical representations. It is paramount to translate with precision this message transmitted with so much love.

We come now to the incidence of the exact place of the upper signs upon the resolution of the added notes. When one is well-acquainted with the precise significance of the lower cantillation signs, it is easy to sing those verses which do not have upper signs. But when the upper signs are present, the particular point where certain ones are located sometimes poses a problem in regard to the opportune moment to return to the basic degree from which they have carried us momentarily. However, one has only to observe several characteristic rules in order to surmount this apparent dilemma and apply them only while taking the punctuation into account, for the implicit punctuation is also determinant in this situation. If spite of the very great importance of these modalities for resolution of the added notes, we will not continue our examination of them here (such an examination being particularly deep).²⁸

**b) The hazards of a living punctuation:
the melodic line must not "suffer" because of the choice**

Finally we must call attention to the determinant role that the punctuation has over the physiognomy of the monody, because the *resolution* of the added notes can affect it. This is actually a *latent* punctuation. In fact, in the absence of specific signs, the punctuation is not *formal*. If it is perceived, due to the music, it does not impose itself on each phrase in certain verses. Still, it plays a *capital* role over the *configurations* of the melody.

It goes without saying that the modalities or resolution of the *appoggiaturas** and *melismas** vary according to the interpreter's decision to interrupt the discourse *here rather than there* in the middle of certain particularly segmented phrases. One will prefer to execute a *caesura** at one incidental clause rather than at another. This is his liberty. But he must not lose sight of the melodic line. It must never, in any case, become ungraceful.²⁹ This remark demonstrates the fitness of a *judicious* realization in the restitution of the deciphered texts. It proceeds from formal laws. There is no question of its being an improvised public reading.

The experienced performer, when he decides to observe or not a *caesura,** will automatically take into account the *appropriate resolution* of the *melisma** at the end of the incidental clause, in order to obtain the best melodic effect, just as the ancient readers of the sacred texts did (cf. Postface). The lack of precision on this subject is not a deficiency in the notation. We must not forget that the notation *doubled* the living *chironomy** which by its very nature permitted certain liberties concerning minor punctuational effects.

4) THE LIFTED VEIL DISCLOSING ANCIENT MUSIC

**a) Themes and thematic ideas;
the constitution of the musical "period"**

Here ends this careful, yet incomplete study of an unsuspected art whose life was concealed in this succinct notation. Does the musical contexture appear abridged? Could it have been otherwise? It attains its goal. Is this not the essential thing? Is there no musical *form*? We have seen that it mirrors, to the extreme limits of musical precision, the verbal syntax.

Is this to say that ancient musical art limited itself to that? It does not seem so. The texts guide us on further, and this revealed music gives them more weight: "As David was returning after killing the Philistines, the women came out...from all the towns of Israel, singing and dancing to the sound of tambourines and triangles [Heb. *shalishim*] and cries of joy; and as they danced, the women sang..." (I Samuel 18:6-7) These were songs of festivity and mirth. But also: "Speak, old men, it is proper that you should; but know what you are talking about, and do not interrupt the music." (Ecclesiasticus 32:3)

The other *side* of music known to the ancient Hebrews was that of listening to the *music itself*. These texts are eloquent, as we approach our conclusion. They show us that this prosody was not "the only music" that was heard in ancient times. They suggest rather that *it restrained its effects*, so as not to harm its function by surpassing it.

Moderated "attractions" in order to better serve the faith: this must have been the motto of this liturgical art *par excellence*. We have the proof in these pages themselves that the music of antiquity was not just a crude, unrefined art; certain examples presage this. *The Elegy of David* attests it. We have cited its brilliant theme, worthy of our greatest composers. Its *development* gives us an idea of the "methods" undoubtedly employed when it was composed. A perfected art does not improvise an entire piece; it conceals a foundation of references, even if the spontaneity veils it. It must be acknowledged that a poetical form is present, especially in these verses of the *Elegy*. How does the music structure this form, notably with its inevitable recursions to the tonic at the end of each verse?

The *periods* [musical sections] are nevertheless *delineated*. The restrained motion of the melody brings out the delicate emphases on the characteristic degrees, from which must necessarily be born a form, built on tonal relationships.

The *main theme* oscillates between the degrees I, IV, I (cf. p. 255). A kind of "commentary" follows, suspended between V, IV, V (verse 20, cf. p. 296). Then a *secondary phrase* occurs — "*theme B*" (verse 21, cf. p. 304), terminating the *first section* in a *façade* composed of three arches.³⁰

DAVID'S ELEGY: II SAMUEL 1:21

[21] the shield of Saul, which will never again be anointed with oil!

The next two verses are only the *development section* (the first verse develops theme B, the second, theme A). They do not attract attention to themselves. This constitutes the second section of the piece. But at verse 24 the initial theme reappears, forming the *recapitulation*. Of course, the words are different.

DAVID'S ELEGY, v. 24

[24] O daughters of Israel, / for Saul / weep

How well they justify the return of the moving and incomparable "pediment" of this work!

A *commentary* follows next, separating *theme A* from the modified *theme B*, slightly reworked by an initial note added to its beginning. This constitutes the *third arch* of the recapitulation.

DAVID'S ELEGY, v. 25

[25] How / have fallen / the mighty in the midst of the battle!

A short *coda* ensues, making use first of all of *theme B, unmodified*, then terminating by a modified *theme B*.

DAVID'S ELEGY, v. 27

[27] How / have fallen / the mighty, and perished / the weapons of war!

:

'ékh naf_loú ghi_bô_rím vay_yob_dôú_ke_lé mil_ha_mah :

Thus the *Elegy* "ties itself together."

I think that this piece, unique in every respect, gives us the oldest example of a genuine **architectonic***. It is a rare elaboration in prosody because the verbal text, for the most part, does not require such similar constructions. It unquestionably provides us with insight into music capable of illustrating the poetic forms of antiquity.

The presence of a *theme* is again particularly sensible in the *Sacrifice of Abraham*. It has a veritable *leitmotiv* which is present after a sort of musical *introduction*, indicated by the words themselves. In substance *God tested Abraham and commanded him to offer Isaac as a burnt offering*. Thus begins the drama. Immediately in verse 3 a melodic idea is presented which will be the constant support of the patriarch's heavy heart.

ABRAHAM'S SACRIFICE: GENESIS 22:3

3] So rose / Abraham / early in the morning

vay_yash_kem 'ab_ra_ham ba_bo_qer

It reappears in verse 5.

ABRAHAM'S SACRIFICE v. 5

[5] And said / Abraham / to his servants



It is outlined in verse 7, when Isaac ventures to cautiously question his father.

ABRAHAM'S SACRIFICE v. 7

[7] Spoke / Isaac / to Abraham his father



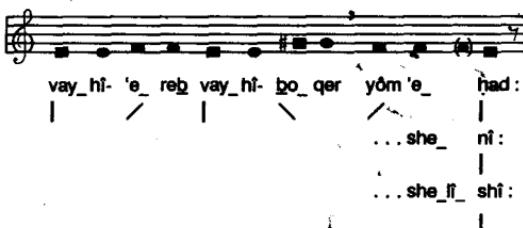
It is interrupted by meditative inflections in verse 8,³¹ and we discover it again in verse 11 (cf. p. 251). Here dawns a glimmer of hope; and finally we see it in verse 13, where it is confirmed that Abraham has been spared from sacrificing his son.

Such thematic consistency is rare in biblical prosody. It cannot happen without the *adherence* of the creator-artist. On the other hand, no *refrain* (according to the customary use of the term) has been found.³² This melodic concept seems excluded from the liturgical perspective of the Hebrews. However, it flowers profusely in Gregorian chant, and is mentioned in the Sumerian liturgy (litanies, hymns) as well as that of Egypt.³³

The only phrase I have found to this point in the prosody of similar nature [quasi-refrain] is this one, always the same, which structures the enumeration of the *Six days of Creation* in the first chapter of the Bible. Let us remark that, motivated by the analogy of the words, they fittingly enhance the texts they support.³⁴

THE CREATION: GENESIS 1:5, 8 & 13

- [5] and there was evening and there was morning, day / one.
 [8] . . . day / second.
 [13] . . . day / third.



b) No form for the sake of form

The "technical means" which we have looked at are discreet. They do not demand our attention as do certain characteristic forms of our "classical" art. They are not of primary importance, do not constitute an *end in itself*. Other particular points prove that this prosody, if it is generally restrained and reserved, is so by virtue of determination and not of impotence.

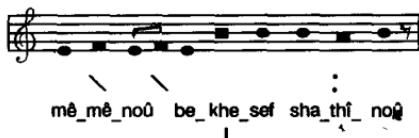
If the "melodious" effects are not elaborate, one can nevertheless find them; and thus one finds them in the last part of the 7th chapter of the *Song of Solomon*.³⁵ The freshness of this melody, its gracefulness, relates it to the firstfruits of spring, cited by the verses.

If the rhythm does not impose itself except where the description demands it (as in the *Song of the Red Sea*,³⁶ where we can almost hear the tambourines tapping out the dance), the art of description comes to the surface (by simple allusion) at the beginning of the book of Jonah;³⁷ where for an instant we are there facing the storm!

On the other hand, when melodic development itself appears inopportune, as in the famous *Lamentations*, the "litany" is present. The same painful, melodic phrase supports the evocation of innumerable misfortunes (chapter 5).³⁸

LAMENTATIONS 5:4

[4] Our own water / at a price / we drink,



what is our wood / to buy / we have need.

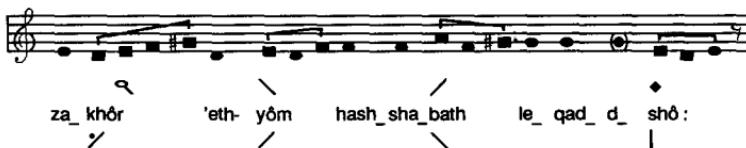


This melodic idea consistently outlines each verse from the 9th through the 17th.

And under the domain of a similar obligation—enhancing the *meaning* of a given text—the beginning of the *Decalogue* leaps right into the middle of a "fireworks display"³⁹ which then diminishes to a simple accessory when the captivated listener is invited by a noble, persuasive phrase to respect the basic prescription for rest, the Sabbath.

THE DECALOGUE: EXODUS 20:8

[8] Remember the day of the Sabbath to keep it holy.



What an artistic testimony, in the ensemble of these examples so diverse, garnered from the Book of Books, and which was almost lost forever!

**c) These polished works of music
attain the heights of musical expression**

The *suppleness* and adaptability of this monody is evident in every direction. Every kind of sentiment and circumstance is reflected by it, as though "fleshed out" by the miracle of well-ordered sounds. But the music, everywhere, is only *what it should be* and no more. It is abundantly successful. Once again, this could not be a case of a nascent art, but rather that of a fully developed art which purposely limits itself.

What remains to be said now is primordial. It would have been vain and deceitful to stress all these beautiful creations if a proof could not be established, surpassing them in a sense by the indispensable support that it grants them. This proof is the perfect *continuity* of all the musical reconstitutions through this notation, which have become intelligible once more.

Actually, and one has reason to be overwhelmed by this, there is no evidence of imperfection, fault or error. And yet, a misplaced sign is a very little thing. It would simply be a "wrong note." But in regard to "wrong notes," I have yet to find even one!⁴⁰

Thus the numerous reconstitutions unfold without any momentary "destitution" or regrettable incidences. And we in turn are interested, captivated, conquered, enchanted, convinced, taken with compassion, edified—without the slightest technical imperfection arising to impede our reactions.

How good that it should be so. Would we not have been plunged into bitter regrets if the powerful and delicate touches that we have drawn out of the shadow of *Sheol*⁴¹ had been surrounded with imperfections, rendering them artistically or liturgically "unacceptable?" Yet the contrary is true. Could we really wish for anything more?

The *Psalmodic System* has in store for us marvels no less startling, with a bigger part given to the music.

NOTES

¹ We cite however one exception: the Decalogue, verse 5.

² Cf. p. 227 and Postface.

³ Such an *equivocal* sense would have had no place in the enthusiastic song cited above (where we noted the absence of cadences on the 7th degree).

⁴ Already cited for its characteristic rhythm corresponding to the words (cf. p. 253).

⁵ Cf. p. 269.

⁶ Cf. pp. 32-33, 216ff. Notice that nothing in these melodies permits us to presume the presence of micro-intervals. Their use would disturb the obvious simplicity of this music (cf. Postface).

⁷ "The Greeks themselves did not have the same repulsion for the tritone as the theorists of the Middle Ages. They used it in their melodies... The archaic Mixolydian scale cited by Plato (in *The Republic*) even begins with an exposed tritone... A fact worthy of mention, Gaudence cites among the paraphonia the *major third* and the *tritone*..." M. Duchesne Guillemin, "Découverte d'une gamme Babylonienne," *Revue de Musicologie* (July 1963), p. 15.

⁸ The Church warred against certain adulterated practices (cf. p. 24), and it is in this sense that it permitted only diatonic modes and no doubt restricted intervals as well.

⁹ Tchaikovsky's *Marche Slave* employs an old scale with two augmented 2nds in it: between the 3rd and 4th degrees as well as the familiar 6th and 7th.—Trans.

¹⁰ Cf. J. Combarieu, *Histoire de la Musique*, vol. I, p. 86.

¹¹ The rhythmic reading of this "song" (of poetic essence) is related to that of the Psalms (cf. p. 35).

¹² Cited by J. Duchesne-Guillemin in "Paul Valéry et la Musique," *Revue Musicale* (Jan. 1952), p. 121.

¹³ Bergson, Henri, *Les deux sources de la morale et de la religion* (Presses Universitaires de France, 1967), p. 37.

¹⁴ See chapter 5 in this section.

¹⁵ This characteristic "upper leading tone" in the *Dorian* mode is called, however, the *2nd degree*. The melody rises so naturally before returning towards its starting point.

¹⁶ Notably in chapters 5 and 6 of this section.

¹⁷ Except when they are grouped, which is very rare.

¹⁸ The dynamic accent does not always coincide with the tonic accent in biblical cantillation. It can be found on a syllable that is normally unaccented,

as happens twice in Ecclesiastes 1:2 (*gohelet, habel*—cf. p. 296). The melody itself is the judge of what results in the most refined expression—something the "Masters of Tiberias" did not understand (cf. p. 168, with the citation from the *Manuel du Lecteur*, p. 484).

¹⁹ The unaccented repetition does not enter into account here.

²⁰ There are exceptions, always justified in context.

²¹ See the unrestrained intensity of expression of the word *vedim'athah* (p. 153).

²² Unless two of them share the same syllable, which is rare.

²³ Hebrew Bible, Bomberg Edition (16th century).

²⁴ Some editions, however, omit or displace signs, following the prescriptions of the Masoretes (who did not understand them!). (Cf. pp. 167-170.)

²⁵ Cf. pp. 137ff.

²⁶ In this verse it is the syllable *ta* affected by the sign  on the left side of the Hebrew *t* (bearing in mind that Hebrew is read from right to left). The reader will find numerous similar examples in the Bible, notably in our reproduction of the *Decalogue*. See p. 40, line 3, for the same sign; compare its position at the extreme end of the last letter of the word with that in the middle of the last letter of two other words (lines 1 and 2).

²⁷ A look at the examples in this book will confirm this.

²⁸ The reader will find this detailed in the Appendix.

²⁹ This is why the added notes' modalities of resolution are especially analyzed whenever they are present at the end of an incidental clause. (Cf. Appendix.)

³⁰ Taken from the above "commentary" (p. 314). Cf. Postface (realizations).

³¹ Cf. p. 262 and Postface.

³² Neither in the form of stanza-refrain (alternating musical ideas) nor as a litany (a single repeating musical idea).

³³ A. Machabey, "La Musique Egyptienne," *La Musique des origines à nos jours*, pp. 59, 61.

³⁴ Cf. Postface (realizations).

³⁵ Cf. p. 291 and Postface (realizations).

³⁶ Cf. p. 117 and Postface (realizations).

³⁷ Cf. Appendix and Postface (realizations).

³⁸ Cf. Postface (realizations).

³⁹ Already cited on p. 147.

⁴⁰ Concerning this, see Annotation.

⁴¹ The realm of silence where the dead sleep.



PLATE XVIII
EXCAVATIONS AT UR—THE SECTION OF THE CITY
CONTEMPORANEOUS WITH ABRAHAM
(beginning of the 2nd millennium B.C.E.)
Perhaps the patriarch's feet trod the dust of this street.)
(Photo Michael Audrain)



**PLATE XIX
MOUNT SINAI**

The place where Moses received the Decalogue in solitude and prayer.
(Photo Roger Viollet)



PLATE XX

THE LAKE OF TIBERIAS (SEA OF GALILEE)

The landscape familiar to the Ben Asher family (cf. p. 105).

(Photo Michael Audrain)

BOOK II

THE PSALMODIC SYSTEM

The Syntax of the Psalms

CHAPTER I

THE SEVEN LOWER SIGNS: A SCALE LIMITED TO SEVEN DEGREES

— Summary —

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2) Lower signs common to both systems	324
3) Two omitted signs: $\overline{\vee}$ and \overline{s}	324
4) A new, enigmatic sign	325
5) This sign \overline{v} is a new subtonic* , a half-step below the tonic	326
6) A specific scale for psalmody—the most frequently employed mode*	327

1) FIRST OBSERVATIONS

As we already pointed out at the beginning of this study the correlations are great between the prosodic and psalmodic systems:

- the same location of signs (below and above the words)
- the same shapes, in general, with few new signs.

And yet, all the same, the near-certitude of a satisfying interpretation for the first system's signs does not resolve the enigma of the second system. There are actually very few differing elements, but they suffice to render the second system unintelligible. Consequently everything is brought back into question.

2) LOWER SIGNS COMMON TO BOTH SYSTEMS

Only the lower signs will be considered at first. Six of them are already known to us, since they are also found in the prosodic system: $\text{I} \nearrow \nwarrow \wedge \wedge \nearrow \swarrow$. They represent the *tonic* and the *five degrees following it* in ascending order. *It is logical to attribute the same meanings to them.* The 6th degree constituted the upper limit of the scale in the prosodic system; apparently, it is the same in the psalmodic system. No degree is omitted between the tonic and this upper 6th degree.

There is a great basic similarity between both systems—and it seems that, because of this, the reconstitution of the musical meanings of this second system will be easy. But this is not at all the case!

3) TWO OMITTED SIGNS: $\overline{\vee}$ AND \overline{s}

Limiting ourselves to only the lower signs, let us deepen our examination. Actually *two signs* are discontinued, $\overline{\vee}$ and \overline{s} . They represent the two degrees proceeding to the tonic note *from below* in the prosodic system. The absence of these two signs therefore situates (at least for the moment) the tonic at the *beginning* of the scale. Could this scale be reduced to six degrees?

But then, the *attraction of the tonic* would only be exercised in a single direction. And the suppression of this zone below the tonic, in the limited structure of a unique, unalterable scale, would deprive the melody of an important means of expression. We know the power that

the musical phrase acquires in the prosodic cantillation when, leaving the 6th or 7th degree below the tonic, it vaults over it, leaping to the 2nd, 3rd or even the 4th degree before landing on the *conclusive* 1st degree. That the melody is deprived of such a resource, especially in the psalmody system (where most likely the music plays a more important role than in prosody), is hardly admissible.

4) A NEW, ENIGMATIC SIGN

Let us continue our complex investigation, difficult as it was for us at the time. Two signs have been omitted, but a *new sign* appears: $\overline{\vee}$.¹ We immediately recognize this new sign as none other than the one symbolizing the 4th degree in the prosodic system $\overline{\wedge}$, but presented here *upside down* $\overline{\vee}$. Unmistakably the idea comes to mind, knowing the procedure of Greek notation (cf. p. 62), that this new position of the sign representing the 4th degree simply marks the *alteration* of this same sign, no doubt making it a half-step *higher* or *lower*.

Will this scale then contain *two signs* indicating a 4th degree of variable pitch?

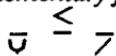


This double representation of the 4th degree would be justified perhaps (in this first supposition) by the frequency of the alternation of the 4th degree's position in the melody.

Now comes the experimental stage. We can imagine the multiple tonal paths that must be tried in order to arrive at a valid option—the position of the neighboring degrees being itself tangent, in this primitive kind of notation which does not specify the mode.

Right there is the stumbling block. This is an *imbroglio*, a melodic chaos where our path leads (at whatever cost) if we want to finish. However, the result of this painstaking work is that it leads nowhere! And one comes out of it somewhat bruised by the confrontation of the results with those acquired by the interpretation of the lower signs alone,

in the examination of the first system. But one observation comes to the fore in this experimentation. We notice that this sign \vee is most frequently followed by this *complementary formula*:



It seems it is necessary to comprehend the meaning of this sign \leq when it is *above* in order to penetrate the mystery of the *basic structure* symbolized by the lower signs. However, it is not at all easy to find the meaning of this sign \leq (6th constituent degree when placed under the word) in its now location *above the text*. In the *second system*, $\underline{\text{I}}$ is also found *above* the text, and we might suppose it is a "leap"² to the upper 5th. But to imagine a "leap" to the upper 6th for this sign \leq is unthinkable. The interval simply becomes too great. And we just saw that it is frequently employed, especially after the lower sign \vee (*related to* \wedge , in a new, enigmatic position).

5) THIS SIGN $\bar{\vee}$ IS A NEW SUBTONIC, A HALF-STEP BELOW THE TONIC

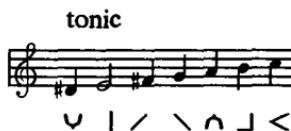
The situation seems unsolvable. Must we return to the fastidious *tables of relationships* used for the first approaches to the prosodic system? At the end of the dark labyrinth of this inconsistent method lies the *key* to the second system, and the hope of an equally wonderful harvest as that reaped through the identification of the musical meanings of the first system.

Sparing the reader the dead-end streets I had to investigate, I will present the resolution of the enigma. The sign \vee actually represents a **subtonic*** note, in principle a *half-step below the tonic*. And symbolically, its shape is justified. While the 4th degree (most frequently a perfect 4th above the tonic) has a strong *cadential* power (marking the **hemistich***), the lower 7th degree, a half-step below the tonic (our "leading tone") is by contrast an opening, an *aperture* from which derive the two morphologically suggestive forms.

But we will not be surprised if the 1st degree almost never directly follows it, the conclusive **cadence*** being effected by a descending movement and not by an ascending movement in ancient times.

6) A SPECIFIC SCALE FOR PSALMODY —THE MOST FREQUENTLY EMPLOYED MODE

Seven degrees all told comprise the scale used for the poetic cantillation. It is a **gapped*** scale. While the *mode* is not obvious as in the prosodic system, it most frequently has this physiognomy:



Notice that the *2nd degree* is a *whole step from the tonic*, and the *3rd degree a step and a half away*—a characteristic of "minor" scales.³

The *mode** actually takes shape at the same time as the scale, being a "chromatic minor" similar to our own, with one slight difference: the connection between the 6th and 7th degrees (in their *fundamental nature* as represented by the lower signs) is *avoided*. The scale limits itself to the *upper 6th degree* at the top and the *lower 7th degree* at the bottom. The characteristic interval of the *augmented 2nd* between them therefore does not *fundamentally* exist. Only the presence of *subordinate degrees* makes it occur.

This **gapped*** scale, just as the structure of eight degrees found in the first system, is particular to antiquity. The **final*** note maintains its *medial* location propitious for expressivity. Of a less conclusive balance (the two outer degrees no longer presenting the analogy of the octave), this other structure for musical thought well suits the *contemplative aspect of prayer*. Many an example will verify this.

NOTES

¹ It is found in the first system only as a rare exception.

² Original French: *echappé* (literally, "snatch," "vista").—Ed.

³ It is not surprising that their shape is not modified because of this; only much later was the mode specified by the use of **alterations*** in the Occidental notations themselves (cf. p. 229-230).

CHAPTER II

THE MEANING OF THE UPPER SIGNS

— Summary —

- 1) Signs of the first system that are retained or discontinued; new signs 330
- 2) The two signs for upper appoggiaturas, \smile and \frown , maintain the same meanings 330
- 3) \bullet becomes a simple appoggiatura to the lower 2nd in psalmody, thus replacing $\dot{\underline{z}}$ which is abandoned 332
- 4) \approx and $\text{'}\text{'}$, two melismas which maintain the same meanings in both systems 337
- 5) Five melismas of the first system are discontinued 339
- 6) The meanings of three new upper signs: \leq , \smile and $\text{'}\text{'}$ 340
- 7) The signs together, in their multiple combinations, constitute a proof in themselves 346

1) SIGNS OF THE FIRST SYSTEM THAT ARE RETAINED OR DISCONTINUED; NEW SIGNS

Without tarrying here in order to immediately demonstrate the correct basis of this conclusion (as was necessary for the first approach to the Masoretic notation), we are going to inspect the *upper signs* figuring in the psalmodic system. The signs belonging to the *first system*, maintained by the second, are the following: \swarrow \searrow \bullet \approx \prime . On the other hand, certain other signs of the first system are *omitted* in the second: $\dot{\underline{L}}$ $\dot{\underline{D}}$ $\dot{\underline{I}}$ $\dot{\underline{R}}$ $\dot{\underline{Z}}$. Later we will see that this omission is justified. Moreover, there are three upper signs of the psalmodic system which do not exist in the first system: \leq $\underline{\leq}$ $\underline{\not{E}}$.¹ There is reason to imagine that the signs used by both systems retain identical meanings (this apparently is not quite the case for $\dot{\underline{L}}$, but its modification is particularly justified).

2) THE TWO SIGNS FOR UPPER APPOGGIATURAS, \searrow AND \swarrow , MAINTAIN THE SAME MEANINGS

These first observations executed, we now pass to the experimental stage. We will examine first of all the two signs which, in the first system, indicate *upper appoggiaturas*, \searrow and \swarrow , appoggiaturas to the 2nd and 3rd degrees respectively. In the second system, this sign \searrow also marks a subordinate degree to the *upper 2nd*. The efficient simplicity of this melody attests this.

PSALM 27:1

[1] Of David – The Lord (is) my light and my salvation; whom shall I fear?

le_da_ vid 'A_do_nay 'ô_rî ve_yish_î mim_mî 'î_ra'
 ↴ ↴ ↴ ↴ ↴ ↴

The sign \swarrow continues to symbolize an appoggiatura to the *upper 3rd*. Could one wish for a better psalmody?

PSALM 46:10

[10] . . . he breaks, and cuts in two the spear, the chariots he burns!

A musical score for Psalm 46:10. The melody is in G major, indicated by a treble clef and a key signature of one sharp. The lyrics are written below the notes, with some words underlined and others with specific prosodic marks like slashes and dots.

ye_ sha_be_r ve_ qits_tssets ha_nith 'a_ gha_loth yis_ rot ba_ 'esh²

We now discover that, concerning its general traits, the psalmodic system possesses the *same characteristics* as the system of the twenty-one books.

The cases are rare where the upper signs are *isolated*, which actually limits our examples here. The following pages where the remaining upper signs enter one after the other, will fully confirm this statement. Let us note right off that this upper sign ‿ is very often followed by ◆ in the psalmodic system. The two meanings are often close neighbors, to the point of appearing as a compound sign ‿◆. In the psalmody the interpretation of this latter sign ◆ poses a problem because its meaning in the prosodic system *does not fit here*.

PSALM 30:3

[3] I cried to Thee (for help), and Thou didst hear me.

A musical score for Psalm 30:3. The melody is in G major. The lyrics are written below the notes, with some words underlined and others with specific prosodic marks like slashes and dots.

shiv_va'_ti e_ le_kha va_ tir_pa_ 'e_ni

We can easily see this for ourselves. As such, this melody does not reflect the *gravity* of this verbally formulated prayer. This is confirmed by the rest of the Psalm; the interpretation of this sign is clearly incorrect.

PSALM 30:4

[4] O Lord, Thou hast brought up / from Sheol / my soul.

The musical notation consists of a single-line staff in common time with a treble clef. It features a diamond-shaped appoggiatura (a small diamond symbol above a vertical stroke) positioned above the note 'nay'. The lyrics are written below the staff, aligned with the notes: 'A do_ nay he_ 'e_ li_ tha min- she_ 'ol na_ shi'. The diamond symbol is placed above the 'nay' note, and there are vertical strokes under the 'do', 'he', 'li', 'tha', 'she', 'ol', 'na', and 'shi' notes. A circled '3' is at the top center of the staff.

Reasonably, the meaning of this sign must be *different* in the psalmodic system. To this point, such lack of appropriateness or cohesion has been *excluded* in all our reconstitutions.

3) ♦ BECOMES A SIMPLE APPOGGIATURA TO THE LOWER 2ND IN PSALMODY, THUS REPLACING : WHICH IS ABANDONED

It is the *repetition* of the preceding fundamental degree (double appoggiatura) which, in the last two examples, rendered the melody so *trite* that it hardly serves the words, and even makes it contradict the position of the sign. In the prosodic system, this little diamond ♦ symbolized the *simplest of all melismas*: the *repetition* of the preceding fundamental degree, followed by the lower 2nd.



In the same prosodic system, the two *superimposed dots* : marked the simple appoggiatura to the lower 2nd (quite frequently employed in prosody). However, this sign *totally disappears* in psalmody. This melodic device played such a great role in the constitution of the biblical monody until now that it actually seems strange that it does not appear in the second system. But in looking closer we perceive that *only the sign* has disappeared while the meaning remains. This is precisely the sign that we were working on, ♦ the sign which in the Psalms so frequently forms a composite figure with :, becoming ↗♦, which symbolizes this simple appoggiatura to the lower 2nd in the psalmody:



Thanks to this clarification, the monody of the two previous examples recovers its familiar *physiognomy*, which is characterized by moderation as much as expression and musical taste, suiting perfectly the literary meaning.

PSALM 30:3-4

[3] I cried to Thee (for help) and Thou didst hear me.



shiv_ va'_ tf e_ / ♦ 4
 (^) / le_kha va_tir_pa_ 'e_ni
 [4] O Lord, Thou hast brought me up

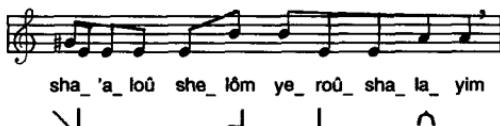


'A_ do_ nay he_ 'e_ li_ tha
 ↴

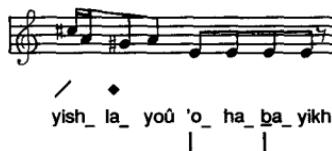
This simple *correction* sufficed to reestablish the perfect correlation between the music and the words. One finds the same correlation in this picturesque description of a *Pilgrimage to the Holy City*.

PSALM 122:6

[6] Pray for the peace of Jerusalem:



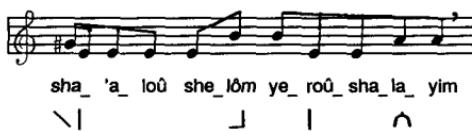
"May they prosper who love you!"



If we were to retain the first system's meaning for \downarrow , it would give a *misplaced* musical expression to this last verse.

The same text incorrectly interpreted

[6] Pray for the peace of Jerusalem:



"May they prosper who love you!"



Just one note too many and an entire phrase loses its eloquence. It takes so little!

But then, why was this sign \downarrow abandoned when it specifically represented the subordinate note to the lower 2nd in the first system? No doubt it was because the melodic formula represented by the "tandem" signs $\swarrow\bullet$ is *very frequent* in psalmody, the second sign often being literally "embraced" by the first. The two dots, if they were used, would not only be "excess baggage," but they would create a *false analogy* with a melisma from the first system $\underline{\text{:}}$, a figure not employed by the second.

Given the simplicity of \downarrow , actually symbolizing the "appoggiatura of the appoggiatura" to the lower 2nd in the prosodic system,⁵ its *substitution* for $\underline{\text{:}}$ was more valid than the use of a new sign (to be honest, the originators of this figuration of the cantillation were miserly).

Moreover, there are numerous signs that are similar in both systems. Several basic distinctions are good reference points to remind the reader that he is dealing with the psalmodic system and not the prosodic system. The great frequency of ◆ in the poetic texts constitutes an excellent reminder; and all the more so in that it almost always accompanies this sign ‿. The resultant melismatic figure



is one of the most revealing clues of the presence of the psalmodic system.

This sign ◆ is rarely found by itself in the second system. Let us remark that the interpretation assigned to it shows coincidence with the verbal meaning in every case.

PSALM 54:5

[5] For strangers have risen up against me.



Incorrect interpretation

[5] For strangers have risen up against me.



The accent on 'alay is more *reserved*, with the interpretation of the sign which we have adopted, yet at the same time more "authentic."

PSALM 122:1

[1] A Song of Degrees

**Incorrect interpretation**

[1] A Song of Degrees

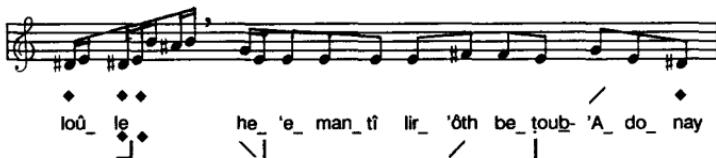


The "facile" musical turn *imposed* on the beginning of this Psalm by the rejected interpretation actually corresponds quite poorly to the needs of a simple announcement.

A typical example (which moreover is unique in psalmody) completely justifies this solution: Psalm 27:13. Its first word uses this very sign *no less than three times*.⁶ The interpretation chosen for it makes this verse one of the gems of psalmodic inspiration.

PSALM 27:13

[13] Ah! If I had not the certitude that I would see the goodness of the Lord



in the land of the living!



4) ∞ AND ¶, TWO MELISMAS WHICH MAINTAIN THE SAME MEANINGS IN BOTH SYSTEMS

∞ We have just finished examining the subordinate degrees. Now we take up the melismas. Reasonably, this sign ∞ has the *same meaning* in both systems, symbolizing the *same melodic design*.

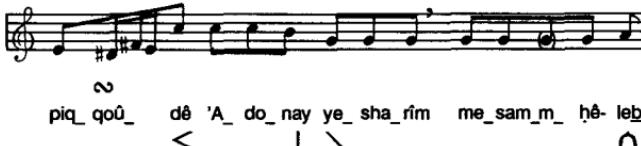


It is especially easy to be convinced of this, since it is rather frequently encountered in certain psalms.

In Psalm 19 it is conspicuous; it is used there no less than *twelve times*. And it is only when the sign is interpreted in this manner that it confers on the melismas the suppleness, naturalness and especially the expression befitting the sense of the words. One can judge for himself from this simple verse, taken from among so many others.

PSALM 19:9

[9] The precepts of the Lord are right, rejoicing the heart.



All the variant resolutions of this melisma, born from different conjunctures of signs, make their appearance in this Psalm.

However, let us note right here that, interpreted in this manner, it "sculpts" to perfection (with an appropriate melodic contour) the curious verbal phrase, so stirring and flashing, in Psalm 29.

PSALM 29:7

[7] The voice of the Eternal flashes forth flames of fire.

Musical notation for Psalm 29:7. The melody consists of a series of eighth and sixteenth notes on a single staff. Below the staff, the text 'qđt 'A do_ nay ho_ tseb la_ ha_bóth 'esh:' is written with prosodic markings: a long horizontal bar over 'qđt 'A do', a vertical bar under 'nay ho', a diamond above 'tseb', a long horizontal bar over 'la', and vertical bars under 'ha_bóth' and 'esh:'.

This other melisma also retains the same meaning as in the prosodic system:

Musical notation for a melisma. It shows a single note followed by a grace note, then a short melodic line consisting of two eighth notes and a sixteenth note. Below the staff, the text '(—)' is written with a vertical bar under the first note and a horizontal bar under the second note.

The following eloquent phrase by itself adequately demonstrates this:

PSALM 23:4

[4] Even though I walk in the valley of the shadow of death,

Musical notation for Psalm 23:4. The melody consists of a series of eighth and sixteenth notes. Below the staff, the text 'gam ki- 'e_ lekh be_ ghə' tsal_ ma_ veth' is written with prosodic markings: a vertical bar under 'gam', a horizontal bar over 'ki- 'e_ lekh', a vertical bar under 'be', a diamond above 'ghə'', a horizontal bar over 'tsal', a horizontal bar over 'ma', and a vertical bar under 'veth'.

I will fear no evil, for you are with me.

Musical notation for the phrase 'I will fear no evil, for you are with me.'. The melody consists of a series of eighth and sixteenth notes. Below the staff, the text 'lo- 1_ ra' ra 'ki- 'a_ tah 'im_ ma_dī' is written with prosodic markings: vertical bars under 'lo' and '1', a vertical bar under 'ra', a diamond above 'ra', a vertical bar under 'ki', a horizontal bar over 'a_ tah', a horizontal bar over 'im', and a vertical bar under 'ma_dī'.

The ensemble of examples is conclusive. We will cite for its *dignity and concision* this announcement of Psalm 30.

PSALM 30:1

[1] A Psalm, a song for the dedication of the palace – of David.

Musical notation for Psalm 30:1. The melody consists of a series of eighth notes on a single pitch, indicated by a bass clef and a common time signature. Below the notes, the lyrics are written: "miz_môr shîr ha_nou_kath ha_ba_yith le_da_david:". Below the lyrics, there are several musical signs: a fermata over the first note, a breve under the second note, a short vertical stroke under the third note, a long vertical stroke under the fourth note, and a breve under the fifth note.

5) FIVE MELISMAS OF THE FIRST SYSTEM ARE DISCONTINUED

The following melismas in the prosodic system are absent in the poetic books: l: .. P Q W. Upon reflection, this is not surprising. They figured in the *narratives* and the *exhortations*, either for directing the believer's attention to *key words*,



or for marking with *retrocession* certain occasions of an incidental clause,



or, on the contrary, terminating a word with the flourish of a panache.



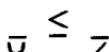
These means, these *artifices* we are tempted to say (*even though legitimate everywhere they are found*), have no place in the Psalter. The psalmodic cantillation is a *harmony* which *conjugates* with that of the words. Both blend their respective purity in order to support the special effusion of prayer. It is useless to employ devices in order to attract the attention of Him who knows everything! When all is said and done, the

presence of these melismas, authentic oratorical "structures" that they are, would be most *unusual* in the Psalms.

6) THE MEANINGS OF THREE NEW UPPER SIGNS: \leq , $\underline{\text{—}}$ AND $\overline{\text{—}}$

The three *new upper signs* used in the psalmodic system have *very different meanings* from those signs we have just discussed, which are excluded. Notably for the first two signs, these meanings are less characteristic, but more essential. The melody of the Psalms is even more unadorned than that of the narratives, but it is also more *musical* (at least from the perspective that the added notes, or the melismas, never aim for "effect," even if that of the prosody seeks only to serve the comprehension of the text). Two of these signs are melismas \leq $\overline{\text{—}}$; the other is but an appoggiatura $\underline{\text{—}}$. The intervention of \leq and $\underline{\text{—}}$ is nevertheless inseparable from the melody.

When the prosody is read without the upper signs, it sometimes maintains its "countenance." Here, if these two signs were *not identified*, then the verses containing them would be *inexpressive*, even though the lower signs are known to us! — and very rarely are the incidental clauses devoid of upper signs in psalmody. This is why this sign \leq in its location *above the words* was a *stumbling block* in the search for the meanings of the lower signs of the second system. Seeing that nine times out of ten it follows the *subtonic* (which was not yet identified) and is almost always followed by the 2nd degree⁷ in this composite grouping:



without knowing its signification, the musical phrase could not be reconstituted. It was a "dead letter."

There was no question of referring to the same sign located *below* the word \leq , to assimilate its meaning as a *leap* to the upper 6th. The melody in this case took on a disheveled aspect which is hardly its customary state (and to locate this 6th, it was still necessary to know upon which note to construct it, the meaning of $\overline{\text{—}}$ being yet unknown!). Only a fortunate concurrence of circumstances could permit the resolution of this dilemma. In a certain verse, allowing myself to be led by the powerful and descriptive inspiration of the melody, I intuitively rediscovered the meaning of this significant composite grouping, the ignorance of which shackled my research.

The reconstitution of musical phrases like the following example demand one's attention and push us to broaden our experimentation and when this only brings confirmation in countless scrutinized passages, it is with a sense of release that one finally prepares to gather in a prodigious harvest.

PSALM 27:5

[5] For He will conceal me in His tabernacle in the day of trouble.



We see here that this sign \leq really does represent a leap, but it is limited to the interval of a 4th



with an immediate return—integrated into the formula—to the basic degree from which it takes flight. And this occurs within the same syllable (which proves it is really a melisma).⁸ Thus the suspensive cadence on the 2nd degree, so frequent in the Psalms, is clothed with all its expressive power.

But when based on a completely different degree, the intervention of this formula is just as perfect.

PSALM 133:2

[2] It is like holy oil upon the head coming down upon the beard,



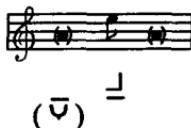
(even) the beard of Aaron, coming down upon the edge of his robes.



This example shows it is capable of enhancing the exquisiteness of the poetic text with such appropriateness (in spite of the oscillation of an octave it gives to the melody in this context), that it clearly appears that the sign has found its correct interpretation in this melisma.

It is rather surprising that this graphical sign was selected to symbolize a "spring" to the upper 4th when this sign (when located under the words) represents the basic 6th degree. Perhaps the answer is the same as for \cdot . It undoubtedly serves to make the reader conscious of the fact that he is dealing with the *psalmodic system*. Actually it really appears that the shapes and new interpretations of signs particular to the second system constantly guide the reader's memory in this sense.

$\underline{\smile}$ Less frequently employed than the preceding sign, this other sign $\underline{\smile}$ immediately poses an enigma (and all the more so when we have identified the preceding sign). Does it *really* represent an incursion to the upper 5th? In certain cases this seems impossible. It would necessitate aiming the voice at non-habitual heights! And we imagine it is perhaps subject to the same misinterpretation as \leq . And yet it is not. This sign, assimilable to \searrow or \swarrow , correctly represents, in its position *above the words*, a subordinate degree to the *upper 5th* (or its equivalent, as we will see).



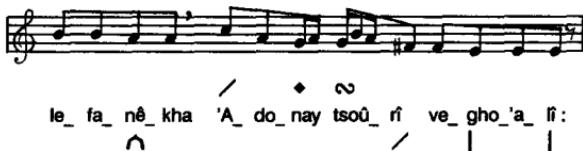
We have the proof in ever so many verses where it appropriately intervenes, without the slightest difficulty. In this example it expresses the sentiment of solemn devotion, in spite of its melodic leap.

PSALM 19:15

[15] Let / be acceptable / the words of my mouth and the thoughts of my heart



in Thy sight, O Lord, my rock and my Redeemer!



But then what happens when the *basic degree* which this sign affects is a *high* pitch already, as in the next example? The solution is very simple though perhaps not immediately evident: it then implies the *inversion* of the interval by which this "leap" separates itself from the basic degree—being to the *4th below* instead of the *5th above* (these being corresponding subordinate degrees)..



In this economy of symbols, the simple *inversion* justifies this unique sign—a skillful maneuver to be appreciated. And its efficacy again breaks through here. In this inverse direction as well as the other, it serves the expression of the written text; it does not constitute an ornament.

PSALM 3:1

[1] A Psalm of David—when he fled from Absalom his son.



How moving is this simple announcement, thanks to this sign's intervention.

Still more problematic is the search for the meaning of this last melisma, which also figures in the twenty-one books (the prosodic notation), but only seven times. That is why I did not treat it earlier in Book I. It occurs thirty times in the Psalms which allows an appreciable experimentation.

Its compact "zig-zag" shape reminds us of **chromaticism***.⁹ Considering the available elements for expression, which shows itself to be endowed with cautious means (as proved by diverse utilizations), it appears to be a movement from the *3rd below* the basic degree, returning to the same degree, passing through *two chromatic degrees*, the pitches of which, like the figuration, vary according to the mode.



Consequently it is composed of *three degrees*, corresponding to the *three projections* of the sign itself.

The following examples, each quite different in expression, testify to this. In every one, we discover the chromatic movement seems quite natural, as well as its ascending direction (it would be far different if the movement were the inverse). What profound objectivity this next phrase retains, even though favored with this melodic figure, so original in itself (auditively suited to the pictographical form of the sign).

PSALM 131:1

[1] O Lord, / is not proud / my heart, nor are / haughty

my eyes; nor do I involve myself in matters too great,

too high for me.

And how much conviction is evidenced in this next verse by the entrance of this same melodic figure, reinforced and stressed in order to serve the words!

PSALM 29:11

[11] May the Lord / strength / to His people / give!

May the Lord bless His people with peace!

It singularly pinpoints the abhorrent act, the consequence of despair, which is recalled at the end of the deeply tragic Psalm 137.

PSALM 137:9

[9] (How) blessed (is) he who will seize and dash



'ash_ rē shey_ yo_ ḥez ve_ ni_ pets
<

your little ones against the rock!



'eth- 'o_ la_ la_ yikh 'el- has_sa_ la':
| |

7) THE SIGNS TOGETHER, IN THEIR MULTIPLE COMBINATIONS, CONSTITUTE A PROOF IN THEMSELVES

In psalmody there is no example comparable to that offered by the *Decalogue* (cf. p. 147), where the signs, extremely close together and often superimposed, force adhesion, by the naturalness and quality of the resultant musical phrase, to the interpretations given by the deciphering key. Without constituting as spectacular a proof, the total rapport, in each of the psalms, between the musical figures and formula attributed to the various signs by the "key," speak just as much in favor of the correctness of this interpretation.

The equilibrium of the following melody attests this. The melismas, far from complicating the phrase when they occur, gracefully complete it.

PSALM 96:7

[7] Ascribe to the Lord, O families of the peoples,



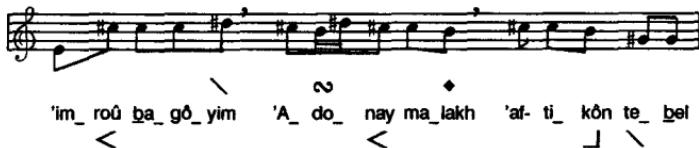
ascribe to the Lord glory and strength.



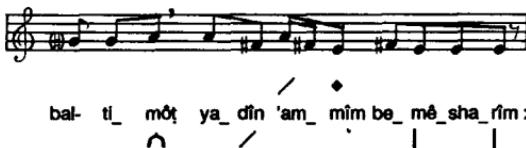
And the exaltation at the beginning of the tenth verse of the same psalm, which does not weaken while the signs become more infrequent (rather the reverse), confirms this.

PSALM 96:10

[10] Say among the nations: "The Lord is King! Firmly established (will be) the world,



and it shall not be moved! He will judge the peoples with equity."



This will be confirmed time and again in analogous situations, born every time from the relationship of the signs which succeed each other in various combinations in all the Psalms.

NOTES

¹ One of them is actually found in the first system, but with extreme rarity: £.

² Let us remember that psalmody, as opposed to prosody, has *regular* time values which take up the entire time (of the syllable) or divide it into equal parts (cf. p. 35). This is why we transcribe it here in **mensural*** notation.

³ This sign ♦ is actually placed over the final letter of the last syllable of the word '*Adonay*'.

⁴ The rules for resolution of the added notes are practically the same in psalmody as in prosody (cf. p. 393ff).

⁵ The meanings correlate thus: this sign marks the only appoggiatura to the lower 2nd in psalmody.

⁶ This is an exceptional case. Undoubtedly, for non-musical, religious reasons, the same sign also figures in the same places *below* the text. [In manuscripts ♦ appears as a simple dot. This verse, alone in psalmody, contains the "extraordinary points" found in several verses of the twenty-one books (which, like ♦, appear in manuscripts as simple dots). Moreover, it is the only verse which has dots above *and* below the word. Is it possible that these three dots above the word in this Psalm truly are melismas—and that, sometime in the distant past, they were confounded with the "extraordinary points" below the word? The alternative—that none of these points are cantillation signs, as scholars think—gives us a coincidence found nowhere else in the Bible; here alone does an interpretation of the upper signs as melismas give a sensible (and eminently expressive and appropriate) musical interpretation of the word they affect (and, moreover, give the rest of its verse all its value).—Ed.]

⁷ This sign is identified in the first system.

⁸ This particular "return" is actually justified by the etymology (cf. p. 97).

⁹ The etymology of this sign confirms this supposition (as we have already seen).

CHAPTER III

THE MODALITY OF THE PSALMODY —MINIMALLY VARIED

— Summary —

- 1) A chromatic Hypodorian (our "classical" minor) without a constitutive augmented 2nd 350
- 2) The Lydian, a limited "major," containing other characteristics 353
- 3) A mitigated Lydian: its 6th degree is minor 355
- 4) A Hypodorian with a pronounced chromaticism—a central augmented 2nd 356
- 5) Sometimes the mode changes in the middle of a psalm;
there are few accidentals 359
- 6) The neutral modal feeling of certain verses 362
- 7) Certain expressions of unknown meaning do not concern the modality 364

1) A CHROMATIC "HYPODORIAN" (OUR "CLASSICAL" MINOR) WITHOUT A CONSTITUTIVE AUGMENTED 2ND

We begin our analysis of the modality of the Psalms with the "chromatic-minor," the principal support of the psalmody. We have already sketched its characteristics (cf. pp. 326-327). It is an incomplete, **gapped scale*** of *seven degrees* with its 7th degree *one half-step* below the tonic; the *absence of the lower 6th degree excludes* the augmented 2nd between the constituent intervals. It is a mode derived from the *Hypodorian* (diatonic), which we transpose (as we will do for the other modes) to the D#-C scale in order to standardize our examples.



This mode is *chromatic*, as theory confirms. It is confirmed in practice as well, for as soon as the *upper 7th* enters (reached by an appoggiatura or melisma), the characteristic interval of the augmented 2nd between the 6th and 7th degrees appears. It also occurs in the lower register (an admittedly rare circumstance) when the 6th degree is attained, before or after the 7th. That it is actually a "*chromatic-minor*" is confirmed, even when the melodic movement is descending, initiated by the 8th degree, as in the following example.

PSALM 137:3

[3] For there / demanded of us / our captors / to recite songs

ki sham she_e_loû_noû shô_bê_noû dib_rê_shîr

The beauty of the phrase, as much as the correctness of the expression, are evidence of this.¹

In reality, this is an "*incidental*" chromaticism more than a foundational one. Certainly, such structures are chromatic, but the *tension* created in our "classical" music by the attraction that the tonic note exerts over the **leading tone*** and which provokes the augmented

2nd between the 6th and 7th degrees pulling the melody to the tonic, *does not exist here*. This is, without a doubt, the fruit of another way of thinking.

We just saw the perfect proof that this scale structure is able to suit the character of the Psalms. The melody which arises from it is intimately wedded to the expression of choking grief in Psalm 137. But it is propitious to many other kinds of expression. With equal ease it describes the sentiment of unfailing confidence, as in the next example.

PSALM 23:5

[5] You prepare / before me / a table in the presence of my enemies.

This verse would be deprived of all its expressive significance if the augmented 2nd were removed.

As soon as the chromaticism appears—even if this characteristic interval is not as its basis—the structure reveals itself admirably appropriate to the particular ***ethos**** of the verbal text.

PSALM 130:2

[2] Lord, hear my voice.

In reality this is the *characteristic mode of prayer*. Structurally speaking, the two half-steps marking the boundaries of the **gapped scale*** have the effect of *tightening, drawing together* its degrees in its capacity to express sorrow, contemplation and expectation.

These outer half-steps are like the edge of a broad-mouthed "sacred chalice"² for sacrificial offerings, for holy anointing oil.

PSALM 131:3

[3] Let hope / Israel / in the Lord, from this time forth and forever!

In Psalm 150, which limits the scale by yet *one more* degree in the lower register, the **Hypodorian*** (this time diatonic) becomes the generator of enthusiasm (cf. Postface).

PSALM 150:6

[6] Let everything that has breath praise the Lord! Alleluia!

One should not imagine by this that the use of the augmented 2nd darkens the expression. Here, in this next example, it is the messenger of scrupulous, humble, yet totally filial faith.

PSALM 19:14

[14] Even more from presumptuous sins / keep back / your servant;

let them not rule over me; then I shall be blameless.

Although this mode is so familiar to us, it is remarkable that the ancient "Masters" assigned specific melodic configurations to it which sound new to our ears, with an expression so varied, so original, and so profound. The same is true of the other modes employed by the Psalms.

2) THE LYDIAN, A LIMITED "MAJOR," CONTAINING OTHER CHARACTERISTICS

Even though it has the *same structure*, how much the ancient **Lydian*** differs from our "classical" **major*** mode, which in our time has become synonymous (or nearly so) with *banality!* The melodic terrain of the ancient mode simply does not compare. The **gapped scale*** limits the basic degrees to the *6th degree* above the tonic. The remaining notes in the higher register occur only through the "added notes." But, considering the given melismas, there is no *conjoint ascending movement from the dominant to the tonic*, which is the characteristic formula of the "classical" major.



The 7th degree precedes the tonic only in the *lower register*, and (as we have already stated) it never proceeds directly to it.

The frequently cited dynamic drive of the major mode—the mode which for centuries reigned over Occidental music—is not the essential characteristic of the ancient **Lydian*** mode (yet which is closely related to the major mode).

Major mode



Gapped Lydian



(transposed to the scale degrees adopted for our examples)

This mode, "truncated" though it is, is nonetheless an important "sound mold" from which springs melodies translating the spontaneity of heart, united with the elevation and purity of the verbal sentiments. This is brilliantly demonstrated by Psalm 122, a "Song of Degrees" which distinguishes itself from the other Psalms so designated by its mirthful grace. The "degrees" here are those of *ascent* towards Jerusalem, the beloved city of the faithful of Israel!

Through the revealed mode blossoms a vibrant, "virginal" faith that no other mode could so fully express.

PSALM 122:4

[4] To which / go up / the tribes, the tribes of the Lord,

The musical notation consists of a single staff in G major. The lyrics are written below the notes, with some syllables underlined and arrows pointing to specific notes. The first line of lyrics is "shesh_sham 'a_ loû she_ba_tîm". The note "loû" has an arrow pointing to it from above, and the note "she_ba_tîm" has an arrow pointing to it from below. The second line of lyrics is "shib_tê_Yah", with "shib_tê" having an arrow pointing to it from below and "Yah" having an arrow pointing to it from above.

(according to) the ordinance for Israel, to give thanks to the name of the Lord.

The musical notation continues on a single staff in G major. The lyrics are "e_ doûth le_ yis_ra_ 'el le_ ho_dôth le_ shem 'A_ do_nay:". There are several arrows pointing to specific notes in the melody corresponding to the lyrics.

Mirthful as befits Psalm 122, the Lydian mode translates equally well a lucid reservedness in this next example (here again, a propitious mode despite the gravity of the thoughts, given the "rural" context of the Psalm).

PSALM 8:5

[5] What is man that You take thought of him? The son of man, that You care for him?

The musical notation consists of a single staff in G major. The lyrics are "mah_ 'e_ nôsh ki_ thiz_ ke_re_ nou_ ou_ben'a_ dam ki_ thif_ qe_den_noû :". There are arrows pointing to specific notes in the melody corresponding to the lyrics.

What a palette this **mode*** possesses! In Psalm 96:10 it reflects the warm expression of a faith which cannot be uprooted, one which cries out its conviction.

This demonstrates that the "major" mode has not (as one would tend to believe) exhausted its resources. Long before it was in the service of Occidental musical thought, it was capable of being noble, sensitive, efficient, with a minimum of permitted inflections and its reduced orbit.

Our thoughts shape the "dough" of sounds more easily than the potter shapes the clay! All that is necessary is that the melody correspond to a truly personal sentiment.

3) A MITIGATED LYDIAN: ITS 6TH DEGREE IS MINOR

Perhaps the reader thinks that the presence of "major" and "minor" is rather unusual in a monody *born before musical notation*, over two millennia ago. But on closer examination, what can one normally do with seven notes, except raise or lower them by half-steps? If a seven-note scale, with little modification in its structures, gives itself to the expression of such diverse, unusual sentiments, it is precisely because the usage of "effects" is so completely *reserved*.

It would seem the Hebrews sensed the weakened, sweeter character which the Lydian can possess if its 6th degree is lowered a half-step, at a minor 6th from the tonic:



With its major 3rd and its minor 6th, this familiar mode, (sometimes called "major-minor"), suits the reserved "effusion" of the Psalms.

Its presence is justified by the fact that in order to correctly serve the word it supports, the *3rd degree* really should be *brilliant* (and therefore a *major third* from the tonic); whereas the *6th degree* (another characteristic modal note), *does not need to brighten* the word it accentuates and thus, the gleam of "major" is inappropriate.

This is the case in Psalm 133. Reasonably, this mode is the best structure to choose from in the palette of equivalences for melodically "situating" the highly characteristic expression of the verbal text.

PSALM 133:3

[3] for there / has placed / the Lord the blessing – life forever.

ki sham tsiv_ vah 'A_do_ nay 'eth- ha_b_ ra_khah hay_yim 'ad- ha'_o_lam:

^ \ / ♦
< _ \ _ / |

The same is true in Psalm 134 where we sense a restrained, yet vibrant expression of faith.

PSALM 134:1

[1] Behold! bless the Lord, all (you) servants of the Lord

hin_neh bar_khoū 'eth-' 'A_do_nay kol_ 'ab_dē 'A_do_nay
(/) < | _ \ _ ^

If the 6th degree were *raised a half-step*, the exhortation would become too positive in the inflection of the following words: "You who serve by night in the house of the Lord." A "major" 6th would be too "brilliant."

The same text incorrectly interpreted

[1] Behold! bless the Lord, all (you) servants of the Lord

hin_neh bar_khoū 'eth-' 'A_do_nay kol_ 'ab_dē 'A_do_nay
(/) < | _ \ _ ^

It is from similar considerations, *carefully analyzed and compared*, that the delicate determination of the choice of mode is finally born.

4) A HYPODORIAN WITH A PRONOUNCED CHROMATICISM —A CENTRAL AUGMENTED 2ND

Quite different are the correlations announcing the presence of another very special mode: the "minor" with a *central augmented 2nd*:

T Aug.† 2nd

On the whole, the degrees comprising this mode are identical to those for the chromatic-minor save one, *the 4th*, which is raised a half-step. The *gap* created by the augmented 2nd separating the 4th from the 3rd degree is a "peak" to which the 4th mounts in relationship to the third, "notches the edge" of the words, thereby outlining them in vivid relief.³

This is the mode of Isaiah 11:1-9, as we mentioned earlier (cf. p. 228). Although in psalmody there is no question of visions or inflamed exhortations of inspired men as justification for this harsh, abrupt structure, the majority of the texts which call for its use are vigorous, peremptory, and majestic. They testify and proclaim the sovereignty of the one God.

This is the mode of Psalm 93. The transcendent majesty of the God of the universe is fittingly described in its successive verses.

PSALM 93:1

[1] The Lord reigns! with majesty He is clothed;

'A_ do_ nay ma_lakh ge_oûth la_ besh

has clothed himself / the Lord / with strength, and girded himself!

la_ besh 'A_ do_ nay 'oz hith_ 'az_ zar

PSALM 93:3

[3] Have lifted up / the floods / O Lord, have lifted up / the floods / their voice,

nas_oû ne_ha_rôth 'A_ do_nay nas_oû ne_ha_rôth qô_lam

lift up / the floods / their pounding.



Everywhere the 4th degree is used, it calls for a "high-tone" accent. A perfect 4th would bring only platitude to the inflection of the verbal context.

An incorrect interpretation of the end of the preceding verse

have lifted up / the floods / their voice, lift up / the floods / their pounding.



Should one accredit a mediocre, even banal interpretation, under the pretext of simplicity? Why would one deny the power of expression equivalent to the text possessed by a simple modal nuance? All the more when the phenomenon is repeated throughout an entire Psalm!

We know that this primitive structure is not rich in technical means at its disposal. It is obliged to exploit the easiest means of utilization. Psalmody is not *symphony*! The effect is chosen among the possibilities offered by the norms of the period. The goal is achieved through these simple means; we can only comply and admire.

Psalm 29, with its abrupt text woven of *chiaroscuro*⁴ visions, calls for this structure also. The superscription is an exception (it is in "minor"). From one end to the other, the mode is justified and demanded. Here again, without it all effect would be lost; with it, the music underscores and exalts the power of the words.

Through this specific mode justified by the words, the psalmody of verse 7 undeniably and astonishingly depicts the strange shapes of flames (cf. p. 338). Also through it, the exclamation textually formulated in verse 9 becomes an imposing reality.

PSALM 29:9

[9] The voice of the Lord makes / to calve / the deer, and strips the forests bare.

So striking is the psalmody of this Psalm 29 in the fact that it literally weds with the highly unusual text, making the ensemble a case by itself, a realization of a *romantic genre*, all grandiloquence excluded.

5) SOMETIMES THE MODE CHANGES IN THE MIDDLE OF A PSALM; THERE ARE FEW ACCIDENTALS

Certain psalms, from the start, find themselves musically explicit by the easy discovery of their mode. For certain others, the mode is not revealed until the various structures are tested. Everything does not always go together simply.

Sometimes, through the right choice of a clearly appropriate mode, the beginning of a psalm clothes itself in a beautifully perfect melody possessing an expression beyond our highest expectations, faithfully serving the meaning of the words. Then this marvelous cooperation deteriorates. The musical phrase becomes abnormally banal or caustic, no longer corresponding to the verbal text.

In these psalms the modality *does not maintain the same structure*. Certain modes may either follow each other or alternate from section to section. Fortunately, these cases are rather rare; the determination of the points of change is particularly complicated.

A *change of mode* is required in Psalm 24, but this is confirmed by the form of the poem itself (which is written in two sections). The first section is perfectly served by the **minor mode***⁵. Here we present the end of that section.

PSALM 24:6

[6] This is the generation of those who seek Him, of those who seek Thy face
—(even) Jacob, Selah!

zeh dōr dor_shav me_baq_shē fa_ nē_kha ya_ 'a_ qob se_lah:

\ / | \ / \ / | \ / | \ / | \ / |

Without any transition we begin the second part, to which neither the **Lydian*** nor the habitual **Hypodorian*** responds. In these modal structures the majestic text would become *crushed* by an unbearable banality. But when the 4th degree is *raised*, the spell is broken and the divine majesty shines forth.

PSALM 24:7

[7] Lift up / O gates / your heads, and be lifted up /

se_ 'oū she_ 'a_ rīm ra'_ shē_khem ve_ hin_ nas_ 'oū

< \ / | \ / \ / | \ / | \ / |

O doors / ancient, that / may come in / the King of glory!

pith_ hē 'ō_ lam ve_ ya_ bō' me_lekh ha_ ka_ bōd

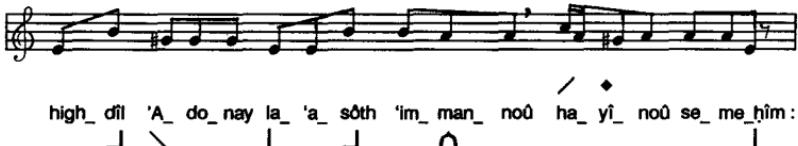
\ / | \ / | \ / | \ / |

Notice that it is not a question of "taste" which is more or less debatable, but *imperatives* to which the composer has the obligation to comply. To *neglect* them is to fail to cooperate with the *message* of the poem. All the Psalms show that this is the *primary concern* of the creators of this cantillation.

There is no doubt that Psalm 126 contains these changes. The beginning is in *major-minor* up through verse 3.

PSALM 126:3

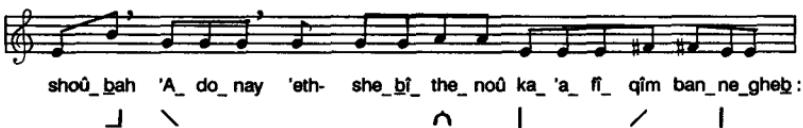
[3] Great things / the Lord / has done for us; we are glad.



But the "minor" is called for in verse 4, even though the theme is the same as in the preceding verse. For if the mode were unchanged, how would the sudden sadness of the words be translated?

PSALM 126:4

[4] Restore, O Lord, our captives, like the streams in the southern desert.



This sort of alternation between modes is not limited to our Western music (in which "major" and "minor" modes are commonly alternated). We know the melodies of Iran (constructed according to the Sumerian theory of music) were classified as "major" and "minor" in the 10th century C.E.⁶ Such alternations of mode, therefore, may well have been performed by earlier Oriental musicians.

Sometimes certain alterations (accidentals) will appear to be necessary within a given verse in order to reinforce the expression of a word. The scale degrees subjected to this brief alternation are the 4th (normal or augmented) and the 3rd (major or minor). Long before calling for such changes, it is normal to refuse their entry until the monody benefits naturally and beautifully from them, without the unity of the whole being compromised. These modal alterations undoubtedly demand a deeper study of each Psalm.

It is undoubtedly in this manner that the melody for the following verses was conceived. Through these delicate nuances, it responds all the better to the requirements of the text.⁷

PSALM 54:5

[3] violent men seek my life;



not / they have / for God / any thought. Selah!



To not take into account these sensorial necessities would be to allow the music to deteriorate in these unusual spots, whereas a simple nuance reestablishes the beauty and efficacy of the cantillation.

6) THE NEUTRAL MODAL FEELING OF CERTAIN VERSES

Having briefly considered these different modes, it is interesting to stop an instant at a compositional device capable of economizing and renovating the effect of a mode. It occurs in passages where one or more characteristic modal degrees (the 3rd, 6th or other degrees, as we have already noted) are not present. The temporary exclusion of such degrees constitutes a respite, a "truce," considering the adhesion they demand. A sort of "virginity" to the ear results that cannot be disregarded in a monody having but one tonality (and consequently is without the least modulation in the musical sense). The receptivity to the modal influence finds itself heightened by this. One finds this in many psalms.

This structural neutralization can also provoke an expectancy. By its very neutrality it accentuates the reservedness often marking the superscription of a psalm. This is particularly sensible in Psalm 100, all the more in that it is maintained in the real beginning of the poem: "*Shout joyfully to the Lord.*" It is thus the generator of restrained emotion.

PSALM 100:1

[1] A Psalm of Thanksgiving—Shout joyfully to the Lord, all the earth!

miz_ mōr le_ thō_ dah ha_ ri_ 'ōū la_ do_ nay kol_ ha_ 'a_ rets:

This restraint also marks the second verse.

PSALM 100:2

[2] Serve the Lord with gladness; come before him with joyful singing.

'ib_ doū 'eth- 'A_ do_ nay be_ sim_ hah bo_ 'ōū le_ fa_ nāv bir_ na_nah:

This peaceful exhortation actually occurs without the use of the remaining characteristic degrees. Thus, when the *major* mode finally appears, after such preparation, it serves the text all the more warmly and efficaciously.

PSALM 100:3

[3] Know that the Lord Himself (is) God.

de_ 'ōū ki_ 'A_ do_ nay hoū 'E_ lo_ him

7) CERTAIN EXPRESSIONS OF UNKNOWN MEANING DO NOT CONCERN THE MODALITY

We have furnished a view of the modality of the Psalms as a whole, as they are reconstituted by the deciphering of the signs of Tiberias. How richly instructive is this examination! But no one until now was capable of undertaking such research, and for good reason! Furthermore, it is not surprising that certain persons have wanted to attribute a modal significance to the various expressions found in the Psalms, since they are otherwise incomprehensible. These suppositions are without foundation. Certain indications found in the superscriptions of the Psalms, like "the silent dove in the distance" (Psalm 56), "the hind of the dawn" (Psalm 22), "the lily of the testimony" (Psalms 60, 80), *do not concern the modality*. We now have the proof; the musical reconstitutions presented here attest this. We will return to this point in the following pages (cf. pp. 419-420).

The same is true for the word *selah* frequently encountered at the end of verses, a mysterious word for which many hypothetical interpretations have been given (some are rather extravagant!). The idea that this word signified a musical rest motivated by an *adjustment of the stringed instruments* in order to change modes must be eliminated. *Selah* actually appears where the modality of a psalm cannot be the least bit concerned. What is more, it also appears *at the end of a Psalm*, which renders this supposition erroneous!

The present reconstitutions show that this term in no way detaches itself from the syntax of the ensemble, but rather affirms it.

PSALM 46:8, 12

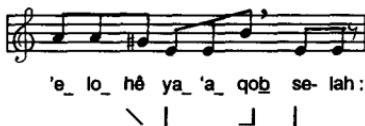
[8, 12] The Lord of Hosts (is) with us; a stronghold for us

/ ♦

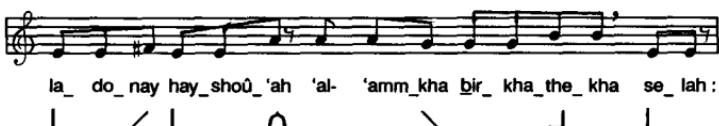
'A_ do_ nay tse_ ba_ 'oth 'im_ man_ noū mis_gab_la_ noū

_ _ _ _ ^

(is) the God of Jacob! Selah!

**PSALM 3:9**

[9] To the Lord (belongs) salvation! upon Thy people (be) Thy blessing! Selah!



Such is the observation that we can now make concerning this word. Clarified by the music, its sense is a little less hidden.

NOTES

¹ Without the augmented 2nd they disappear.

² In French, "coupe parfumée" ("perfumed cup").

³ In French, "arêtes vives"—literally "live angles"—being architectural ridges, mouldings and vaultings.

⁴ An Italian term: "light-dark" contrasts in pictorial art, omitting the various colors.

⁵ The majestic expression of the poem as a whole, and other musical considerations, give this mode the preference.

⁶ "Through the history of instruments, we know that the Persians were the inheritors of the Sumero-Babylonian tradition." Again, the authors inform us that during the epoch of El-Farabi (10th century), "all vocal music was divided into two kinds: melodies à *vosta'* and melodies à *bincir'*—that is to say, they contained either the minor 3rd or the major 3rd." Barkechli, "Histoire de la Musique," *Encyclopédie de la Musique* (Delagrave), vol. i, p. 462.

⁷ The same musical phrase is repeated in verse 6 with the same remarkable nuance.

CHAPTER IV

A VERY SIMPLE USE OF RHYTHM —DELICATELY MEASURED

— Summary —

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| 1) The discovery of a psalmodic "meter" | 368 |
| 2) The melismas insert themselves, respecting the equality of
the syllables | 371 |
| 3) The duration of the caesuras is itself measured | 373 |

1) THE DISCOVERY OF A PSALMODIC "METER"

The equality of the successive syllables

No more than does the first system, the psalmodic system contains no indication concerning rhythm. However, as in the prosodic system, *a specific kind of rhythm* emerges from the restored psalmody. It is not immediately self-evident; it is *deduced* once the meaning of the signs is revealed. Much trial and error, fraught with uneasiness, is necessary; for, when badly interpreted rhythmically, the melody appears deformed.

Finally, after numerous psalms are reconstituted, the reality takes shape. The rhythm of psalmody is really quite different from that of prosody. Prosody did not tolerate "fetters." It consisted in the transposition, within the duration, of a hierarchy of time values comprised of syllables, words and incidental clauses. The length of time vested in each of these was a function of its proper dynamic drive. It resulted in a flexibility of delivery which assimilated the cantillation, although musical, to a simple "elocution." In interpreting the psalmody in like manner, it soon becomes obvious that we have taken a wrong turn until we discover the particular law, implicit but unchangeable, that rules over the psalmodic cantillation: the equality of time values for the successive syllables throughout the verses.

A *measured* time value, of which the *syllable* is the unit, is the basic rule that must be respected in order to give to the musical meanings—the legacy of the notational system of the poetic books—their complete efficiency.

This is a **meter***, one would say, but far different from ours! The meter which we use is the result of a spectrum of proportional time values (based on relationships of groups of twos and threes). This elaborate rhythm is the *cornerstone* of all our musical architecture. The Greeks based their meter on the much more limited combinations offered by the "long equal to two shorts" (cf. pp. 192-193), an already highly developed rhythm. The meter of the Psalms is the most unobtrusive of all: a plain, even setting, but marked out by a cadence of single time units of equal time values, proportional to the delivery of the syllable. There is no predetermined alteration of strong counts and weak counts. *Equality and homogeneity of the succeeding time values are the bases of the meter of the Psalms.*

Upon a first "simplistic" glance, this basic fact offers the superiority, applied to sacred music, of not attracting attention to secondary contingencies. Only the poetic utterance dominates, conceived for prayer.

The Hebrew language is rhythmic by nature. But this natural rhythm is *laid aside* in oriental poetry, where syllabic evenness proves to be propitious to giving full worth to the contents of the poetry: the harmonious interrelationships of the words (which particular euphony is the "music" of the poet), and also the interrelationships of incidental clauses or phrase members in the middle of the verse.

The poetry of the Psalms is not a "game" as is ours today; it simply brings into play various means cooperating together to make the syntax prominent. The rhythm is created in relation to this, effacing itself in order to serve the words.

Thus, the *parallels* from which is woven Hebrew poetry are thrown into relief by this uniformity. The syntactical life bursts into flower, as freely as in prosody, through this *reassuring evenness* which releases the believer from the contingencies of the world of action, from which prayer turns away. In fact, one would almost be in the setting of this conventional rhythm by reading (without singing) the Psalms with an even syllabic delivery. The initiated readers did so, and some still do so today.

The rhythm of oriental poetry favors psalmody. Against the backdrop of equal syllabic time, the expressive syllables of the words are highlighted by the appropriate intonations. The result is a well-balanced, yet asymmetrical rhythm whose charm continues, even when the melody is deprived of its customary component, the melisma.

PSALM 130:5:

[5] I hope in the Lord, full of hope (is) my soul, and in His word I trust.

qiv_ví_thí 'A_do_nay qivv_thah naf_shí ve_lid_ba_ró hó_hal_fí:

Does not the ensemble of melody and words, constituting this phrase, possess the rhythm which befits it? Is the regularity of syllabic time here an "impoverishment"? On the contrary, is not this equality of

time *required*? Can we psalmody this verse with varying time values, without compromising its intimate confession?

Would this remembrance of Jerusalem, for the safety of its people, tolerate an elaborated metrical setting in this melody?

PSALM 122:8:

[8] For the sake of my brothers and my friends, I will now say, "May peace be within you."

The same is true in other psalms when there are no intervening melismas. The regular syllabic rhythm, without symmetrically deposited beats, *weds* with the exceedingly flexible cadence suggested by the dynamic accent. Consequently, the cantillation does not "lattice" the poetry; the melodic design, working in a different matter, seeks only to give the poetry its full value.

Responding to its objectives, this method, exempt of intentions deviating from the context, makes the particular "savor" of each verse stand out.

PSALM 126:5:

[5] Those who sow in tears, with joyful shouting / shall reap!

But let us remember that up to this point we have only set forth that which constitutes the *skeletal structure* of the rhythmical life of the verse. When this simple, unadorned rhythmic cadence occurs, it is purely a *temporary lull* in the rhythmic movement breathed by the words and the *melismas*.

2) THE MELISMAS INSERT THEMSELVES, RESPECTING THE EQUALITY OF THE SYLLABLES

That the *evenness of syllabic time values* is the foundation of this rhythm does not mean that it restricts itself to this exclusively, even if the effect obtained by this very modest procedure avers itself to be efficient. One must take into consideration the *melismas* which so intimately join (as we have already observed) the solid texture formed by the constituent degrees. These melismas do not intervene for the purpose of impairing the even flow of the text's delivery. On the contrary, each one *finds its place* within the allotted duration of the syllable it accentuates, *without ever prolonging it—another fundamental principle of psalmodic rhythm.*

To be liberated from the "beat" would actually *dislocate* the unity of the poetic verse. The equality of the syllabic time must be its basis. That is why the Song of Solomon has to be *mensural*.¹ This is not the case in prosody, as we must point out yet again. In prosody, the melismas, by their contour and their own particular rhythm, set off the syntactical aspect of their intervention. (We already explained this on p. 299.) One might call these *oratorical* means. They delicately *nuance* the very duration of the syllable they "clothe;" they divide it up into the respective durations of their terms, for the better expression of the verbal text. Psalmody *demands a respected cadence*; but this is not rigidity!

Let us immediately reveal the profound reasons for this discipline. It is to *God* that the believer addresses himself in the Psalms; or rather, it is with his face towards God that he addresses his brothers. *Oratorical means* do not befit the personal expression of oneself before the Creator. The psalmody plays down its own charm (an ancestral particularity of "incantation"); the attitude of the cantor, here, remains reserved. Thus the poetry pours forth *in a preserved ordinance*, and the purpose of the prayer is achieved.

This is highly evidenced in the following verse, where the supplication is unhesitatingly persuasive; the established "measure" is completely unaffected by it.

PSALM 5:5:

[5] For You are not a God who takes pleasure in wickedness; not / with You dwells / evil.

When melismas occur, their designated duration will be the same, being that of the affected syllable, equal to that of its neighbors. It would seem that the phrase would appear somewhat encumbered by this, but this is not the case. We can observe this in the following example.

PSALM 27:9:

[9] Do not hide Your face from me; do not turn away / in anger/ Your servant.

The syllabic time is parcelled out *equally* by the terms of the melismas. *It is never prolonged or doubled.* This rhythm is quite effectively "measured." The "balancing effect" created by the subordinate rhythm appropriately transpires in intentionally double or triple rhythmic time values. Never overburdening the expression of the text, it befittingly underscores the meaning of certain words.

We will see shortly that modest impulses such as those above are capable of being descriptive, just as certain symmetrically cadenced rhythms of our Western musical foundation. But they are *light nuances*, adapted to the poetic context. It is evident that this form, if it is the simplest of forms, is much more efficient than one would have supposed. Reservedness is its law; appropriateness of its interventions, its secret.

3) THE DURATION OF THE CAESURAS IS ITSELF MEASURED

In these two laws we have just cited reside the essentials of the rhythm of the Psalms. They give to the psalmody its sacerdotal meaning and even its *originality*. Presented otherwise, the psalmody is denatured. And the proof of this, still more complete, is in the next chapter (cf. pp. 389ff). It remains to speak here of the **caesuras*** and the length of time which must be given them in the various steps of poetic discourse. *This duration is also "measured"*, but diversely so in the different poems.

Some Psalms have, at the end of each verse, a rest equal to *twice* that of the syllabic time value. Most, however, have only "one-beat" rests at this point. *In any case*, there is always a rest there. It is the melody itself which calls for a rather long *measured* caesura at the end of the verses. In principle, its duration does not vary throughout the entire psalm.

That this rest is "measured" is a certain fact. That it corresponds to one or two "time units" ("syllabic" time units) is more an intuition than a result of any particular calculation. It is the *musical sense* which evaluates. Sometimes a solution is obvious, but at others it remains tangent, in which case the resolution taken obviously becomes secondary.

In these pages we present only excerpts generally limited to a single verse, which procedure does not allow for experimentation. Confronted by a complete realization, the relationships of the ensemble are comprehended and contribute to the determination. The *rests in the middle of verses* are themselves *revealed* by the trained ear. In general they have a duration equivalent to *one syllable*.

In certain psalms, however (or in a well-defined section of a psalm), *entire verses* are psalmodied without interruption. If we do not respect this latent rule, the phrase is divided for no purpose and its momentum is broken.

PSALM 19:2:

[2] The heavens are telling of the glory of God,

hash sha ma yim me sap rim ke vod el
/ | ▲

and the work of His hands / is declaring / their expanse.

oū ma a seh ya dāv ma gīd ha ra qī a:
| / | / | |

It is quite obvious in this example that the music, which sticks so closely to the poem, nevertheless demands that the two hemistichs not be separated. The propositions are too melodically bound to each other. The verbal syntax here in this psalmody is certainly respected and enhanced, but one can see here that this is through the *medium* and *in the wake of* the music! The same is true for Psalm 29:1 (cf. p. 345) and others.

In paging through this section of the book, the reader will see our affirmations justified. Spoken reading gives free rein to the interpretation; the psalmody requires *proportional rests*.

It is true that the sign \wedge often marks a measured rest, but this is not always the case (as we have already noticed). Even when the verse is comprised of three parts, it is not always the part with this concluding sign which exclusively carries a rest. It is the music which decides.

Finally, even though a verse may have several well-defined propositions, a measured rest may not be desirable.

PSALM 96:13:

[13] Before the Lord, for He is coming, for He is coming to judge

the earth; He will judge the world in righteousness,

and the peoples in His faithfulness.

In these cases, of course, a short breath will necessarily be taken within the time value of the last syllable of each incidental clause. We repeat, these modalities are not always imperative. But whatever determination is taken, these "resting points" are always *circumscribed by the regularity of syllabic time*.

We know that the Greeks themselves marked the end of phrases in their poems by rests of one or two beats (these being carefully notated), *but it was Greek rhythm which "ruled" the poem.²* It is altogether different in the Psalms. Seeing that in them these determinations are born from the aspect of the monody, taking into account the words which it supports, the fact that such rhythmic signs are absent is without importance. The reconstitution suggests the length of the "interruptions," for the good equilibrium of the vocal flow (*but their time value remains measured*).

At the end of this chapter it is fitting to remember that the ancient psalmody of the Hebrews was generally performed by a rather large ensemble of singers and instrumentalists (cf. p. 114). The evenness of observed time values (made sensible through the power of this psalmody) really had to be the condition *sina qua non* of its impeccable performance; whereas the freedom of vocal delivery in prosody finds its *raison d'être* in the fact that only one reader was responsible for its performance! This unexpected justification is most appropriate here³.

NOTES

¹ Despite the fact it is annotated with the prosodic system of notation (cf., e.g., pp. 150, 291, and 459). Cf. Postface.

² Its principle, we repeat, was simple or double time, contrary to that which is revealed here; the Greek art of poetry was "subjugated" to its rhythm.

³ This comment is equally valid for those psalms sung by soloists; these too had an instrumental accompaniment.

CHAPTER V

THE SYNTAX OF THE PSALMS

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1) TONAL FRAMEWORK AND MELODIC CONSIDERATIONS

a) A structure very close to that of prosody, but not equivalent

Despite having the same structure as prosody, psalmody clearly distinguishes itself from it. It has in fact the same *framework*, utilizing the *same scale*. But first of all, this scale, *reduced to seven fundamental degrees rather than eight*, does not constitute the same foundation. We have already mentioned this briefly at the beginning of our examination of the psalmodic system (cf. p. 327).

Extending thus from the **subtonic*** note to the 6th degree above the tonic, not only is the analogy between these two outer degrees eliminated, but with the scale's limitation to only one note below the tonic, melodic possibilities in this lower direction are greatly limited. Certainly the characteristic linkage of the 6th degree to the 7th is not destroyed, since it occurs in the upper register when the subordinate degrees are called into play. But the conditions are different; the melodic movement *does not lead to the same cadences*.

With the 7th degree at one half-step from the tonic and the 2nd a whole step away, this characteristic structure of psalmody (always present regardless of the mode used) is the inverse of the customary structure of prosody.



This particularity helps to differentiate them.

Apart from this, both systems contain the same *tonal notes*, the 1st, 5th, and 4th degrees (the 4th being rarely altered); and the same *modal notes*, the 3rd and 6th degrees. The modes employed never leave these norms. They are built on these stable foundations.

With its scale reduced by one degree and with the same penury of available means at its disposition, psalmody constitutes a new game for us, for not only is it capable of totally differentiating itself from prosody, but furthermore, it surprises us by the richness of expression it deploys in its unique orbit of praise and prayer.

b) Resting points of less diversity

It is important to understand how the psalmody "articulates" itself in comparison to the prosody, in order to grasp the basis of its originality. The "articulations" of a monody are its *cadences*,* both *suspensive* and *conclusive*. They *motivate* its *form*; the sounds in every musical phrase and every incise take their value only as a function of these endings which they precede and highlight. Because of the poetic character of the psalmody, the disposition of the diverse cadences plays a primary role. Let us consider this first of all from a purely structural point of view. The terminal cadence of the verse invariably takes place on the 1st degree;¹ the others, suspensive, have less diversity than those sprinkled throughout the prosody.

The principal suspensive cadence, the "half-cadence" on the *4th degree*, is an accentuated inflection, representative of ancient thought, and is *present in the majority of verses*. Sometimes alone, it then characterizes the sanctified composition of the poetic verse in two hemistichs.

PSALM 30:4

[4] Sing praise to the Lord, you His godly ones; give thanks to His holy name.
half, cadence

The musical notation consists of a single staff in common time with a treble clef. It features a series of eighth and sixteenth notes. A vertical line with a diagonal stroke marks the half-cadence. Below the staff, the lyrics are written with vertical bar lines under each syllable. The word 'do' is circled, indicating a primary inflection point. The lyrics are: zam_m_ roû la'_ do_nay ha_sî_ dâv ve_hô_ doû le_ ze_kher qod_shô.

However, in numerous verses, other inflections make a pair with it, sometimes being more important than the 4th degree. But these other inflections also have their favorite degrees: *the 2nd or 6th*, as in the next example.

PSALM 118:27

[27] God (is) the Lord, His brightness (shines) on us; align
 suspensive cadence on
 the 2nd degree

'El 'A_ do_nay vay_ ya_ 'er la_ noU 'is_ roU-

the procession with palm branches, right to the corners of the Altar.

hagh ba_ 'a_ bo_thim 'ad_ qar_nóth ham_miz_be_ ah

The phrase members offer therefore very few surprises, concerning their cadential notes, and it is undoubtedly from this that the more "sedate" character of psalmody is derived, regardless of the content of the poem.

It is rare that other degrees are granted the privilege of terminating a phrase member. In the last verse of Psalm 93, the **subtonic*** seems well-chosen.

PSALM 93:5

[5] Your testimonies (are) confirmed /fully ; to Your house /
 suspensive cadence

e_ do_ thè_ kha ne_ 'em_noU me_ 'od le_ bêth_ kha

belongs / holiness, O Lord, forever more.

na_ 'a_ vah_ qo_ desh 'A_ do_ nay le_ 'o_ rekh ya_ mim

But suspensive and conclusive cadences can be effected on the tonic* note alone as befits the textual meaning, as in this next example.

PSALM 86:7

[7] In the day of my trouble I (shall) call, for You (will) answer me.
 ,suspensive cadence

These few examples, illustrating our examination of such an unusual subject, demonstrate to what point—even though voluntarily restricted (upon first glance one might believe "normalized")—the psalmody draws from the humblest of tonal circumstances all the necessary essence for enhancing the verbal text, just as the prosody is successful through other effects. Let there be no misunderstanding; this is a genuinely "grand art."

c) A restricted modality

We have already brought out that biblical cantillation (psalmody as well as prosody) was provided with quite rudimentary means, compared to the materials in our modern "classical" tonalities with the *modulations* and *borrowing* they are permitted (with their incursions of musical thought to distinct locations, appearing in close proximity or at great distance from the basic tonality). Psalmody does not unfold any less easily than they.

These limitations assigned to the musical thought of psalmody do not constitute a deficiency. It permits the delicate nuances of the message to be encompassed by these exiguous restrictions. We must remember that this is music created for the words. Each syntax has its own characteristics. The transition produced by a modulation in Occidental "classical" melody must be manipulated with tact, else it soon loses all interest. On the other hand, in a tonality which restricts itself to a single tonal "location," the meaning of the words directs itself all the better among degrees having *easily divulged functions*, in regard to a unique tonal center. It is the verbal context which is normally responsible for the message. It is the melody's responsibility to enhance it, not to

compete with it! And it succeeds all the better in that the modality, and indeed the "modulation" (in the original sense of the term), offer their indispensable contribution in order to make the verbal and tonal structures accord.

Taking into account the initial **mode*** of a psalm (obviously selected because it suits so well), certain psalms, as we mentioned earlier (cf. pp. 359-361), occasionally call for a *change of mode* between sections, in the middle of a section, or even in the middle of a verse. But this is not out of concern for avoiding monotony. *The verbal contents called for another structure; it presents itself.* As a consequence, psalmody is the *pursuit of correspondence*, not of variety.

d) The characteristics of the melodic line

Taken by itself, the melodic line often seems quite simple. Several well-placed accents, along with rare embellishments, amply suffice to portray it. Let us follow it in its reduced **ambitus***. It progresses easily, in a non-convolutional manner. The few melismas which personalize it do not constitute characteristic figures, with the exception of this one: .

With only the handful of melodic structures that it indulges in, where could it draw its intense and highly varied expressions? No doubt it is capable of discerning, in its modest musical foundations, those essential elements which best translate the sentiments to be expressed. Let us attempt to comprehend these delicate inner workings. We observe that characteristic melodic movements apply to degrees possessing a very specific function. This is only the tip of the iceberg. Each verse contains its unity as a "text-melody." One of the *premier* qualities of the reclaimed cantillation is its startling suppleness! Restricted to a bare minimum of effects, it can still translate everything. But one does not analyze life! The examination of the system, independent of its function, does not restitute its life; it is too complex.

A specific cadential formula

One of the most specific formulae of psalmody is one which leaps from the **subtonic*** and ends on the 2nd degree (cf. p. 341).



Melodically speaking, the **subtonic*** note—the only basic scale degree below the tonic note in psalmody—exercises a curious influence, highly different from that of our present-day "leading tone" (we have already described this on p. 327).

Even though it is just a half-step from the tonic, it almost never cedes to its attraction nor resolves directly to it (which is not the case at all for our "classical" leading tone). In the concept which emerges, this sub-tonic creates the effect of a "set of balances."²

As soon as this 7th note of the scale is attained by the melodic line, as if in recoil, it nearly always sets in motion a highly characteristic rebound to the upper 4th (most often a diminished 4th) and, after a melodic oscillation, arrived at again, it proceeds to finally conclude on the 2nd degree of the mode. The melody thus determines a suspending cadence through a figure charged with expression.

PSALM 5:10

[10] For there is nothing / in what they say / reliable; their inward (thought)
is (pure) destruction.

ki ên be fi hoû ne khô nah qir bam hav vôth

This turn of the phrase is very frequent. And it is interesting to note that, should the melody happen to advance a degree after having attained the "abutment" of the lower 7th, it takes flight from the tonic note thus touched, oscillating to the 4th above *to return again on the 2nd degree of the mode* (but this is an exceptional case).

PSALM 30:8

[8] O Lord, by your favor You have made my mountain to stand strong.

A do nay bir tsôn kha he e mad tah le har ri oz

We have here the proof, it seems, that the attraction of the *leading tone* (7th degree) *to the tonic* that we feel today did not exist among the ancients. On the other hand, an attraction—at a distance—of the *lower 7th degree to the upper 2nd degree* (a propitious location for the suspensive cadence) appears highly exploited.

Furthermore, the expression of the formula is not compromised if the mode contains a "major" 3rd degree.

PSALM 8:3

[3] From the mouth of infants and nursing babes You have established (Your) strength .



The perfect 4th exactly fits this verbal phrase. And in this manner the melody "halos" the phrase. Let us note that the use of this figure in these particular circumstances is much more rare.

The figure symbolized by the sign \approx is also one of the most typical contours of the psalmody (cf. the previous example). It "encircles," so to speak, the degree affected by it.⁴

A frequent inflection in the middle of incidental clauses

The other melismatic figure contributing to the particular turn of psalmody is the result of two associated signs: \swarrow and \downarrow , whether they are close to or distant from each other. A widely-employed means of expression, this melodic "curl," more expansive above than below the note which it emphasizes, encircles it like a contemplative or even painful commentary. As the following phrase demonstrates, the result can be most impressive.

PSALM 130:3

[3] If / of our iniquities / You keep record, Eternal, O Lord, who could stand (before You)?

'im-' a_ vo_ nōth tish_ mor-yah 'A_ do_nay mī ya_ 'a_ mod

Not assigned to any one particular degree, it does not imply, contrary to the previous formula, a *tonal function*.

We hesitate to demonstrate the delicate inner workings of psalmody in this manner. But the results attained by these simple inflections are so remarkable that this spotlighting proves to be necessary. Of course, a few melodic phrases present certain similarities (how could it be otherwise?); but these are rare instances. And what is surprising is that it is necessary only to read the music to be convinced how much the music is renewed in the unified complex it achieves with the verbal text in each verse.

e) More frequent disjointed movements in psalmody

We have remarked in Chapter Two of this section (cf. p. 339-340) that psalmody is composed more of *melismatic accents* than of characteristic figures. In this it differs from prosody, as well as in the fact that it presents a more clearly *disjointed* line.

We have already observed that it is not rare that an ascending 4th or 5th interval, or even a descending 4th, ornaments the melody so wittily; how much it is then enriched, without ever exceeding the sentiment of the words.

PSALM 137:7

[7] Remember, Lord, (against) the sons of Edom,

ze_khor A_ do_nay lib_nē e_ dōm

the (fatal) day of Jerusalem, when they said:

A musical score in G major, treble clef, with a tempo marking of 120 BPM. The lyrics are written below the notes, with some syllables underlined and arrows indicating pitch movement. The lyrics are: 'eth yôm ye_ roû sha_ la_ yim ha_ 'om_rîm'. Below the lyrics, there are musical markings: a small circle over 'eth', a downward arrow under 'yôm', a small circle over 'ye', a downward arrow under 'roû', a small circle over 'sha', a downward arrow under 'la', a downward arrow under 'yim', and a downward arrow under 'ha'.

"Raze it, raze it, to its very foundation!"

A continuation of the musical score. The lyrics are: 'a_ roû 'a_ roû 'ad hay_ sôd bah'. Below the lyrics, there are musical markings: a downward arrow under 'a', a small circle over 'roû', a small circle over 'a', a downward arrow under 'roû', a small circle over 'ad', a downward arrow under 'hay', a small circle over 'sôd', and a downward arrow under 'bah'.

Putting aside these expressive bursts, usually produced by melismas, it is to be noted that *thirds* are numerous in the melody accompanying the Psalms, as well as *arpeggios* based on the variously inverted *major triad of the tonic*. Upon the major triad of the *tonic* and not of the other degrees. Even though this music seems more inspired than learned, it is necessary despite this to put the emphasis upon the *musical science* that these realizations unveil, and even upon a certain **harmonic*** science.

PSALM 118:1

[1] Give thanks to the Lord, for He is good; for everlasting (is) His grace.

A musical score in G major, treble clef, with a tempo marking of 120 BPM. The lyrics are: 'hô_ doû la_ do_ nay kí_ tób_ kí_ le_ 'ô_ lam hâs_dô'. Below the lyrics, there are musical markings: a downward arrow under 'hô', a small circle over 'doû', a downward arrow under 'la', a small circle over 'do', a downward arrow under 'nay', a small circle over 'kí', a small circle over 'tób', a small circle over 'kí', a small circle over 'le', a small circle over 'ô', a downward arrow under 'lam', and a downward arrow under 'hâs_dô'.

That is what is behind the majesty, the grandeur, as well as the occasional "fullness" characterizing the psalmody, which render it so very *musical* and less strictly a "servant of the text" as in prosody.

PSALM 118:26

[26] Blessed (is) he who comes in the name of the Lord!

A musical score in G major, treble clef, with a tempo marking of 120 BPM. The lyrics are: 'ba_ roûkh ha_ ba' be_ shem 'A_ do_ nay'. Below the lyrics, there are musical markings: a downward arrow under 'ba', a small circle over 'roûkh', a downward arrow under 'ha', a small circle over 'ba', a small circle over 'be', a small circle over 'shem', a small circle over 'A', a downward arrow under 'do', and a small circle over 'nay'.

We bless you from the house of the Lord.

be_rakh_noú_khem mi_béth 'A_do_nay

f) The extraordinary "dominant-tonic" cadence

But from the tonal point of view, the greatest surprise is actually that we find in the psalmody a number of *dominant-tonic* melodic cadences in a conclusive function. This cadence, which we believed to be the sign of the *flowering* of the science of harmony, is here found enthroned, in an important number of verses, in the affirmation of their most fortified tonal bases—as if these works dated from the epoch of a Vivaldi, Handel, or J. S. Bach!

Now, there is no doubt that this notation which we have here deciphered is at least anterior to our millennium (cf. p. 445). It was propagated at an epoch during which, in our regions, the tonal bases lacked foundation, to say the very least! The bases evidenced in our next-to-last example (Psalm 118:1), testifying to a perfect knowledge of the principles of harmony, are what confer on this music its strength. Just as solid are the foundations of the following verse, confirmed by the successive 3rds that one could easily "harmonize."

PSALM 23:1

[1] The Lord (is) my shepherd, nothing / I shall lack.

'A_dó_nay ro_í lo' 'eh_sar

The serenity which it evokes is all the more justified by them.

This observation is a fertile ground for ideas concerning the delicate question of the *instrumental accompaniment* which could have been practiced at the Great Temple of Jerusalem, according to the indications which figure in the Bible. A burning question to which this reconstituted music responds in a very strange and unexpected manner!

2) FACTS AND LAWS CONCERNING THE PSALMODIC RHYTHM

a) A framework favorable to the specific poetry of the Psalms

Even though music has a *greater place* in the Psalms than in the exhortations or the narratives, the psalmody is nonetheless subordinated to the verbal text. But this text is *poetry* and, as we have already learned, Hebraic poetry requires, even when "spoken" (cf. p. 368), an equivalent duration of syllables in order to enhance the essential elements of the verse.

Why this necessity to efface itself? These elements are *poetry* in their synthesis; that is why the weave embracing them must be light! To be certain, the *dynamic accents* justify the *inflexions* in psalmody just as in prosody. But the rhythm, instead of accentuating the psalmodic inflections by the durations *delicately expressed in conformity to their hierarchy* (which is the case in prosody—cf. pp. 248-249), permits the musical degrees in psalmody *to play their role by themselves*, in the "simplified beat" which it establishes.

Thus the melody alone seems to enhance the inter-relationships of the words, but as their servant; a basic "eurhythmy" actually presides. It consists in the *harmoniously cadenced appearance of the "strong beats" called for by the dynamic accents*, set off by the melodic contours pertaining to them, which are disposed *according to an artistically elaborated assymetry*. All told, it is the poetic rhythm itself which must be preserved. This kind of poetry is different, in its bases, from ours.

Occidental poetry (like Greek poetry before it) is pleased to erect *obstacles* prior to inspiration: a precisely *measured* number of feet for each verse, masculine and feminine *rhymes* variously alternating, etc. Oriental poetry, from which proceed the Psalms,⁵ is distilled from *parallelism: the correlation or contrast of compared figures*.⁶ The *interplay of the words*⁷ underscores these meanings and clarifies them; the melodic contour emphasizes and even "evokes" them. *The musical rhythm carefully avoids breaking the charm; it remains discreet*. It is further

characterized by an appropriate evenness of flow, yet interspersed at times with *well-placed melismas*, marking off the idea or key words without impeding the course of the verse.

This subordinate rhythm, which keeps itself from details, is propitious to poetry and (all the more so) to prayer. In the resultant meditative, prayerful mood, it makes the full value of a word (indeed of a syllable) stand out for the purpose of emphasizing without "flashiness" the invocation or more distinctly expressing the praise (but always with a reserved attitude.)

Thus, the imposed "restraint" in this ultimate colloquy with the Master of the Universe—even if the approach is filial—is commendable and facilitated by the highly reserved rhythm of the psalmody. The fact that the poetry is not rhythmically stressed as in prosody becomes gradually apparent through analysis, as we have already noted. But this is verified by the very place assigned to subordinate notes in psalmody.

For example, in the next excerpt, the melodic power is solicited right from the first syllable of the verse (which is a "weak" syllable). This syllable is placed in relief by the *melisma* which consequently musically develops the phrase from its beginning, with such a *fullness* that the expressiveness of the text is *multiplied tenfold* when the dynamic accent appears. This is a totally different process than those utilized in prosody.

PSALM 6:11

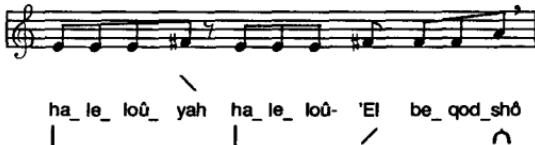
[11] May / be dismayed and ashamed greatly / all my enemies.

Here the musical expression takes a step beyond verbal formalism!

Moving on to a different subject, the regular "strong beat-weak beat" rhythm of a psalm intoned by the choir⁸ will be established right from the beginning through the regular rhythmical "stress" resulting from the successive, equal syllables,⁹ this "beat" being produced intentionally by the accents wherever necessitated by the rhythmical equilibrium.

PSALM 150:1

[1] Praise the Lord! Praise God in His sanctuary;



praise Him in the firmament of His power.



The effect of "massiveness" is startling right from the first word! The initial sign l, which is repeated on the second word, would have been superfluous both times if it did not have the sole purpose of *accentuating the rhythmic cadence*.

Many exegetes have conjectured about the profound details of the poetry of the Psalms, seeking in its form traces of diverse conventions. Despite all intentions, we have not discovered (any more than they) any indication that the number of syllables or accents in the incidental clauses play a formal role. There is a different kind of imperative here. Once again, it is the "verbal-tonal" *complex* which alone is concerned; the accents only serve to emphasize the various "tone-colors" added to the words by the melody in order to thoroughly situate them in the receiving thought—it being established that syllables without accents have a lesser value (which is also very enlightening!).

The following verse, almost totally deprived of melismas, sees its own very particular harmony blossom, enhanced solely by the *measured alternation* of the emphasized beats.¹⁰ But it is the neutral beats which govern this "measuring."

PSALM 8:2

[2] O Lord, our Lord, how glorious (is) Your name in all

'A_ do_ nay 'a_ do_nè_ nou mah_ 'a_ dir shim_ kha be_ khol-

the earth; for You have displayed Your majesty above the heavens.

ha_ 'a_ rets 'a_ sher_ te_ nah hòd_ kha 'al_ hash_ sha_ ma_ yim

Incidental clause endings

Certain particularities noted in the prosody are equally sensible in psalmody; but their physiognomy is different, especially the *incidental clause endings*. They are more frequently masculine (this comes from the fact that the musical supporting structure is *stronger* in the Psalms). Furthermore, the 5th degree accentuated by a melisma (a feminine ending— cf. p. 298) hardly ever appears. The 1st and 4th degrees, favorable to the *masculine* ending, are most frequently the points for the melodic descent (consider, in the last example, the melodic cadence to the sign ⌂).

For the *feminine ending*, this consecrated formula in psalmody is typical; but other formulae are equally characteristic.



The "tempo" of the Psalms

We will say a few words here about the "tempo" of the Psalms. It varies from one psalm to another and depends solely upon the *gait*

conferred on the verbal text by the psalmody. The music is descriptive; its impulsion must be followed. And there as elsewhere, "conformism" is not the question.¹²

**b) How the "added notes" are inserted into the psalmody;
modalities of resolution**

These facts being well-established, let us now consider the problem posed by the intra-syllabic rhythm, resulting from the subordinate notes or melismas. Upon first experimentation, it seems confusing, but gradually the rules emerge and the psalmody takes on its real, flawless identity. The evenness of syllabic time imposes itself, and it is undeniable that it *establishes rules* for the most favorable resolution of the added notes in the melodic phrase.

A *fundamental difference* is seen between prosody and psalmody on this subject, and it arises from their distinct particularities. In prosody, the duration of a melisma is only considered from the viewpoint of the syntax and the *caesuras**.¹³ An accented syllable is prolonged, given its importance attested by the accent; *the discourse as a whole is not one bit affected*. There is no question of a prolongation of any beat during the incidental clause of psalmody, nor yet for its ending.¹⁴ The musical meanings brought together by the syllable share its time equally, but above all they must never weigh down the phrase. As in prosody, simple rules preserve this fundamental unity, so characteristic of the Hebraic cantillation that we are reconstituting; they are similar to the preceding rules (cf. pp. 305ff).¹⁵

**c) Characteristic melodic ideas take shape
through the arrangement of the melismas**

In this *evenness* of syllabic time, which could become monotonous, the melismas exert (as we have previously stated)¹⁶ a most delightful influence, and we are astonished *a priori* that they are parsimoniously dispensed in an art with such limited means.

But it is their *very scarcity* which makes them so important. This verse from Psalm 86 has only one, the influence of which persists to the very end.

PSALM 86:11

[11] Show me, O Lord, Your way; I will walk in Your truth.

Musical notation for Psalm 86:11. The melody is in G major, common time. The lyrics are: hô_ re_nî 'A do_nay dar_ke_kha 'a_ha_lekh ba_a_mi_te_kha. A melisma is indicated over the word 'nay', consisting of six eighth notes. The notation includes a treble clef, a key signature of one sharp, and a common time signature. Below the staff, the lyrics are written with musical markings: a wavy line over 'hô', a bracket under 're_nî', a breve over 'A', a vertical line under 'do', a diagonal line under 'nay', a breve over 'dar_ke', a vertical line under 'kha', a breve over 'a', a vertical line under 'ha', a breve over 'lekh', a vertical line under 'ba', a breve over 'a', a vertical line under 'mi', a breve over 'te', and a vertical line under 'kha'.

The entire psalm, which is long, contains very few melismas. *Yet the expression remains intense.*

From a different point of view, a single melisma can create the "mood" of the psalm when intentionally placed at the beginning of the first verse, as in this next example.¹⁷

PSALM 96:1

[1] Sing to the Lord a new song; sing to the Lord, all the earth!

Musical notation for Psalm 96:1. The melody is in G major, common time. The lyrics are: shî_roû la_ do_nay shîr ha_dash shî_roû la_ do_nay kol-ha_a_rets. A melisma is indicated over the word 'nay', consisting of six eighth notes. The notation includes a treble clef, a key signature of one sharp, and a common time signature. Below the staff, the lyrics are written with musical markings: a vertical line under 'shî', a diagonal line under 'roû', a vertical line under 'la', a breve over 'do', a vertical line under 'nay', a vertical line under 'shîr', a vertical line under 'ha', a vertical line under 'dash', a vertical line under 'shî', a vertical line under 'roû', a vertical line under 'la', a breve over 'do', a vertical line under 'nay', a vertical line under 'kol', a vertical line under 'ha', a vertical line under 'a', and a vertical line under 'rets'.

It seems that we have before our eyes the impressive procession of a crowd in exuberant joy.

It is surprising to note how much, in this regularity of principle, a single melisma suffices to *shape* the rhythmical phrase in the desired manner! This rhythmic procedure is truly refined and thoroughly spiritually expressive. The same is true in every Psalm: it is these interventions which finally *mold* this rhythm, for *without destroying the cadence* they give a *particular turn* to the musical phrase.

Let us cite as an example Psalm 19:4. The serene, almost light tone of the words is enhanced by the appropriateness of *one* well-placed melisma. This is all that is necessary to "characterize" the tonal phrase. This light touch is sufficient; any more would be too insistent.¹⁸

PSALM 19:3

[4] There is no speech, nor are there words; is not heard / their voice.

But in this sense Psalm 118 is even more indicative. Composed of *contrasting strophes*, in the stroke of a pen it traces a complete scene: the unexpected tableau of what could have been a thanksgiving procession to the Temple of Jerusalem.

PSALM 118:25

[25] We beseech You, Lord, do save (us);

we beseech You, Lord, do send us prosperity.

Here the words are surpassed! The joy and the quietude which are prominent in this melody impose a vision of peace which the invocation can only confirm.

Furthermore, through these primitive means, we witness the creation of a rhythm composed of *alternating two- and three-beat syllables* that fittingly underscore the two melismas. This is a new, characteristic sign of this ancient art which made *everything* out of nothing. In this same example we discover that the crowd of the devout, with *loulab*¹⁹ in their hands, did not advance forward evenly, but under the impulse of the stately palms, according to a *fettered pace* [hesitation step].

The same melismas are to be found over the same degrees in various psalms, forcibly creating similar rhythms, but each time they are so appropriate to the verbal meaning that monotony does not set in. What can we say about the extreme grace resulting from the following solitary melisma, which divides the time of the affected syllable into *four parts* (a rare exception), thus finding the right expression for this phrase *ki tov* ("for You are good"), the key phrase of the entire verse?

PSALM 52:9

[9] and I place my hope in Your Name, for You are good, concerning Your godly ones.

Musical notation for Psalm 52:9. The melody consists of a single line of music in common time with a treble clef. It features a melisma over the word "tob". The lyrics are written below the notes, with vertical lines under each note and a horizontal line under the "tob" section. The lyrics are: va_ 'a_ qav_ veh shim_ kha khî- tob ne ghed ha_ si_ de_ kha. The "tob" section has four distinct rhythmic values represented by different note heads: a short note, a long note, a medium note, and another short note.

3) THE MELODY IS THE THEMATIC SERVANT OF THE TEXT —NEITHER SLAVE NOR FREE

a) The presence of a theme, developed or not

Thematic material is most highly varied in the Psalms. Nevertheless, it does not call attention to itself; it "signals" more than it delineates. Most psalms have an initial theme, or rather, a characteristic melodic *figure*, often dependent on the configuration of the whole, but also sometimes unexploited. In this case, the melody evolves freely, as in a lied*, without formal limitations (it seems to disdain them). But it is the *unity* that shapes the whole. This is the case in a number of eminently expressive, intimate Psalms, such as Psalm 23 and the famous "De Profundis:" Psalm 130. In this latter Psalm the characteristic figure, synthesizing (in a sense) the expression of the first words,

PSALM 130:1

[1] Out of the depths have I cried to You, O Lord.

Musical notation for Psalm 130:1. The melody consists of a single line of music in common time with a treble clef. It features a melodic figure over the word "ma". The lyrics are written below the notes, with vertical lines under each note and a horizontal line under the "ma" section. The lyrics are: mim_ ma_ 'a_ maq_ qîm qe_ ra'_ thi_ kha 'A_ do_ nay. The "ma" section has three distinct rhythmic values represented by different note heads: a short note, a long note, and a medium note.

is not repeated; and although it is music worthy of our greatest modern composers, we do not expect a repeat; the succeeding melodic contours themselves perfectly match the deep meaning of the words (cf. pp. 351, 369). This is melody in its barest form.

The same can be true in the most majestic Psalms, those which suit an impressive choir, such as Psalm 93 (cf. p. 357), the highly "visual" theme of which could also have merited development. But numerous are the Psalms where the thematic figures of the beginning reappear. Sometimes this transpires when the verbal text is identical, and thus it seems natural (e.g., Psalm 118—cf. pp. 387-388); but it can also occur *independently* of the words. For example, Psalm 8 begins and ends with the same musical phrase.

PSALM 8:1

[1] To the choir director, on the gittith. A Psalm of David.

lam_nats_ tse_ ah' al- ha_ gi_ tit̄h miz_ mōr le_ da_ vid

PSALM 8:10

[10] O Lord, our Lord, how majestic (is) Your Name in all the earth!

'A_ do_ nay 'a_ do_ nē_ noū mah_ 'a_ dir shim_ kha_ be_ khol_ ha_ 'a_rets

And this repeat is good. The melodic idea of the simple superscription melancholically concludes an otherwise rustic poem, making the essence of this Psalm stand out *like a gem in a jewel case*.

In psalmody the words are never subjugated to thematic material; in other words, their expression is never dependent on the exactitude of a melodic reminiscence. On the contrary, it is the *melody itself which bows to the requirements of the words*. This results in the greatest of efficiency in the suppleness of the melodic contours even when the melodic reprise is obvious.

This is demonstrated by Psalm 96, where the initial motive of the theme (cf. p. 394) is modified in order to emphasize the new words.

PSALM 96:9

[9] Bow down before the Lord in attire / holy; tremble before Him.

A musical score for Psalm 96:9. The music is in common time with a treble clef. The lyrics are written below the notes, with vertical lines under each word indicating pitch and horizontal lines under groups of words indicating rhythm. The lyrics are: hish_ta_ ha_vou la do_nay be_had_rat- qo_desh hi_ lou mi_ pa_nav. There are several grace notes and a fermata over the last note.

b) Occasionally, several themes

Certain secondary melodic ideas are also exploited. Many psalms do not limit themselves to the effect of one characteristic melodic figure, but utilize two or more. Sometimes it occurs in the middle of a section, emphasizing the meaning of the words, as in the next excerpt.

PSALM 19:3

[3] Day after day pours forth speech; and night after night reveals knowledge.

A musical score for Psalm 19:3. The music is in common time with a treble clef. The lyrics are written below the notes, with vertical lines under each word indicating pitch and horizontal lines under groups of words indicating rhythm. The lyrics are: yom le yom ya bi a' o mer ve lay lah le lay lah ye ha veh da ath. There are several grace notes and a fermata over the last note.

Compare the above verse with verse 4 of the same Psalm (p. 394). Both verses begin alike but finish with different inflections.²⁰ This melodic figure is very different from the principal theme. Sometimes the procedure is utilized to indicate distinct sections. It is thus in Psalm 118, and also in Psalm 24 where, beginning with verse 7, there emerges what we could call a "refrain," but which is far from being one, given the power of its intervention (cf. p. 360).

c) Never an alternating stanza

We stated earlier that the words in psalmody are never enslaved to the melodic "theme" material; we have formal proof of this. In the Psalms the same melody never serves as the basis for several verses (such as in a *refrain* or *couplet*),²¹ as in the *chanson* or *litany* (or moreover in plain chant). This other concept of psalmody was already in use in Sumer, where at times it combines the secular with the sacred.²² It is a principle of Hebraic psalmody *not to make a big ado of the music*, lest one follow it instead of the words. The primary goal is the verbal message.

If therefore a theme recurs, which is the case in so many psalms—*it remains secondary to the meaning of the text*, as Psalm 96 demonstrates from one end to the other (space limitations do not permit us to reproduce it here).²³

d) A completely elaborated thematic ensemble

No doubt one begins to realize that, without compulsory thematic material, psalmody can have an *elaborated* melody. This is in fact what the analysis of each psalm reveals. Psalm 122, in its conspicuous spontaneity, confirms this. The initial theme,

PSALM 122:1

[1] I was glad when they said to me: "to the house of the Lord / let us go!"

sa_mah_tî be'_om_rîm lî bêth 'A_do_nay ne_lekh

＼ | ˘ ^ \ ˘ |

is repeated, its melodic motive being already *ornamented* from the beginning of the second verse (cf. p. 402). Then it calls for a sort of thematic complement in *two parts*,

PSALM 122:3

[3] Jerusalem (that is) built like a city of a harmonious ensemble!

ye_ roû_ sha_ la_ yim hab_noû_yah ke_ 'ir she_houb_rah- lah yah_dav

which is repeated almost in its entirety in the seventh verse. But before this, the secondary theme is "summarized" by a *melodic contraction*, so to speak, of its first part,²⁴ that it may be expanded into a most delightful development, which is divided into three segments.

PSALM 122:4

[4] To which go up the tribes, the tribes of the Lord, (according to the) ordinance for Israel.

shesh_ sham 'a_ loû she_ba_tim shib_té_yah 'e_ doôth le_ yis_ra_ 'el

Following this is an exquisite, complementary reply which rejects this amplified version of the thematic figure, but restates its resolution:²⁵

PSALM 122:5

[5] For there / were set / thrones for judgment, the thrones of the house of David.

ki_ sham_mah yash_boû khis_ 'ôth le_ mish_pat kis_ 'ôth le_ bêth da_vid

Then the first theme reappears, with renewed pungency.

Pure simplicity in its appearance! The unity which results, in its stupefying succinctness, testifies of the art (if not the science) which presided over its conception.

4) THE POETIC FORM DETERMINES THE MUSICAL FORM, BUT RIGID STRUCTURES ARE EXCLUDED

It is the *form of the poem* which decides the musical form. Certainly, we have already comprehended that the one is not a simple "traced copy" of the other. In a sense, the poem is *entrusted* to the monody which clothes it, adorns it and presents it to best advantage according to its character. Simply put, the monody *interprets* the words.

Is this to say that the merits of this interpretation can sometimes be contested? Never! Even better than the words, the music reveals to us the true spirit of the Psalms! This is why the rare initiatives the music takes concerning its form cannot be controverted.

a) The names appearing in the superscriptions of the Psalms remain unexplained

We know practically nothing about the possible relationship between different psalms and their superscriptions. The music cannot elucidate this subject, since it carefully accompanies the poem and (above all else) reflects its spiritual meaning.

Thus, if an original poetic structure is not evident upon silent reading, the music will not create one. Its role is not to decide the number of verses which must comprise a stanza. Furthermore, one will not be surprised that the particular names with which certain psalms are endowed—*mikhtam* (in five psalms), *maskil* (in twelve psalms)—remain a mystery. *Shigayon* (found in one psalm) supposedly denotes a *lamentation* (since this is the meaning of this word in Akkadian).²⁶

Commentators have attempted to comprehend the nuances that the contents of the poetry do not reveal. *Mikhtam* supposedly denotes a kind of almost *whispered meditation*,²⁷ but the music refutes this theory since there are certain *mikhtam* psalms containing vehement invocations.²⁸ *Maskil* supposedly denotes an "eloquent, solemn" poem;²⁹ yet the same sort of invocations are still encountered, accompanied by an equally edifying psalmody, which the ensuing verses of the poem confirm (cf. p. 362).

PSALM 54:4

[4] O God, hear my prayer, give ear to the words of my mouth.

On the lookout for a detail possibly contained in the music, we discover nevertheless that the expression *Song of Degrees* (heading fifteen Psalms, 120-134) does not signify the systematic performance of the song three times, each time on a higher tone, as some have suggested.³⁰

The monody follows its normal course, and the power of its expression (which we now have the opportunity to appreciate) fully suffices to enrich the poem, without resorting to so conspicuous an artifice. Psalm 130 could not be more edifying in this sense (cf. p. 396).

The precise meaning carried by the title is completely different; it confirms other hypotheses. "*Degrees of ascension to the Altar?*"³¹ Yes, notably in Psalms 130 and 131: ultimately, the ascension spiritually of the believer towards his Creator. "*Degrees of ascension towards the Temple of Jerusalem?*"³² Yes, again, in Psalms 126 and 122.

PSALM 122:2

[2] Standing are our feet within your gates, O Jerusalem.

The joy and the ecstasy of the pilgrim is exhaled from them. We do not know the meaning of the other expressions, but the Psalms and their psalmody are no less moving because of this.

b) No rigid poetical forms

To be honest, it is confirmed that the form is *secondary* in this kind of poem. Their *raison d'être* is to beautifully unify the verbal figures dictated by inspiration, without giving the slightest obstacle to their spontaneous expression. This is an aesthetic which bears fruit when the attention must be focused on a central directing thought. Then, the poem is not related to a "poetical play" [*jeu*]. It is normal that its formal aspects should play a secondary role.

We are far removed from the Occidental "classical" conception, which shackles the inspiration in order to stimulate it, via regulated control of the verse, the rhymes, the stanzas. The totally different perspective of the Psalms is not a particularity of the Bible; the Hebrews did not innovate it (cf. p. 389).

**c) Parallelism reigns over the Psalms
as it rules in Oriental poetry**

Oriental poetry (which governs the Psalms) attests to other preoccupations than those which are familiar to us. "The poetic law, common to all Semitic antiquity, is that of *parallelism: two synonymous, antithetic or complementary (synthetic form) phrase members, concurring in the expression of the same idea.*"³³

We stated that the articulations of a psalm bow to this parallelism in the different caprices that inspiration may dictate. The verse gives it value, dividing itself into either two, three or more phrase members according to the abundance of figures used. This is why it is not rare to find, in the same poem, verses composed of three parts, alternating with verses possessing two hemistichs, without a particular set pattern.

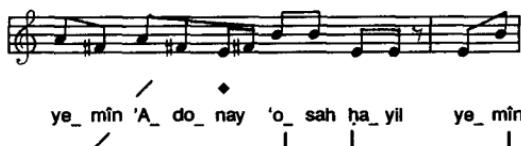
The *binary form*, comprising two "stichs" (or hemistichs), freely associates with poems of virile expression. Yet the *ternary form* is also often encountered without the poetic harmony being the least bit troubled. The music responds to this.

PSALM 118:15-16

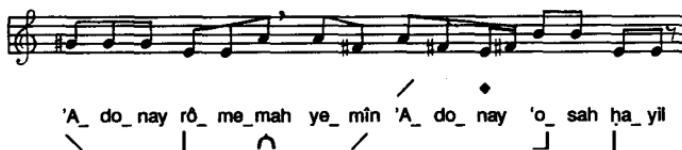
[15] The sound of joyful shouting and triumph (is) in the tents of the righteous;



the right hand of the Lord does valiantly. [16] The right hand



of the Lord is exalted; the right hand of the Lord does valiantly.



**d) The music attaches itself to the verbal setting,
but not to the letter**

We have already stated how the music in the Psalms intervenes neither as a stranger seeking public approbation nor as a blind servant. This is confirmed when a repetition of the verbal content makes us suspect the presence of a **refrain*** or an **antiphon.***

The psalmody penetrates its system, and is the deciding factor. It does not deign to attach itself to the letter of the text. There actually is a sort of refrain in verses 8-12 of Psalm 46 (cf. pp. 364-365), but the one in verse 6 of Psalm 42 is quickly abandoned in verse 12. Moreover, as we already stated, the term "refrain" in no way fits in psalmody. Often the musical repetition inserts itself into the piece, marking the repetition of the words by means of a melodic phrase consecrated to them. In this case the psalmody only substitutes one verbal expression for another in a melodic form previously assigned; but nothing obliges it to continue to do so if the evolution of the thought changes directions. Thus the music

unites with the verbal form, but as we have witness, it does so with discernment and lucid determination.

We cannot better illustrate this observation (which defines the musical importance, properly speaking, of the psalmody) than in allowing the monody to express itself in the accompanying notes of a simple *superscription of a psalm*.

Many exegetes have wondered if these superscriptions were added posteriorly to the poem or if they were "*revealed*" (meaning written under the same inspiration). This second hypothesis seems to be the correct one; at any rate, the musical analysis confirms it. *Musically speaking, the superscription is an integral part of the Psalm.*

In fact, we have already cited the beginning of several psalms; they are conclusive on this subject. Thanks to the psalmody, the superscription of Psalm 8 is integrated into the poem; this is clear since its accompanying melodic phrase is *repeated in its entirety at the end, but with other words* (cf. p. 397). Moreover, the superscription of Psalm 3, despite the incident it mentions, is already in the spirit of the complaint (cf. p. 344). However, in Psalm 100, the melody takes up its own rights, *making a unit of the superscription and the commencement of the poem*. The idea is original; but even more, in this particular case, the effusion which results from this is most poignant (cf. pp. 362-363). It is plain that in this latter case, the melody has rejected the form proposed by the verbal text in order to *impose its own*, which is *assuredly preferable!*

The greater part of Psalm 29 gives us the example of a psalm *assuming the responsibility of the form* where the words barely outline it (detaching themselves from it in order to impress a dominant idea). In this Psalm, *flashing* from one end to the other with a fiery but controlled "romanticism," are several verses beginning with the same words *qol 'Adonay* ("the voice of the Lord"). This same repeated phrase, followed by diverse evocations, does not constitute, properly speaking, a defined form, but it can potentially possess *one* by force. *It is the psalmody which takes charge of this.*

This Psalm, so original and strong, is characterized by its opening theme.

PSALM 29:1

[1] Ascribe to the Lord, O sons of God,

ha_bôu la do_nay be_nê 'e_lîm
(/) ∕ ∕ | ∕ ∕ |

ascribe to the Lord glory and strength.

ha_bôu la do_nay ka_bôd va_oz
/ ∕ ∕ | / ∕ |

Well defined in *antecedent* and *consequent*, this verse will be exploited with rare mastery. The second verse reproduces it almost note for note.

Verse 3 introduces a theme which seems to be *incidental*; but it will become the conclusion of this "exposition."

PSALM 29:3

[3] The voice of the Lord (is) upon the waters.

qôl 'A do_nay 'al-ham_ma_yim
/ ∕ ∕ | / ∕ |

Here we discover a most unusual *architectural "pier"* [jetée]. The second section of theme B which we just mentioned becomes the "pediment" of the central section of the poem.

PSALM 29:3 (continued)

[3] the God of glory thunders, the Lord, upon waters / many.

'El-ha_kâ_bôd hir_îm 'A do_nay 'al_ma_yim ra_bîm
| / ∕ ∕ | ∕ ∕ |

These two words, *qol 'Adonay*, are variously illuminated by the tonal axis blazing its way through the course of the development. The two themes are alternately exploited, while being scarcely modified by the melismas.

[4] The voice of the Lord (is) powerful.

Musical notation for verse 4. It consists of a single line of music in G clef. The lyrics are: qol- 'A_ do_ nay ba_ ko_ ah. Below the lyrics are three vertical markings: a vertical bar under 'qol', a diagonal slash under 'do', and a diagonal upward-pointing arrow under 'ah'.

[5] The voice of the Lord

Musical notation for verse 5. It consists of a single line of music in G clef. The lyrics are: qol 'A_ do_ nay. Below the lyrics are two vertical markings: a vertical bar under 'qol' and a diagonal downward-pointing arrow under 'nay'.

[7] The voice of the Lord spews out

Musical notation for verse 7. It consists of a single line of music in G clef. The lyrics are: qol- 'A_ do_ nay ho_ tsev. Below the lyrics are three vertical markings: a vertical bar under 'qol', a horizontal wavy line under 'do', and a diagonal upward-pointing arrow under 'tsev'.

[8] The voice of the Lord shakes

Musical notation for verse 8. It consists of a single line of music in G clef. The lyrics are: qol 'A_ do_ nay ya_ hil. Below the lyrics are three vertical markings: a vertical bar under 'qol', a diagonal downward-pointing arrow under 'do', and a vertical bar under 'hil'.

These verses build up to verse 9, the magnificent peroration (cf. p. 345);

[9] The voice of the Lord

Musical notation for verse 9. It consists of a single line of music in G clef. The lyrics are: qol 'A_ do_ nay. Below the lyrics is a single vertical marking: a diagonal downward-pointing arrow under 'do'.

which finally terminates by the nearly integral repeat of *the first theme* (cf. p. 430). This theme is modified only slightly in the final verse (cf. p. 345).

This then is a demonstration of the form which, *despite the words*, this Psalm achieves through the themes, their modifications, and their alternations. In a psalmody where the rhythmical material does not offer the diversity of well-sectioned cadences and where the monody does not benefit from the unexpectedness of tonality changes (which are principal compositional materials in our "classics"), what better means to use for *sculpting a form* than these masterful melodic constructions?

5) VARIED VOCAL FORMS ARE DEDUCED FROM THE MELODIC CONSTRUCTIONS IN REGARD TO THE WORDS

It was in the Temple of Jerusalem that the Psalms, right from their origin, were sung by a great body of musicians. We have mentioned this before. However (and this will seem strange at first), the monody of the Psalms which we have reconstituted calls for *of itself*, by its own power, *a specific vocal formation* — one which perfectly fits the liturgical poem concerned!

With the proofs of authenticity that we present, there is no reason to be surprised. In the inverse sense, every composer has tried this! At the creation of a composition, a simple melody *calls for its own choral or instrumental formulation*, even if the music is not yet "realized." In the same manner, when the initiated listener hears this monody "*in his head*" (in the present case, it also accompanies the biblical verses), he perceives a solo version for one psalm, a single choir for another, two alternating choirs for another, and so on.

Not every melody potentially possesses such indications. This is proof all the more in support of the affirmation that the psalmody melody was written intentionally for a choral medium. It is the melodic constructions which point the way. Sometimes one may find a melodic *figure* at the head of a verse, *in opposition to that of the preceding verse*, and the words confirm the structure. At other times it may be the *simple touch* of an initial note. One needs only to let the monody *suggest* which vocal form is appropriate in order to be convinced that indeed this one was desirable, within the venerable courts of the Temple for which it was destined.

Thus, in Psalm 29 (which we have just examined), all the lead-offs in various directions given to the same words, "the voice of the Lord," by the tonal introductions, suggest at the same time a *performance by two choirs*. One need only meditate on the text and imagine it: *the alternating phrases answer each other in their diversity; they seem to overlap* (cf. p. 407).

A non-arbitrary classification of the choral forms thus employed then emerges, and furthermore, it completely responds to the *spirit* of each psalm. Let us state, before giving the first examples, that the superscriptions of certain psalms seem to have been conceived for performance by a secondary soloist rather than the one to whom the body of the poem is eventually entrusted. This must have been true for Psalm 54. Its introduction, a veritable recitative, could not reasonably have been sung (in the Temple courts, obviously) by the same voice which (beginning in verse 3) laments and pleads (cf. p. 435-436).

PSALM 54:1-2

[1] For the choir director; on stringed instruments. A Maskil of David

[2] when came / the Ziphites / and said to Saul:

"Is not David hiding himself among us?"

a) THE SOLO

The vocal form of the above Psalm is the solo. This is attested by the particularly unornamented monody and the words themselves. The same is true for Psalm 23, "The Lord is my Shepherd" (cf. pp. 338, 351), and for certain prayers (singular: *tefillah*) such as Psalm 86, whose tone never varies from beginning to end in either the poem or the monody. The solo is appropriate even in psalms where great contrasts are found, but which do not call for alternations in the voice. This is the case for Psalm 52 (which also has a long introductory recitative) and for Psalm 137, "By the rivers of Babylon." In spite of its length and the successive "I's" and "we's," one is not misled; this poignant evocation *cannot be collective* — the melody denies this.

PSALM 137:1

[1] By the rivers of Babylon, there we sat down



and wept, when we remembered Zion.

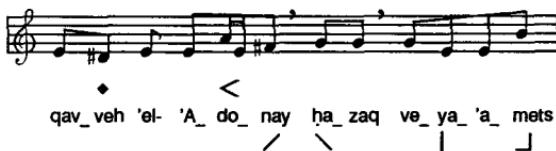


b) SOLO AND CONCLUDING CHOIR

In certain psalms where the solo is required, the ending nevertheless demands the assistance of a *choir*. This is the case in Psalm 27. A single voice holds the audience in this poem with its incessant plea for Divine loving kindness in the face of man's cruelty; this goodness that one hopes to find "in the land of the living!" (cf. p. 337). Then the choir enters.

PSALM 27:14

[14] Hope in the Lord; be strong, and let / take courage /



your heart! Yes, hope in the Lord!



It could only be like this. The *choir* ends the poem and the monody proves it well!

c) CHOIR ALONE

Even though the melody may not suggest an alternation, certain psalms cannot be considered as appropriate for only a soloist. The tone is too majestic, the rhythmic progression too "regular." Only a *massed choir* could respond to this. To this form unquestionably belongs Psalm 150, already cited for its particularly *robust rhythmic cadence* given to it by the arrangement of its musical accents (cf. p. 391). Right from the onset, it centers on the subject which dominates it, "reins in hand," with an unrelenting dash right up to the last note (cf. p. 352). Only a choral ensemble is adequate! Yet the same formation is called for in Psalm 100, a song of thanksgiving: a veritable *lied** for combined voices (cf. p. 363)—a rather rare circumstance.

d) TWO ALTERNATING CHOIRS

Certain psalms justifying choral fullness may indicate the *alternation of two groups* by their repeated incidences. Psalm 29, which we cited earlier, illustrates this form. Psalm 148, almost entirely in binary form poetically, also illustrates this choral form. A single chorus would soon become "winded" in the attempt to emphasize its successive exhortations.

PSALM 148:2-4

[1ST CHOIR]

[2] Praise Him, all His angels! Praise Him, all His hosts!

ha_le_loû_hôû kol- mal'_a_ khâv ha_le_loû_ hôû kol- tse_ba'_av

[2ND CHOIR]

[3] Praise Him, sun and moon! Praise Him, all stars of light!

ha_le_loû_hôû she_mesh ve_ya_re_ ah ha_le_loû_hôû kol- kôkh_bê ôr

[1ST CHOIR]

[4] Praise Him, highest heavens!

ha_le_loû_hôû she_mê hash_sha_ma_yim

e) TWO ALTERNATING CHOIRS AND TUTTI

This same form often calls for a *tutti* section (i.e., both choirs combined). Psalm 96 is a good example of this. The analogy of the thematic figures which mark the beginning of the successive verses would hardly justify simple repeats by a single choir, whereas alternating choirs would explain their presence (as we stated earlier). Melodically similar to the first verse (cf. p. 394), verse 2, sung by the 2nd chorus, thus retains all its vigor.

PSALM 96:2

[2] Sing to the Lord, bless His name,

shî_roû_la_ do_nay bar_khoû she_mô

proclaim from day to day His salvation.



On the other hand, the contrasting melodic line of the *third verse* justifies a conclusion of this vibrant exposition with a *tutti* (both choirs combined).

PSALM 96:3

[3] Tell / among the nations / of His glory; among all the peoples / His wonderful deeds.



The remainder of the poem confirms this form: *alternating choirs followed by tutti*, the latter intervening with such appropriateness in verses 6, 10 and 13.

f) SOLO AND CHOIRS ALTERNATING IN RESPONSE

Sometimes it is the solo which proposes an *alternation with a massed chorus*; Psalm 122 is a vivid example. The verbal text indicates this as much as the melody does (cf. pp. 399-400). In Psalm 19 the solo interrupts the alternation of the two choirs. Corresponding to the incitation of the text, the music would have nevertheless suggested this form even in the absence of the words!

To this enlightening, highly representative inventory of liturgical music (we will have reason to think so shortly) must be added the "response" found in the middle of a verse, giving it a certain quality of munificence in grandiose ceremonies. This is the form found in Psalms 136 and 118. An isolated circumstance in psalmody, the *melody accompanying the consecrated formula of these songs of thanksgiving is identical in the first verses of these Psalms*³⁴ (cf. p. 387).

PSALM 136:1

[1] Give thanks to the Lord, for He is good; for everlasting (is) His mercy.

[response]

hō_dōu la_ do_nay kī_tōb kī_le_ 'ō_lam has_dō

In Psalm 118 the following verses have nearly the same melody.

PSALM 118:3, 4

[3] Let / say / the house of Aaron: for everlasting (is) His mercy.

[response]

yo'm_roū_na' bēth_ 'a_ha_ron kī_le_ 'ō_lam has_dō

[4] Let / say / those that fear the Lord: for everlasting (is) His mercy.

[response]

yo'm_roū_na' yir_ 'ā 'A_do_nay kī_le_ 'ō_lam has_dō

Then, without any transition, ensues a solo. The music, like the words, indicates this change.

PSALM 118:5

[5] From the depths of my distress I called upon the Lord; / answered me
(and set me) in a large place / the Lord.

min_ham_me_tsar qa_ra'_thī Yah 'a_na_nī bam_mer_hab Yah

The *antiphonal choirs* and the *solo* divide up the remainder and the Psalm ends with a *note-for-note restatement of the 1st verse with the response*. Joined to this ensemble of great ceremony (which accompanied the procession — cf. p. 380) were the *instruments of worship* and the *trumpets*. Who could possibly be surprised by their addition? But this is the subject of the pages which follow.

6) THE BACKGROUND ACCOMPANIMENT OF THE PSALMS

a) The Psalms were accompanied

Mizmor or *Psalm* comes from a word meaning "to cut up, divide the sounds, modulate" and signifies by extension: "to sing while accompanying oneself upon an instrument."³⁵ This is the meaning of the Hebrew word for which the Greek *Septuagint* translation gave "*psalmi*," or *psalm*. So psalmody was originally accompanied,³⁶ but not prosody.³⁷ Certain psalms actually contain in their superscriptions the indication of an instrument or group of instruments. But most are devoid of such performance details. Does this mean that the rest were not instrumentally accompanied?

The biblical texts (*Chronicles* and *Kings*) are explicit: *the sacerdotal music included instrumental participation*. David had even created special instruments of music for that purpose (I Chron. 23:5; II Chron. 7:6). But it must be supposed that the instruments consecrated to the worship service were quite reserved, as opposed to those called for by certain psalms whose timbre (as we will see) seems to be *suggested by the melody itself*. The instruments generally used did not leave a marked trace of their timbre, with the exception of the trumpets. We sense their presence, even though they are never mentioned in the superscriptions of the Psalms. But we know, however, that they also participated (at least in certain psalms) in great ceremonies of state (I Chron. 16:4-6).³⁸

Twenty-four "specialists" would have ensured the instrumental part, say certain commentaries³⁹ (cf. p. 422). However, the book of *Chronicles* specifies (II Chron. 5:12) that each singer had his own instrument (cf. II Chron. 7:6).

What then were these instruments?

Three kinds are cited, the first two being *stringed instruments* (we know this since the number of their strings is sometimes indicated), the third being the *cymbals*. Between the *kinnor* and the *nebel*, the stringed instruments, few details allow us to establish the difference. These instruments have never been pictured; moreover, no archaeological discovery to date allows a supposition. However, they had to have been rather small, since Saul and the choir of prophets he joined at Bethel "which was coming down from the high place" (I Samuel 10:5) was preceded by instrumentalists.⁴⁰

Their shapes were already forgotten at the time of the Second Temple. Musicologists have apparently contradictory opinions about them, which *en toto* are not so very different: harps, lyres, cithars, or even lutes (less reasonably).⁴¹ According to certain authorities⁴² (and if we accept the suggestion of the actual sound of the word on the ear), the *nebel* was a harp (the word, in effect, is unctuous). The *kinnor* (a more accented word), which was ordinarily played with a plectrum (cf. I Sam. 16:23), was a lyre. But these are hypotheses.

Whatever the case, the *kinnor* and *nebel* were specially fashioned for the sacred service during the reign of Solomon, "from alnum wood" (II Chron. 9:11); whereas *cypress wood* is cited for instruments used in open-air worship (II Sam. 6:5). Their strings were of *gut*.⁴³ We can deduce from all this that they had a timbre which was plain, yet sweet, even if not very brilliant.

As for the cymbals, we imagine (from common use) that they must have only gently accented the prominent syllables in order to ensure the simultaneousness of the very large performing ensemble. But sometimes the Bible (particularly in Psalm 150) defines some cymbals as being "*high sounding*," others as "*loud sounding*".⁴⁴ With the exception of these particular cases, there is no question whatsoever of there being a demonstration of brute force in the sacerdotal music!

Let us just say that all these instruments (the timbres of which will, barring a miracle, remain unknown) had only the goal of *supporting the chorus or soloist*. The *kinnor*, of common usage, is mentioned numerous times *prior* to the construction of the Temple at Jerusalem. It is already mentioned at the time of the Patriarchs (Gen. 31:27). Psalm 92 describes it as an instrument "*of harmonious sounds*." It was suitable for diverse sorts of expression; so Psalm 49:5 specifies ("*I will prelude with the kinnor*

*my piquant aphorisms"). It is from the *kinnor* that David took the sweet accents that calmed the apprehensions of Saul. Three times the book of Samuel states that David touched it *with the hand*⁴⁵ (hence, the timbre was undoubtedly more velvety). It probably had *eight to ten strings*, as did the *nebel*, about which we are even less well-informed as regarding its timbre (Josephus mentions a *nebel of twelve strings*).*

Moreover, *nebel* signifies "leather bottle" in Hebrew. "Which permits us," says Dom Parissot, "to imagine that part of this instrument possessed a rounded, swollen part which formed the resonance body."⁴⁶ No doubt this is true, but we also think (with A. Machabey) of a *triangular harp*.⁴⁷ The chorus of prophets which Saul encountered (under the instigation of Samuel) was not only preceded by lyres and harps, but also by *flutes and tambourines* (cf. p. 416), which is a more heterogeneous ensemble.

Another orchestral description is given prior to the construction of the Temple of Jerusalem. During the first transfer of the Ark of the Covenant⁴⁸ (which had not long before been recaptured from the Philistines), "David and all Israel celebrated before God with all their might, with singing, and with *lyres, harps, tambourines, cymbals* and *trumpets*" (I Chron. 13:8).

This was a celebration improvised by the common people, with a musical ensemble appropriate to the circumstances. But the participation of the customary instruments of the sacred service was completely different. *They pass by unremarked.* But thanks to them, the choral ensemble would have been stable, numerically impressive, noble — "and all Israel stood" when they played (II Chron. 7:6). Nothing indicates that the voices of the people melded with those of the singers.⁴⁹

**b) The melody almost suggests the timbre
of the instruments indicated for certain psalms**

Only Psalm 5 calls for *flutes* (*el-hanhilot* "For the flutes"). According to A. Schaeffner, to translate the names of ancient wind instruments by the word *flute* gives us "a falsely sweet, glossed-over image" of ancient Greek music.⁵⁰ Actually, the melody proposes a rather sour timbre for the *nehilot*; despite this, it is languishing, almost piercing.

PSALM 5:2-3

[2] To my words / give ear, / O Lord / consider

my groaning! [3] Hear my cry for help,

my King and my God, for to You do I pray.

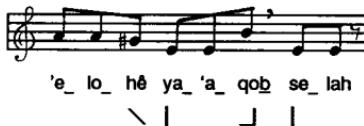
Truly this melody distinguishes itself from the others, which are conceived for the strings (*neghinot*); these instruments, though incisive, are softer, sweeter and more enveloping (cf. Psalm 6, pp. 425, 470).

For the expression *Alamoth*, the Bible proposes three ideas: "young girls, maidens," "instruments of music," or "soprano voices."⁵¹ If we "listen" to Psalm 46 (where they are mentioned), the *alamot* would more likely be *wind instruments with rather shrill, piercing tones* rather than young girls' voices. The melody is *frank, solid*, perhaps in a high register (from which derives the analogy).

PSALM 46:12

[12] The Lord of host (is) with us; a stronghold for us

(is) the God of Jacob! Selah!

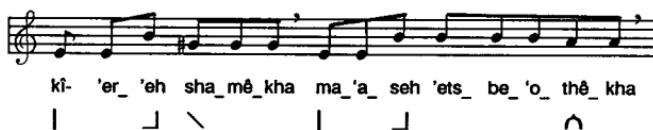


(In our day, does not the term "bassoon" specify its tessitura *through its name?*)

The Septuagint⁵² links the Hebrew word *ghittith* to *gath*: "winepress." It would seem the Seventy were right about this; the psalmody evokes a rustic timbre with a gentle, sweet warmth, one capable besides of being brilliant.

PSALM 8:4

[4] When I consider Your heavens, the work of Your hands,



the moon and the stars which (You have) ordained,



The translation of *shoshannim* remains obscure: "lily," "instrument of music," or "known melody."⁵³ Psalm 69 gives it an uncommon fullness;⁵⁴

PSALM 69:1-2

[1] For the choir director, on the shoshannim / Of David. [2] Save me,



O God, for / have reached me / the waters, threatening my life.

a fullness also found in Psalm 45, with a completely different sentiment:

PSALM 45:2

[2] Overflows / my heart / with a theme / good; address / I / my

work to the King; My tongue (is) the pen of a ready scribe.

Here the evoked timbre seems *full, noble, majestic*. It makes us think of our *violoncello* (with the exception of the use of the bow). Could this possibly be the lute, in use in Western Asia and Egypt well before the time of David?

In this second part we have already explained that the terms "the mute dove in the distance" or "the doe of the dawn" *cannot concern particular modes*. On the other hand, the psalmody evokes a characteristic timbre, corresponding well to the idea suggested by the particular phrase.

Very penetrating and incisive in its delicate sweetness, actually, is the timbre of the melody of Psalm 22, one of the most famous. The instrument(s) producing it could very well be named "the doe of the dawn." The timbre suggested is high-pitched and thin, pure, plaintive, as though "on the watch."

PSALM 22:2

[2] My God, my God, why have You forsaken me?



Far from my deliverance (are) the words of my groaning.



Although this captivating subject has provoked much curiosity for centuries, we cannot really explore it further here.

c) The underlying harmony

The Psalms were accompanied. What was their accompaniment like? The texts read aloud in antiquity were all cantillated; this was common practice. Narratives and poems were "supported by song," most frequently without any instrumental accompaniment. The melody was capable of being "non-musical," simply indicating, by the fluctuations of the "tone," the various phrase members. It was commonly done this way and the sacerdotal music of the Temple would not have been any different.

We have seen examples of this in our reconstitutions of biblical prosody. Although "musical," it dispenses with accompaniment. The psalmody, which is really choral music, *requires a tonal base*: the complementary "texture" of instrumental support. A syllabic melody conceived for accompaniment progresses more by *movements of disjointed notes* [melodic skips] than of *conjoint notes* [diatonic movement]; thus, the sounds work better together with a "harmony." Proceeding by disjoint movement, the necessity for a change of chord is less felt. This is the case in the reconstituted psalms, as we have already remarked (cf. p. 386).

The instrumental ensemble attached to the sacred service was generally *not very conspicuous* (harps, lyres and cymbals); we know that David had deemed it good to create special instruments for this effect. Moreover, we have noticed that the "timbre" of the reconstituted psalmody is perfectly *neutral* when particular instruments are not present (cf. p. 415-416) except, of course, when the trumpets entered. (This is never stated, but it becomes obvious by the *grandeur* of expression that the melody sometimes takes on, in conformity with the written text.) At the inauguration of Solomon's Temple, the chronicle reports no less than *120 trumpets* – an impressive number!

According to some translators, it would seem that only the twenty-four leaders of the sections played instruments. It is really unthinkable that *twenty-four* stringed instruments were able to *counterbalance* 120 trumpets! Most likely the number of stringed instruments employed depended upon the psalm performed, ranging from instrumental solo to *tutti* (which is plausible, each singer being also an instrumentalist – cf. pp. 114, 415).

The customary instruments must have been used to accompany the chorus or soloist; but in what manner? In light of the conjecture we have just described, is one justified in limiting the instrumental participation to a simple "note-for-note" *unison* with the vocal line? If this were the case, then why specify the accompaniment in certain cases? Thus, prior to the construction of the Great Temple, when the Ark of the Covenant was transported to the pavilion erected to temporarily house it – by a joyful procession under the direction of "leaping and dancing" King David (I Chron. 15:29) – the chronicle recounts that in order to accompany the song "*at full voice*," they had *bronze cymbals*, "*high-sounding harps*,⁵⁵ and lyres "*at the octave*" (or rather "*in octaves*"),⁵⁶ the latter "*leading the chorus*" (I Chron. 15:21). And since this is specifically mentioned, we can imagine that *only the lyres* doubled the voices of the singers!

There is yet another indication: at the inauguration of the Temple, finally constructed by Solomon, the choir, the instruments of worship, and the trumpets were joined together (as we already mentioned). The text states that "when the trumpeters and singers sounded *in unison*... the praises of the Lord." (I Chron 5:13). This does not spell out what the other instruments played. If they were all in unison, then why this separate mention of the trumpets and voices?

So, the instrumental part seems to have been more "enriched." But let us be careful here! To imagine from this a fully "organized" harmony such as is formulated in the world today—with *multiple voice parts* each having its own *independence* and yet constituting a unity—there is a world of difference! Just as there is a world of difference between these extraordinary monodies—simple in appearance despite their prodigious expression—and our masterworks, especially liturgical compositions. The former are to us new *models* of this genre.

First of all, the instruments of worship were necessarily limited to a *rather restricted tonal spectrum*, whereas our modern orchestras today give us a *very great tonal spectrum*, often at its extreme limits. We said earlier that the instruments hardly possessed more than 12 strings maximum (cf. p. 417). Not even the range of two octaves! (It seems logical to imagine their strings as being tuned to consecutive pitches.) Of course, one might think that they had *harps or lyres of various sizes*, but there is no mention of this in the music of the Temple. Besides, the choirs themselves exploited only the *lower register*; only adult male voices were employed. *Women did not participate in the sacred service*,⁵⁷ nor did young boys, since it is stated: "*all who were masters...*" (*I Chron. 25:7*). No one is a "master" at 12 or 13 years of age!

There was certainly great tonal power in these musical ensembles, in their *density*; but they really cannot be compared with those grandiose edifices, those "cathedrals of sound" that are the Passions, the Masses, the Oratorios that are available for our listening today. This then is *an art very different from ours today* which was practiced, and (in our estimation) was just as noble, impressive, majestic, but *in the ancient fashion*—of which modern man has little cognizance!

It would be foolish to attempt to make a catalog of the exact sounds for these ensembles. The melody helps us somewhat, and history too, even though some musicologists have barely admitted the existence of unisons and antiphony at these "obscure" times of music history.⁵⁸

Obviously we cannot imagine that it was a *garrulous* ornamenting of the accompaniment, embroidering the melody here and there with unisons and octaves, like those which *meander through* Arabic melodies with which one would have found an antecedent. This type of music does not suit the seriousness of psalmody which, furthermore, was created in the light of harmony with often disjointed notes (cf. p. 386). The other genre of accompaniment justly requires a *conjoint movement!* Besides, it is unreasonable to think that a more dense accompaniment was capable

of being *improvised* thereby constituting an *uncontrollable* heterophony. This monody has an efficiency, a precision which repulses all empirical participation!

Between these two extremes, *unisons or frills*, there are norms which seem better to describe the ancient world. If *wind instruments with two tubes*, figuring in such great numbers that they were *common* in that far-off time, foreshadow nothing else (*a priori*) than one voice evolving melodically and the other fixed, we can already establish the given fact of **diaphony***. The interval "strikes" the ear, and in the case of the restituted biblical psalmody, there is nothing pretentious in sensing that the second voice could *change pitch* when the musical sense requires it! But also, it must not be forgotten that the playing of the ancient lyre commonly consisted in a "*scraping of all the strings, certain ones being previously muted by the light touch of the left hand.*"⁵⁹ **Arpeggiated*** playing, consequently, signifying "*implied chords.*" Things become clear: if we cannot imagine that there was "*Polyphony*" in that period, there were at least harmonic *intervals* and (it would seem) some *chords*—these being *arpeggiated*.⁶⁰

In common practice, an *arpeggiated style* must have been quite suitable, but it seems most improbable that it was tolerated for the accompaniment of the Psalms in the Temple. The *restrained fervor* of the reconstituted music of the Psalms seems in fact to be *contrary* to such usage. Therefore, it is the *interval*, the *chord*, that must have been retained. This is the most probable hypothesis concerning the sacred music of the ancient Hebrews—and the reconstituted monody justifies it so well.⁶¹ How were these chords placed? This remains a mystery. For several reasons, it does not seem likely that they were placed in the *lower register* of the melody. But neither can one imagine them in the upper register! Research in this area seems to testify of another particular manner of performance which suited such an ensemble, perhaps unique in this sense as well.

Evolution does not always go from the simple to the complex! If the plain chant was, as they say, uniquely *vocal*, and primarily *monodic*, let us not forget that the simple or double **ison*** replaced the prohibited drones in the Christian worship service. A rather pale survival, no doubt, of a *more nourished* past.

What illuminates the subject with a most particular light is the observation that we made at the beginning of this chapter and to which we return. It has to do with the *dominant-tonic* cadence so frequently

employed in the Psalms, yet so rarely found in prosody. This cannot be a case of simple coincidence; the occurrence is too obvious and too frequent. In principle, prosody was performed by a solo voice; psalmody was *accompanied by stringed instruments*.

Now, *strings* in great numbers, and when playing in unison, produce the *natural harmonic*⁶² of the 5th above the octave (the *three strings in unison* set in vibration by *each note* on the piano amply attests this). It is highly probable that the originators of the psalmody perceived this and took into account this law of physics. The frequent *dominant-tonic* cadence in the Psalms strongly attests to this.

We stated earlier, in our comparison of psalmody with the free evolution of prosody, that melodic movement mainly in *conjoint notes* (for syllabic singing) *will not coincide* with this *natural harmony*. It is normal that *3rds* or *5ths* would be more numerous in psalmody than in prosody (which is exactly the case). And when the *strings* are "*at the octave*" with each other, the phenomenon is all the more salient. This is no doubt why Psalm 6, whose superscription advocates just this arrangement of strings "*at the octave*," contains a monody where the same sound is prolonged for several syllables.

PSALM 6:6

[6] For there (is) not in death Your remembrance; in Sheol who will give thanks to You?

ki 'én bam_ma_veth zikh_ re_ kha bish_ 'ol mî yô_deh-lakh

< ^ / *

This occurs rarely in the Psalms, yet characterizes Psalm 6.

A question arising from these observations concerning the resonance as well as the very *structure* of the monody is: why would its creators—who so expertly employed these formulae, achieving a balance between the **modal*** and **tonal,*** depositing "root position" major or minor chords (let us note again that they are always on the "*good degrees*")—not have had the idea of placing some of them in the accompaniment? For example, under this melody from Psalm 130?

PSALM 130:2

[2] let be / Your ears / attentive to the voice of my supplications.

tih_yé_nah 'oz_ nô_kha qash_shou_bôth le_ qôl ta_ ha_noú_nay
 tonic subdominant

Bearing in mind the exiguous tonal range of these instruments with their unknown tessitura, without raising the delicate question of "inversions," where is the real musician who does not hear in this excerpt the progression of the *tonic chord* to the *subdominant*?

Even in the choirs, without foreshadowing "polyphony," it does not seem illusory to imagine that the voices were capable of maintaining several key-notes from time to time, thus giving more support to the melody (cf. Psalm 122, p. 399-400).

In certain psalms in the following mode (which is particularly propitious), the *exchanges* made among the 3rd, 4th and 6th degrees spontaneously propose themselves to the ear.

PSALM 148:1

[1] Praise the Lord in the heavenly spheres,

ha_le_ loú 'et- 'A_ do_ nay min- hash sha ma_ yim
 (1)] v ^
 6 4 3 4
 praise Him in the heights!
 ha_le_ loú hoú bam_m_ rô_ mîm

I know very well that some musicologists contest the harmonic significance of arpeggios that are deposited in certain melodies; but confronted by such highly-developed art, one can formulate hypotheses that are really quite plausible!

The question is completely different now; and one can agree with A. Schaeffner that those who refuse to credit the Ancients with the right to have thought "harmonically" give proof "*of a form of European or confessional provincialism!*"⁶³ A final remark shows its worth in this delicate question. Nowhere does the melody seem to be eclipsed, becoming content with a secondary role which would foreshadow a temporary instrumental predominance. Most likely this instrumental participation acted solely as the "accompaniment." Preludes or interludes would simply be *superfluous* in this music exempt of verbiage, since it is intimately tied to the verbal text to serve it and not to *serve itself*.

**7) THE EXPRESSIVENESS:
A WIDE SPECTRUM DEPLOYED
WITHIN THE SPAN OF ONE OCTAVE!**

The diverse elements of the psalmody have been detailed and explained one after another. What stands out in this chapter's analysis is the remarkable *reservedness* of the means employed: melody without excessive convolutions, based on diatonic movement,⁶⁴ and the absence of ethnic character (cf. p. 291); regular rhythms, musical meanings equally distributed, non-artificial thematic material which would testify too eloquently of musical prowess, forms without constraint. All this reserve of principle would hardly be eloquent if the fundamental characteristic of the psalmody were not its *extraordinary expression*, whose efficacy results from the cooperation of all the elements of a hidden science.

We have already noticed throughout this second part the power of this simple monody in this sense. In examining the details of this expression, we will be better capable of appreciating its disconcerting fullness. Such a result, attained with such little formal variety, is close to prodigious! The entire range of pure feelings associated with worship, along with the most varying testimonies of genuine faith, are musically represented here.

**a) No compartmentalization:
it is the spirit of each Psalm which is highlighted**

It would be a most limited classification if one would attempt to distinguish the *genre* of psalmody, defined and delineated by the general character differentiating the Psalms. Certainly a distinction is obviously

established between the songs of thanksgiving, glorification, prayer and supplication. But this is not the essential. For, whatever its primary expressive source, the music of each poem places a prominence on the *universality* of the sentiments it contains in a fashion which fits its *particular unity*, expanding its angle of vision everywhere. Moreover, that which the words potentially contained but could not make concrete of themselves (being retained by the positive significance attached to them), the psalmody *suggests*, consequently restoring to each psalm its particular richness inaccessible until now except after countless readings.

It is not a case of revealing the profound significance of one or several verses. It is the integrality of the *spirit* of a psalm that the psalmody communicates to us. It is in this manner that the music of each psalm really constitutes a *work of art*.

**b) From beginning to end,
the verity of expression has the primacy**

The deep humanness of the pain emanating from Psalm 137 stands out in the monody right from the first note (cf. p. 410). It envelops us, penetrates us. But in the *3rd verse*, this pain becomes *biting*, like a barb being driven into a wound (cf. p. 350). We can almost picture the scene! The oppressors order us to sing.

PSALM 137:3

[3] "Sing us one of the songs of Zion."

The musical notation consists of a single melodic line in G clef, common time, with a key signature of two sharps. The lyrics are written below the notes, aligned with the onset of each note. The lyrics are: shî_ roû la_ / noû mish_shîr tsiy_ yôñ. There are vertical lines under 'shî', 'roû', 'la', 'noû', 'mish', 'tsiy', and 'yôñ'. There is also a small diamond symbol above the 'shî' note.

Their self-sufficiency and their arrogance becomes transparent in the *condescendence* of this blind command. The exile reacts with silent, ferocious determination.

PSALM 137:4

[4] How can we sing the song of the Lord in a land / foreign?

♦ / ♦
'ékh na_shir 'eth- shir- 'A_ do_nay 'al 'ad_ math ne_khar
— / — / — |

But soon it gives into an intense, overwhelming despair.

PSALM 137:5

[5] If I forget you, O Jerusalem, may forget (its skill) / my right hand!

♦
'im- 'esh_ ka_ hékh ye_ roú sha_la_ yím tish_ kah_ ye_ mí_ ní
/ | / |

The intense, total love for the Holy City is affirmed.

PSALM 137:6

[6] Let cleave / my tongue / to the roof of my mouth, if I do not remember you (always).

\ ∞ <
tid_ baq le_ shó_ní le_ hi_ kí_ 'im- lo' 'ez_ ke_ re_ kí
< | < |

The remainder does not abandon this perfection. Right to the last note, this psalm is a masterpiece!

In this sense Psalm 29 is another summit. It also clarifies the exact meaning of the words. In reading this poem, certain persons have actually imagined that this glorification of the Creator has a hidden intention: that of gaining His support in order to conquer the adversary.⁶⁵ The psalmody *rectifies* this view. The power of God is described *for its own sake*, not to take advantage of it! The **cadence*** of the melody is quickened, its contours evoke "flames of fire" (cf. Ps 29:7)!

We have cited several of its verses in these last chapters (cf. p. 406-407). Taken together, they have an invincible strength; and conceptual unity is imposed, in spite of the numerous ideas described! This is a vibrant glorification which, devoid of any special emphasis, unfowers in incessant gradation.

PSALM 29:9

[9] in His palace everything cries out: "Glory!"

Musical notation for Psalm 29:9. The music consists of a single melodic line on a treble clef staff. The lyrics are written below the notes, with some letters having diacritical marks (e.g., 'ó' over 'o'). The lyrics are: oúb hé_kha_ló koul_ / ló_o_mer ka_bód. There are various musical markings above the notes, including a diamond, a circle with a dot, and a circle with a cross. Below the lyrics, there are three sets of symbols: a parenthesis with a diagonal line, a circle with a dot, and a circle with a cross.

Presenting opposing images within two successive verses is a privilege of this art, in spite of its being based on such limited means. In Psalm 52 we can admire with what vigor and reality the words: "*cut you down...tear you away...root you out*" are put into relief during the course of the same verse.

PSALM 52:7

[7] But God will cut you down forever; He will snatch you up

Musical notation for Psalm 52:7. The music consists of a single melodic line on a treble clef staff. The lyrics are: gam-'El yi_tats_kha_la_ne_tsah_yah_te_kha. There are musical markings above the notes, including a circle with a cross and a less than sign (<). Below the lyrics, there are three sets of symbols: a circle with a cross, a less than sign (<), and a circle with a cross.

and tear you away from your tent, He will root you out

Musical notation for the continuation of Psalm 52:7. The music consists of a single melodic line on a treble clef staff. The lyrics are: ve_yis_sa_ha_kha_me'_o_hel ve_she_resh_kha. There are musical markings above the notes, including a less than sign (<) and a diagonal line. Below the lyrics, there are three sets of symbols: a vertical line, a bracket under a 's', a circle with a dot, and a vertical line.

from the land of the living! Selah!



Then, without any transition, how *peaceful* the psalm becomes!

PSALM 52:8

[8] Will see / the righteous / and fear; and at him / will laugh.



Often the melody limits itself to putting into relief the expression of just a single word, making the tone characterizing it *emerge* from the uniformity of those surrounding it.

PSALM 130:7

[7] For with the Lord is loving kindness, and abounds / in Him / redemption.



Here it is discreetly enhanced, whereas in Psalm 52 the psalmist is literally "absorbed" in *the goodness of God* (cf. p. 396).

c) The laconicism of the Proverbs confirms to us the mastery and "tact" of psalmodic expression

The tone of the book of Proverbs is different. The music here is almost always a reserved support of the maxims. Contracted in its *ambitus**, nearly exempt of melismas, the melody is *eclipsed* permitting

the words to bear their full weight. A utilitarian music, certainly, but which is not at all comparable with the traditional synagogal cantillation (cf. p. 154 and Supplement II). It is the work of *specialists*.

PROVERBS 1:5

[5] Will hear / a wise man / and increase in learning, and a man of understanding
(will acquire) wise counsel.

yish_ ma' ha_kham ve_ yô_ sef le_ qah ve_ na_ bôn tah_ bou_ lôth yiq_neh

Nevertheless, it is not devoid of feeling. Wherever it is called for, the music responds.

PROVERBS 1:10

[10] My son, if / entice you / criminals, do not consent.

be_nî 'im_ ye_fa_ toû_kha hat_ta_ 'im 'al_ to_ be'

d) The monody is sometimes content to rectify the apparent sense of a verse

In five notes spread over three words, Psalm 130 establishes the idea of repentance! Five notes whose uniform rhythmical duration, in such limited tonal relations, *raises aloft a world of thought!* This poem has inspired many composers. We still hear the grave, resonant tones of certain versions of the *De Profundis*.

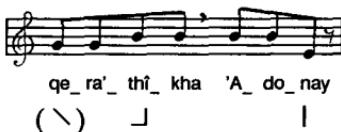
J. S. Bach grasped the human grief, the infinite contrition of the repentant believer in the midst of his sins.⁶⁶ This ancient psalmody concedes nothing to him in this respect. With what simplicity it expresses this emotion: with a movement of a 4th, *plunging* to the **tonic*** note;

[1] Out of the depths (of the pit)



and the fullness of a "minor" chord whose tension is accentuated by its resolution to the dominant.

I implore You, O Eternal!



By these few notes, the deep meaning of this Psalm is clarified; and this faithful interpretation persists, despite the slackening of the effect which certain verses would make one suppose (in the absence of the music). Verse 3 describes the human weakness which leads to pardon, and committed to this course, the succeeding words seem to *abandon* the initial despondency of verse one. But the melody rectifies this. It is insistent: *the weight of offenses persists despite implored pardon*. And how is this persistence manifested? Through the simple repetition of the melody of the previous verse which itself is *burdened* with the weight of offenses (cf. p. 386).

PSALM 130:4

[4] But with you (there is) forgiveness, so that You are feared.



A subtle reminiscence which, through its basic construction, redirects the sense of the words!

This then is truly a *veritable complex*, an accord between the monody and the text which gives the recovered psalmody its inestimable worth and curiously confirms its authenticity. Would any musician, any

music-lover wish to retract it (now that it is known) from its imperishable context? What can be said of this next psalmodized verse except that it *deliberately expresses, in a feeling of despondency*, the words otherwise dictated by enthusiasm?

PSALM 86:8

[8] No one (is) like You among the gods, O Lord,

'en- ka_ mō_ kha ba_ 'e_ lo_ him 'A_ do_ nay

nor are there any works like Yours!

ve_ 'én_ ke_ ma_ 'a_ sē_ kha

⁶⁷

/ | |

It is thus that thanksgiving and fervor take on numerous faces. It may be with the feeling of awe characterizing the psalmody of Psalm 100 (verse 1, p. 363), or it may be prayerful and illuminated, as bespeaks the intimacy of the following verse.

PSALM 5:8

[8] But as for me, by Your abundant loving kindness I will enter Your house,

va_ 'a_ nî_ be_ rob_ has_ de_ kha 'a_ bô' bê_ the_ kha

I will bow down at Your temple / holy / in reverence (for You).

esh_ ta_ ha_ veh_ 'el_ hê_ khal qod_ she_ kha be_ yir_ 'a_ the_ kha

Or it may be vibrant with gratitude, as in the exaltation of this verse.

PSALM 118:21

[21] I shall give thanks to You, for You have answered me; You have become for me
(my) salvation.

'ō_ de_ kha kî 'a_ nî_ tha_ nî vat_ hî- / liy_ shoû_ 'ah
\\ _ _ _ _ / | | | |

e) The faithful musical expression of complete faith

We see that *through its principle of reservedness*, the psalmody loses none of its good qualities with which prosody is endowed. *It is never outdistanced by the words and never exceeds the words themselves.*

It is dignified and moderate even when it is exuberant and exempt of all grandiloquence.

PSALM 96:13

[13] Before the Lord! For He is coming.

lif_ nê 'A_ do_ nay kî ba'_<
| | | | | |

It is reserved even when in supplication.

PSALM 54:3

[3] O God, by Your name, save me,

'E_ lo_ hîm be_ shim_ kha hô_ shî_ 'e_ nî
\\ . _ _ _ | | |

and by Your power vindicate me.

A musical staff in G clef with six notes. Below the staff, the text is written in a cursive font with vertical and horizontal bar lines under certain letters to indicate pronunciation. The text reads: ou_bigh_boô_rath_kha the_dî_ne_nî. There are vertical bars under 'ou', 'igh', 'boô', 'rath', 'kha', 'the', 'dî', 'ne', and 'nî'. There is a horizontal bar under 'igh'.

Nevertheless it adds its *very own message* which is the "substance" of the words. It does not treat the text in a trivial manner. Thus, when it exults in the Divine choice of this people from among the others,

PSALM 148:14

[14] He has lifted up a horn for His people, praise for all His godly ones,

A musical staff in G clef with six notes. Below the staff, the text is written in a cursive font with various marks indicating pronunciation. The text reads: vay_ya_rem qe_ren le_ 'am_mô te_hi_lah le_khol-ha_sî_dâv. There are vertical bars under 'vay', 'ya', 'rem', 'qe', 'ren', 'le', 'am', 'mô', 'te', 'hi', 'lah', 'le', 'khol', 'ha', 'sî', and 'dâv'. There is a horizontal bar under 'vay' and 'ya'.

(even) for the sons of Israel, a people near to Him, Alleluia!

A musical staff in G clef with six notes. Below the staff, the text is written in a cursive font with various marks indicating pronunciation. The text reads: lib_nê yis_ra_ 'el 'am qe_ro_ bô ha_le_ loû_yah. There are vertical bars under 'lib', 'nê', 'yis', 'ra', 'el', 'am', 'qe', 'ro', 'bô', 'ha', 'le', and 'loû'. There is a horizontal bar under 'lib' and 'nê'.

no pride is manifested, only love and infinite gratitude.

This is why, through this music and its transparency, we see more clearly the inexpressible faith which characterized the inspired singer, the great prophets, the promoters of Israel.⁶⁹ Translations have remained uncertain, interpretations subjective and convictions varied. Now, it is a faith marked by love, confidence, and gratitude, yet devoid of presumptuousness, which this psalmody *actualizes*, whether it be that of the assuaged believer who has found his way;

PSALM 23:3

[3] My soul He restores; He guides me in the paths of righteousness

Musical notation for Psalm 23:3. The melody consists of a single line of music in common time, G major, with a treble clef. The lyrics are written below the notes, with musical markings such as dots, dashes, and arrows indicating specific intonations or performance techniques. The lyrics are: naf_shî ye_shô_beb yan_he_nî be_ma'_ge_lâ_tse_ deq.

for the sake of His name.

Continuation of the musical notation for Psalm 23:3. The melody continues with a single line of music in common time, G major, with a treble clef. The lyrics are: le_ma'_an she_mô. Musical markings like dots and dashes are present above the notes.

or that of the bounded mortal who seeks it;

PSALM 27:11

[11] Guide me, O Lord, in Your ways; teach me in a path /

Musical notation for Psalm 27:11. The melody consists of a single line of music in common time, G major, with a treble clef. The lyrics are: hô_re_nî 'A_do_nay dar_ke_kha oûn_he_nî be'_o_rah. Musical markings like dots, dashes, and arrows are used to indicate specific intonations.

level, because of my enemies!

Continuation of the musical notation for Psalm 27:11. The melody continues with a single line of music in common time, G major, with a treble clef. The lyrics are: mî_shôr le_ ma'_an shôr_ray. Musical markings like dots and dashes are present above the notes.

or even that of faith itself, tenderly expressed, preaching human fraternity.

PSALM 100:3

[3] Know that the Lord Himself (is) God;



(it is) He who has made us and to Him we belong,



(we are) His people, and the sheep of His pasture.



What a moving testimony! And the music rekindles this faith of long ago, making it intimately penetrate us *in its entirety*.⁷⁰ Thus it takes on an *ethical* significance—and it is this very power which the Greek philosophers recognized and which became later corrupted.

Actually, it does not draw our admiration to itself *like a net*. It does not take into account the flattering approbation of the great men of this earth! It never pontificates. It does not even disdain on occasion to express, despite its remarkable message, a certain *meekness*. Certainly it does not have the freedom of prosody nor its oratorical bursts (even if the latter remain delicately shaded); but would these aspects have a place in the Psalms?

In a still more limited framework (nine, rather than ten scale degrees, and some of them only seldom employed), with the evenness of natural flow like the course of a tranquil river, it accomplishes an unmatched and matchless task. It constitutes a unique legacy which, in an epoch when art has fled its soul, makes one yearn for *basic, unadorned forms*.

NOTES

¹ As in prosody.

² An observation curiously supported by its etymology: literally, "a wheel."

³ In the text the sign is actually located *after* the word. The melisma is inserted at the extreme limit of the allotted syllabic time value.

⁴ Curiously, the etymology testifies to this. This melismatic sign is called "tube."

⁵ "The poetic texts discovered at Ras Shamra (ancient Ugarit) and dated from about the 15th century B.C.E., have revealed the close relationship of Phoenician and Israelite literature... Egyptian poetry also obeys parallelism." R. Tournay, *The Psalms*, pp. 49-50.

⁶ "To the balancing [equilibrium] of the parallelism adds the balancing of the rhythm which is not all iso-syllabic (arithmetic) or prosodic (quantitative) but tonic... rhyme and assonance have little place here." *Ibid.*, p. 39.

⁷ That is, the syntactic relationships.

⁸ The music, as we stated, reclaims its rights in psalmody.

⁹ In this is sometimes characterized the destination of certain Canticles for a choral ensemble (as the words also attest).

¹⁰ These are placed in relief by the accents of cantillation, or rather by the musical interpretations attached to them.

¹¹ Of course, sometimes the signs are only the means of depicting a melodic picture, as in this case, and thus do not require any accent.

¹² It happens, but rarely, that at the end of a musical section the tempo changes at the same time as the mode is altered (as in Psalm 24, p. 360).

¹³ Cf. p. 299.

¹⁴ We will not speak of the rhythmical values for the **caesura*** here, since we have previously treated it on p. 373.

¹⁵ In the light of the other subjects to be discussed, this is placed in the Appendix (cf. pp. 459ff), where its rules will be explained in detail.

¹⁶ Cf. p. 372.

¹⁷ It is produced by closely spaced fundamental degrees, the only means needed to depict the melody.

¹⁸ See also in this connection Psalm 19:3, cited on p. 398.

¹⁹ "Palm branches."

²⁰ One must also admire the finesse of the final cadence of this verse, being a "suspensive" cadence (although formed on the tonic).

²¹ A form cultivated in Oriental music, notably Egyptian music (cf. p. 310).

²² "A psalm to the god Enlil and a liturgy... separate their strophes by a refrain of popular style." A. Machabey, "La Musique Sumer-Chaldéene", *La*

Musique des origines à nos jours, p. 59. Only very few psalms have a refrain form, but this is to highlight the essential text as in Psalm 46 (cf. musical example, p. 364-365).

²³ For this musical score and others, address your requests to: Fondation Roi David, 9, rue d'Artois, 75008 Paris. [The materials already published may be ordered through KING DAVID'S HARP, INC., 795 - 44th Ave., San Francisco, CA. 94121-3305.—Ed.]

²⁴ This has already been cited on p. 354.

²⁵ Cf. p. 354.

²⁶ "Shigayon (Ps. 7) corresponds to the Akkadian *shegu*, a psalm of lamentation." R. Tournay, *The Psalms*, p. 9.

²⁷ "After the meaning of the Assyro-Babylonian *katamu*, 'to cover,' which is employed in the sense 'to close (the lips),' we see in the indication *mikhtam* the action of psalmody at half-voice, with closed lips." E. Dhorme, *La Bible*, op. cit., p. 916.

²⁸ Musically speaking, this is obvious, especially in Psalms 57-59.

²⁹ "A type of poem whose nature is difficult to define: an instructive, didactic poem(?)". Zadoc Kahr, *La Bible* (Edition Colbo), p. 1008, note 14.

³⁰ Based on the fact that Sa'adia Ga'on (10th century) translates the expression *hamma'aloth* by "Song of Praise" which proceeds with an elevation of the voice. Cf. S. Corbin, "La cantillation des rituels chrétiens," *Revue de Musicologie* (1961), p. 32.

³¹ "The name *Gradual* derives from the fact that the psalms were sung on the *gradus* or *ambon*, as were the [narrative] readings." L. Duchesne, *Origines des cultes chrétiens*, p. 179.

³² "Gradual psalms that one sang for "going up" to Jerusalem and to the Temple." E. Dhorme, *La Bible*, vol. II, p. 1177. '

³³ R. Tournay, *Les Psaumes*, p. 38.

³⁴ We have made allusion to this similarity in the historical section (cf. p. 124).

³⁵ Maur-Cocheril, "Psaume," *Encyclopédie de la Musique* (Fasquelle), vol. 3, p. 498.

³⁶ "It must be stated that in Egypt, as in Sumer, the vocal solo with instrumental accompaniment was practiced." A. Machabey, "Musique Egyptienne," *La Musique des origines à nos jours*, p. 61.

³⁷ Except for the "Canticles" and perhaps the "prophets" (cf. I Sam. 10:5), but this would be a matter of inspired prose.

³⁸ See also II Chron. 5:13. The sacerdotal trumpet would have been straight and slender, made of metal and flaring to a small bell at the end (producing a piercing timbre no doubt).

³⁹ Cf. *La Bible*, Edition Colbo, p. 1314, note 32.

⁴⁰ Contemporary iconography gives us examples of similar instruments.

⁴¹ The Bible does not mention any instruments of worship having only two or three strings, such as ancient lutes had.

⁴² Israel Adler translates *nebel* as "harp" in "La Musique Juive," *Encyclopédie de la Musique* (Fasquelle), vol. II, p. 641; see also E. Dhorme, *La Bible*, op. cit. (II Samuel 6:15), vol. I, p. 944. I. Adler translates *kinnor* as "lyre," E. Dhorme as "cithar" (loc. cit.). The difference between these instruments was not necessarily great. E. Combarieu specifies: "The harp has strings of unequal length; the lyre, of lesser volume, with strings of equal length; the Semitic lyre is nearly rectangular and has nothing like an arch (the prototype of the Egyptian harp). The musician holds it under the left arm and, while walking, strikes the strings with a plectrum." *Histoire de la Musique*, vol. I, p. 57.

⁴³ *Dictionnaire de la Bible*, vol. 4, col. 1352.

⁴⁴ The cortège accompanying the transfer of the Ark of the Covenant to the City of David included, among various instruments, bronze cymbals (I Chron. 15:19). Let us note that although Psalm 150 mentions various instruments serving to praise the Lord (vss. 3-5), this does not prove that these were all instruments used for worship in the Temple courts. The superscription of the psalms is where mention is made of instruments not normally used. Several of the instruments mentioned in Psalm 150 are never mentioned in the superscriptions.

⁴⁵ I Sam. 16:23; 18:10; 19:9 (not with the plectrum, as elsewhere).

⁴⁶ *Dictionnaire de la Bible*, vol. 4, col. 1352.

⁴⁷ According to Viroilleau in "Musique Suméro-chaldéenne," *Musique des origines à nos jours*, p. 60.

⁴⁸ To the house of Obed-Edom, the Ghittite.

⁴⁹ Whereas it is also said that the Hebrews sometimes spontaneously sang songs of praise (II Chron. 7:3).

⁵⁰ *Origine des instruments de musique*, p. 270. According to E. Combarieu, among the Hebrews, "because of its shrill sounds, it ended up being used in scenes of mourning, as among the Greeks and Romans." *Histoire de la musique*, vol. I, p. 56.

⁵¹ Zadoc Kahn, *La Bible*, op. cit., p. 1019, note 20. [Actually, I Chron. 15:20 proposes that 'alamoth here refers to harps tuned to a "high" register. The expression 'al - 'alamoth is the same in both texts. Cf. Suzanne Haïk-Vantoura, *Les 150 Psaumes dans leur mélodies antiques* (Paris: Fondation Roi David, 1985), p. XXVIII.—Ed.]

⁵² E. Dhorme, *La Bible* (Bibliothèque de la Pléiade), vol. II, p. 902.

⁵³ Z. Kahn, *La Bible*, p. 1018. [The idea that *shoshannim* refers to "a popular tune" of some sort is excluded by a comparison of the psalms bearing

this superscription.—Ed.]

⁵⁴ This is sensible from the first note of the superscription, as one can observe.

⁵⁵ "In the manner of *alamoth*" (cf. p. 418 and note 51 of this chapter).

⁵⁶ The Pheonician lyre and the Greek *magadis* were tuned in octaves. This was a performance trick borrowed from the East, according to J. Combarieu. He states that the word *magadis* derives from *magas* ("a bridge"), and that "the strings of this instrument were arranged in such a manner as to permit the simultaneous attack of strings responding at the octave." Cf. *Histoire de la Musique*, vol. I, p. 98.

⁵⁷ In fact, the daughters of Heman are mentioned incidentally in the Chronicles (I Chron. 25:5), but not as being part of the choir.

⁵⁸ "Polyphony did not exist in Byzantium; only certain pieces were capable of 'reclotching' what the ancients called *heterophony*, 'other song' or 'accompanying voice.' Sometimes heterophony was a genuine counterpoint in 'perfect' intervals: octaves, 5ths, 4ths, note against note. Otherwise, while the melody evolved in slow-moving notes, another performer embroidered the theme, no doubt at the octave. This procedure subsists all throughout the East." A. Gastoué, "La Musique Byzantine," *La Musique des origines à nos jours*, p. 73.

⁵⁹ A. Schaeffner, *Origine des instruments de musique*, p. 208.

⁶⁰ The "double ison" of the Byzantines, the vocal sustaining of tonic and dominant simultaneously, is derived from this. Cf. R. Verdeil, "La Musique Byzantine," *Larousse de la Musique*, vol. I, p. 144.

⁶¹ Cf. Postface.

⁶² A "resultant" acoustical phenomenon.

⁶³ A. Schaeffner, op. cit., p. 313.

⁶⁴ With chromaticisms made through alterations, without micro-intervals (cf. p. 288).

⁶⁵ "The storm theme describes the Divine power and glory which crushes the enemies of Israel and assures peace." R. Tournay, *Les Psalms*, p. 151.

⁶⁶ J. S. Bach, *Du fond de l'abîme je crie vers toi*, organ chorale (Ed. Bornemann, vol. XII, p. 54).

⁶⁷ These words paraphrase verse 11 of the *Song of the Red Sea* (cf. p. 117).

⁶⁸ See p. 375, where the same verse is cited in its entirety.

⁶⁹ Cf. Postface.

⁷⁰ To enter into the spirit of the psalms of David as is evidenced by his music is to feel for ourselves his very faith. Through him we feel closer to the Creator. A unique experience!

ANNOTATION

THE TECHNICAL SAFEGUARDS SURROUNDING THIS RESTITUTION

— Summary —

- 1) The cogency of the deciphering key is not contradicted by a single sign 444
- 2) The same notation figures in both the ancient biblical manuscripts and in modern Hebrew Bibles 444
- 3) It is only by being thus identified (according to the deciphering key) that the signs create a genuine music, in accordance with the spirit of the words 446
- 4) The deciphering key applies to every musical accent of the Bible; the resultant music concords with the sense of every verse 446

1) THE COGENCY OF THE DECIPHERING KEY IS NOT CONTRADICTED BY A SINGLE SIGN

This effort does not constitute an hypothesis. It is confirmed in its deductions by thorough experimentation. It is scientific, if indeed that which is science consists more in the facts and their analysis than in the ideas alone and their relationships (which Occidental culture has taken as a base since the time of Descartes).

Far from contenting myself with vaguely explaining a possible deciphering key and letting others experiment laboriously with it, I clearly stated my case and accompanied it with the signs concerned, placed above or below the words that they affect, each in its exact position, while adding a literal translation which clarified the meaning of the words. As a consequence, the reader who has been following my exposition has been able to realize for himself the exceptional efficacy of the deciphering key and its simplicity (which by itself speaks volumes).

2) THE SAME NOTATION FIGURES IN BOTH THE ANCIENT BIBLICAL MANUSCRIPTS AND IN MODERN HEBREW BIBLES

It was by means of a present-day Hebrew Bible that I accomplished all this research,¹ all the while referring to several other editions (nearly identical with respect to the cantillation signs). It had been explained to me in the meantime by the most authoritative specialists² that this Bible issued from a 19th-century edition which was faithful to the texts of the most ancient manuscripts,³ and from the second printed edition of the Hebrew Bible, edited by Bomberg in Vienna at the beginning of the 16th century. This is the same edition which was corrected by the famous Elias Levita, the humanist that I have amply cited.⁴

Prior to receiving this information, I myself had conducted some very helpful research. I took in hand the Bomberg Bible, and I compared the text and musical signs from my own Bible with those of the two realizations of this edition, the one produced for use by the rabbinic corps, the other modern. Thus I was able to observe that, with rare exceptions, the signs concorded both in their forms and in their highly diverse positions.⁵

This similarity itself did not appear sufficient to support the undertaking that I was pursuing, since this first edition dated from only a relatively recent epoch.

For this reason I examined many of the most ancient manuscripts carrying this Tiberian notation. In particular, I examined the one written by Moses ben Asher in 895, the first dated manuscript known to us (cf. p. 104), as well as excerpts from a complete manuscript of the Bible (the third such manuscript produced, it seems), dating from the beginning of the 11th century.⁶ The same signs are to be found in the same locations.

A parenthesis must be made here, indicating that certain currents of the *Masorah* attributed to the sign *l*, *silluq* (the *tonic**) a different meaning according to the place which it occupies in the phrase. Some would consider it as a semi-tone at the beginning or middle of the phrase member, having then a lesser divisive function. In this case, they named it *ga'ya*.⁷ This distinction in the interpretation of this sign is responsible for the fact that certain scribes, certain printed editions (even the most recent ones) leave out, purely and simply, this sign when it does not really mark a "division" in the text!⁸—even though the real Tradition includes it.

It is obvious that, musically speaking (as we mentioned earlier on p. 169), the *tonic** note does not have the same function when it is found at the beginning or middle of a phrase member as when it is found at the end of a verse. Only at this latter position does it take on a *cadential significance*. The Masoretes sensed this distinction. It is nonetheless obvious that this sign always represents the same tonal degree: the first note of the mode; and no one is justified (under the guise of nuances of exegetical interpretation) in excising it from the context of which it is an inherent part. This clarification made, the reader, in comparing an edition thus mutilated with a standard edition, will know which to retain; confronted with the indisputable melodic deficiency which results from such mutilation, he will know each time that he is dealing with the omission of the tonic note.

It is to be noted as well that the vertical line (*paseq*) placed between certain words of the text is not properly considered an "accent." It is given no tonal significance.⁹ Armed with all these indispensable, complementary facts, I was able to acquire the certitude that the cantillation which is hereby restored (thanks to my musical interpretation of the signs) actually dates back at least 1000 years. This is a most important confirmation which was well worth emphasizing.¹⁰

Here is a fact which will provoke surprise: in scrupulously respecting the signs of the Bible which I used, without the slightest "twisting" of the deciphering key, without changing any sign whatsoever, nor even

displacing a single sign in relation to a syllable or vowel, I was able to realize all these biblical masterpieces which command our admiration! It is important now to state, for the enlightenment of some of us, what constitutes the real basis of the deciphering key.

3) IT IS ONLY BY BEING THUS IDENTIFIED (ACCORDING TO THE DECIPHERING KEY) THAT THE SIGNS CREATE A GENUINE MUSIC, IN ACCORDANCE WITH THE SPIRIT OF THE WORDS

Let us be specific. The melodic interpretation vested in each sign does not result from the choice of one solution among others. It imposed itself as the only possible choice, in the continuity of the biblical texts. No other interpretation, placed alongside it, can be compared with it. From all points of view it is unique. This result is surprising but it is necessary now to explain something about what a "deciphering key" really is.

The Key penetrated the secret of the notation, explaining practically every detail concerning it. However, this notation is not improvised. The totality of this study proves the contrary—and here is the crucial point: that it reflects a genuinely archaic conception of music theory, which we have but imagined from afar, in the absence of documents. If this had only produced an ordinary sort of music, why bother? But the result is so transcendent that the listener can imagine himself hearing admirably successful, quasi-contemporary compositions!

The inspiration of this music (of which it gives proof of itself) is yet in fact the one thing in which I did not directly have the least participation. My participation was completely different. In abridged form, it was a participation composed of suppositions, experimentation, deductions, rejections, new hypotheses, each confronted with laboriously acquired convictions—all placed into question again and again!

4) THE DECIPHERING KEY APPLIES TO EVERY MUSICAL ACCENT OF THE BIBLE; THE RESULTANT MUSIC CONCORDS WITH THE SENSE OF EVERY VERSE

Incomplete at the beginning of my research, the Key nevertheless clarified the meaning of some of the most famous verses of the Bible. The exhilarating results forced me to chip away at it more and more delicately, so that these chiselings finally opened up the musical "sense" of all the verses. This work was long and tedious—all of it carried out

without one preestablished fact. Perfected in this manner, the Key henceforth operates by itself. If it lifts the veil concealing marvels, it is because the notation itself concealed them as its secret.

For the reader has judged for himself: the Key applies everywhere, without the slightest concession. Those who, being ill-informed, have imagined that somehow I personally *created* these melodies, are totally in error. One need only think twice about it: it would honestly require a supernatural power, not only to compose such inspired music of uncommon skill, but especially to make it coincide in its slightest "undulations" with the rigors of a preestablished notation!

Let us thoroughly deal with the question since the decipherment of a notation is not so common an occurrence that one should hurry past it. Some people think that, perhaps, the author could have unconsciously exerted a certain influence upon the meanings attributed to the signs, and consequently in some fashion her personality shows through in the direction which it gave to the details of the identification. Let such disabuse themselves. This is impossible. The *simplicity* and the *rigor* of the Key formally oppose each other. Its application to the entire Bible is the *guarantee* of its undeniable authenticity.

What makes a scientific hypothesis become a theory is that it is proved by experimentation. Englobing a more-or-less-considerable number of elements which it examines, it is accepted because it is the best explanation of the facts.

Of course, such a theory, yesterday accredited, is outdated today; the means of scientific investigation are continually being perfected. Like a microscope with an ever-growing power of magnification, science daily incorporates into its vision of the world facts that it never before dreamed of. But concerning our subject, the case is completely different. The evidence of the Key cannot be put back into question. It has been experimentally demonstrated, nothing having been left in the shadow of our scrutiny. As for the *historical testimonies*, they all confirm the authenticity of this restitution. And to this list of impressive proofs the *etymological meanings* of the ancestral names have just added their seal of approval!

NOTES

¹ The "Edition Colbo," which states: "Hebrew text after that of the Masoretic version" (Paris, 1967). Cf. note 3.

² Notably Gerard E. Weil, already cited; and above all the late Chief Rabbi *Henri Schilli*, director of the Rabbinical School of Paris.

³ The edition of *Meir ha-Levi Letteris*, Vienna, 1873. One also notices that the typography is exactly the same and issues from that of the earlier edition. [In the U.S., the Letteris Edition is available from Hebrew Publishing Company (New York) and (with the King James Version in the margin) from the American Bible Society (New York). The Letteris Edition text is used also in *The Interlinear Bible*, 2nd ed. (Hendrickson, 1986) (cf. footnotes 6 and 8).—Ed.]

⁴ Until this century, this was the edition serving as the basis for all the printings of the Hebrew Bible, according to G. E. Weil, (*La Massorah*, op. cit., p. 96).

⁵ Apart from some omissions, the rare divergent signs are present in only one or the other of the two editions, printed nearly simultaneously: the one used today and the other the monumental Rabbinic edition of 1524-25 (the first edition of the "Rabbinic Bible" dates from 1517).

⁶ The MS. B19a of the Public Library of Leningrad, found in a synagogue of Fostat (Old Cairo). [This is the basis of the *Biblia Hebraica Stuttgartensia* (BHS) commonly used by scholars today. BHS is the Hebrew text used in *The NIV Interlinear Hebrew-English Old Testament* (Zondervan, Grand Rapids, MI).—Ed.] The first two complete biblical manuscripts containing these signs date from 930 C.E. One of them is the famous "Aleppo Codex", presently at Jerusalem (because of the sanctity with which it was regarded, it was never photographed in its entirety). Cf. Postface.

⁷ The name *meteg* was given to this sign much later (cf. Mayer Lambert, *Traité de Grammaire Hebraïque*, p. 34, note 60).

⁸ Mayer Lambert, *ibid.*, p. 34, states at the end of note 3 that "these different uses of *meteg* have no grammatical significance and are often left out in the manuscripts and printed editions." [MS. Leningrad B19a, BHS, the Snaith Edition of the Hebrew Bible, and others, show such discrepancies (among others) in their accentuation. Cf. Suzanne Haïk-Vantoura, *Les 150 Psaumes dans leurs mélodies antiques* (Paris: Fondation Roi David, 1985), pp. VI-VII.—Ed.]

⁹ Mayer Lambert, op. cit., p. 33, par. 59. [*Munah*, when followed by *paseq* is called *munah legarmeh* ("independent *munah*") or simply *legarmeh* by Hebraists, cantors and the early treatises. Several other signs in both prosodic and psalmody systems may be followed by *paseq*. This line is inserted in order

to point out the "disjunctive" character of a sign generally used as a "conjunctive" (according to grammarians). Yet this arbitrary designation may contradict the natural division of the words. Curious, too, is the fact that several psalmodic signs are also considered different "accents" depending on whether they are or are not followed by *paseq*. Why, then, when certain *prosodic* signs are followed by *paseq*, are they not so considered (e.g. in six verses of the Song of Songs, Num. 17:28 [17:13, English versification] and elsewhere)? It seems to us that *paseq* was probably added after the creation of the written accentuation itself.—Ed.]

¹⁰ Cf. Postface.

וְאֶת-בָּנָיו וְאֶת-בָּנָתָיו וְאֶת-בָּנָתָיו וְאֶת-בָּנָיו

בנין : גדר רוחב וסינון מוגן וקירותיו מוליכו פגודה רוחנית שגדולה.

שְׁמַדְרָאָה חֲבָבָל
וְחַזְוּעִילְעַמְּנִינָה
וּרְעֵן בְּגַעַת תְּבַשְׁוֹן
מִינְעָנוּכָה רַבְבָּה

בשאלה רפיחתו על
הזרע לא באה זהה לנו
שלים והוא קראין ג' ^ג
מייריה הראה טבון
זהה אעכ"י שם את
ירושלים קרי עליון
וזקדים סכ"ב גם
עליה הראה נגמיש
עליה שפט ר' יודה
בזאת הראה ואשכנז אמר
ירושלים ארכון עירס
לברוחמים מלעיסון
שרתינו שרטו ונאט
עליזר כל גוי קראין
בזאת הראה נאמנה
אהוב חלוטם בתמוץ
ויבנו בפטגון גווען
בהתוודה אבגד

ואמר אליהם אמרתב
בעיניכם החשבה
ואפסדא חדרתא מוקה
אותשברירישים
קסף ויאמר הו הא
חט' ליהו אלהי עזיר
אזר והיר אשר קוז
כעליהם ואחד ני
שלישת הנקראת אל
אתו בית יהוד " א
חויזר ואנער ע. אט
מקריח שוני אריה מאי
להפר את הנזחן
חויזד ובין ישראלי
ויאמר הו הא
עד קח לך בירעה
אוול ביה פה אנבל מליט
יעה באורי הנכחות
לא יפרק להנער לא מושט
והנערת אל דרפה
הכעבד לא למל נושא
הבריאה לא בלא פוטיס
יפרך הו רשותה אל

וכתנו את הארץ
ולא עוליך אורע
את עזואה הרעה לבנו
עניהם ואקוח נט
שעימך לות לאזרך
קראת נעל ואחדך
קראת חילך ואדרע
ארה צא ואבחוראות
שלשות רענברה
אחד ותקודר גנטש
בחכמתך בחל
ב כל ארלה ארעה
אתכם הטעות מתאות
והנכחות תבהר
והונשאות תאכלו
אשר את בשער שער
ואחד את מלדי את
נעך אודע את להן
את מירין אשפטת
את כל העמים והט
בזבז הזו מדעינו
עניהם צא חשמורין
אניכם רביהודה חא

הניע עי' משלב תרבות. ולו אמג' הול פון דרכ' בו רצף קרי' עטש' זאָז.

PLATE XXI
MANUSCRIPT OF MOSES BEN ASHER

(895 C.E. — Zechariah 11:6b - 12:4a)

Discovered in the Geniza of a synagogue in Old Cairo

A column of the famous manuscript of Moses ben Asher (cf. p. 105), provided with the cantillation signs according to the millenary secret of the Tradition. One thousand years later, standard Hebrew Bibles (cf. p. 444) still contain precisely the same signs (with rare exceptions) in precisely the same locations.

It is to this dual fidelity that we owe the astonishing reconstitution of the marvelous chants that the Bible concealed, unknown to us all.

כ

משארם רוחה על
 ישראל נאמנהו נטה
 שליכ ליסך ארץ ג
 וערוזה גלבוקט
 הנוד עמי טס את
 ירושלם סג'ר על מל
 העמים סבב אום
 עליה אורה הוותת מיש
 ירושם בחדידה
 בזבח הזהא אשכח את
 ירושלם אט מעסדה
 בלוד העמיט בלוינס
 שרחות ישרטו ותאמט
 עליך מגוין דארץ
 ביום הזה א נאמנהו
 אפה כמלוסט בתרמיהו
 ורכז בשגנוז וען
 בית יהוד א פקח

ג

אי
וְשָׁגַן
סָגֵן
גָּזֶן

ה

וְלִזְמָן
בְּלִזְמָן
וְלִזְמָן
וְלִזְמָן
וְלִזְמָן

וְלִזְמָן
וְלִזְמָן
וְלִזְמָן
וְלִזְמָן
וְלִזְמָן

PLATE XXII
MANUSCRIPT OF MOSES BEN ASHER
 (895 C.E. — Zechariah 12:1-4)
 Discovered in a Geniza of a synagogue in Old Cairo

יְשָׁא דְּבַר־יְהוָה עַל־יִשְׂרָאֵל נָאָמֵד־יְהוָה נָטָה שְׁמִים וַיָּסֶד
 עָרֵץ וַיָּצֶר רֹוח־אֲדָם בְּקֶרֶבְוָה: הַנָּה אָנֹכִי שָׁם אֶת־יְרוּשָׁלָם?
 וְאֶת־עַל לְכָל־הָעָמִים סָבִיב וּנְם עַל־יְהוָה יְהוָה בְּמִצְדָּר
 לְיְרוּשָׁלָם: הַנָּה בַּיּוֹם־הַהוּא אֲשִׁים אֶת־יְרוּשָׁלָם אָכְנוּ
 יְעַמְּךָה לְכָל־הָעָמִים כָּל־עַמְּךָה שְׁרוֹט יְשַׁרְטוּ וְנָאָסְפְּוּ
 אֶלְيָהָה כָּל נָוִי הָאָרֶץ: בַּיּוֹם הַהוּא נָאָמֵד־יְהוָה אֲפָה כָּל
 שִׁיטָּם בְּתַחְמֹזָן וּרְכָבוֹ בְּשִׁגְעֹן וְעַל־בִּית יְהוָה אֲפָקָח אֶת־
 יְיָעֵן וְכָל סִימָנָהָיָם אֲפָה בְּעַזְוֹן: וְאָמַרְתָּ אֶל־יְהוָה יְהוָה
 נְלָבָם אָמֵצָה לְיִשְׁכַּב יְרוּשָׁלָם בְּיְהוָה צְבָאוֹת אֱלֹהִים:
 בַּיּוֹם הַהוּא אֲשִׁים אֶת־אֶלְפִּי יְהוָה קְבִּיר אֲשֶׁר בְּעִצִּים
 בְּלִפְנֵד אֲשׁ בְּעָמֵיד וְאַכְלוּ עַל־קְמִין וְעַל־שְׁמָאָל אֶת־
 גָּלְדָּהָעָמִים סָבִיב וַיִּשְׁכַּב יְרוּשָׁלָם עַד תְּחִזְקָה בְּיְרוּשָׁלָם:
 דְּזֹעַצְתָּ יְהוָה אֶת־אֶדְלֵי יְהוָה בְּרִאשָׁנָה לְמַעַן לְאַתְנָדָל
 גַּפְאָרָת בְּיְתְּדוֹד וְתִפְאָרָת יְשֻׁב יְרוּשָׁלָם עַל־יְהוָה:
 בַּיּוֹם הַהוּא יָגַן יְהוָה בְּעֵל יֹשֵׁב יְרוּשָׁלָם תְּהִלָּה הַגְּבָשָׁל

PLATE XXIII

The same passage (Zechariah 12:1-4) in a modern Hebrew Bible (Edition Colbo, Paris), which served as the basis of research for the author. The cantillation signs have the same location at the beginning or at the end of a syllable, at the first or second stroke of the same letter.

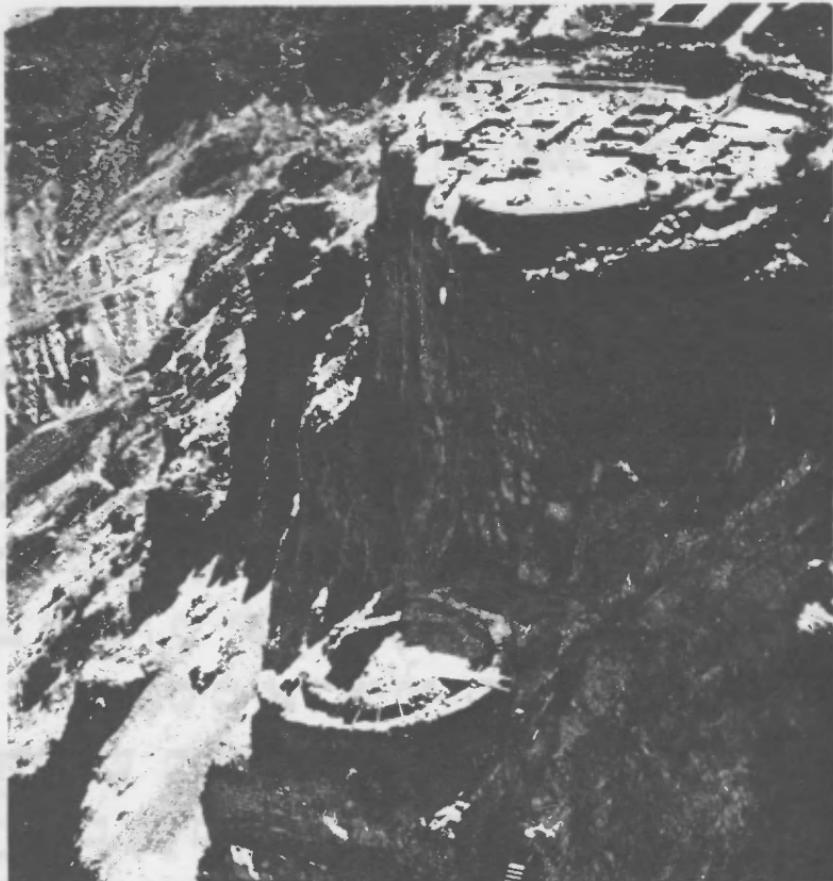


PLATE XXIV
MASADA: SYMBOL OF FIDELITY

At the fortress of Masada, 960 Jewish resisters (having taken refuge there after the destruction of Jerusalem and the Temple in 70 C.E.) repulsed, for an entire year, the attacks of 6,000 Roman legionnaires. At the end of their resistance, they put each other to death rather than fall into the hands of the enemy.

The excavations at Masada, systematically undertaken from 1963 to 1965, bring to light (among other things) Psalms 81-85 and Psalm 150. A capital fact supporting our conclusions is that "the text of the Psalms and its orthography are *identical* to those of the traditional Masoretic Text."

This links the manuscripts of Moses ben Asher to the ancient tradition of the Bible. (Cf. Postface).

APPENDIX

HOW THE RESOLUTION OF THE ORNAMENTS IS AFFECTED BY THE PARTICULAR POSITIONS OF THE UPPER SIGNS

— Summary —

A: PROSODIC SYSTEM

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- 2) Upper sign occurring at the caesura 459

B: PSALMODIC SYSTEM

- 1) Upper sign occurring within an incidental phrase 464
- 2) Upper sign occurring at the caesura 468

A: PROSODIC SYSTEM

The specific location of the upper signs modifies the *resolution* of the added notes and consequently the *melodic line* also. It limits itself to a few precise cases that we will examine one after the other, first of all in the *prosody*.

Two modalities are possible: 1) the upper sign occurs at the *beginning* of the syllable; 2) the upper sign occurs *within* the syllable.

From these specific cases, all evidence remaining the same, are deduced several simple, logical rules, varying according to whether the sign affects a *syllable within* the incidental phrase or the *last syllable* of the phrase i.e., *at the caesura*. Whatever the case, the return to the basic, constituent degree can only be: *normal*, *anticipated* or *avoided*. We will see in various settings what will determine the adopted solution.

1) Upper sign occurring within an incidental phrase

A sign occurring at the *beginning* of a syllable (B) may have a *normal* return (n). The added note or melisma occurs at the beginning of the syllable. The resolution usually takes place without any problem *on the next syllable*.¹

GENESIS 45:1

B) n)

[1] ve_ lo'- ya_ khol yô_ sef

1 | \ /

EXODUS 3:9

B) n)

[9] ve_ 'a_ tah hin_ neh

l: | \ /

This is the most frequent resolution. One can find it quite easily in the examples given throughout this text.

A sign occurring at the *beginning* of a syllable (B) may have an *anticipated* return (a). The note or melisma still occurs at the beginning of the syllable, but the sign representing a *new constituent degree*² occurs on the next syllable. Because of this, an *anticipated* return is effected over the syllable affected by the first sign:³

GENESIS 1:14

B) a) ↓

A musical staff in G clef. It shows a melisma on the word 'le-hab-dil'. The notes are connected by a bracket under the first three syllables. An arrow labeled 'a)' points downwards from the note on 'dil'.

|:
le_ hab_ dil bén
(-) /

A sign occurring *within* a syllable (W) may have a *normal* return (n). Even though the upper sign occurs *within* a syllable, the resolution will be *normal*;⁴ even if the melisma is important.

EXODUS 3:1

W) n)

A musical staff in G clef. It shows a melisma on the word 'eth-hats-tso'n'. The notes are connected by a bracket under the first three syllables. An arrow labeled 'n)' points downwards from the note on 'tso'n'.

'eth- hats_ tso'n 'a_ har
(<) -

GENESIS 1:7

W) n)

A musical staff in G clef. It shows a melisma on the word 'E-lo-him'. The notes are connected by a bracket under the first three syllables. An arrow labeled 'n)' points downwards from the note on 'hym'. A symbol resembling a small infinity or a loop is placed above the staff between the first two notes of the melisma.

'E_ lo_ him 'eth
(-)

ESTHER 5:2

W) n)

A musical staff in G clef. It shows a melisma on the word 'vay-hi'. The notes are connected by a bracket under the first two syllables. An arrow labeled 'W)' points downwards from the note on 'hi'. Another melisma follows on the word 'khir-'. The notes are connected by a bracket under the first two syllables. An arrow labeled 'n)' points downwards from the note on 'hir-'. A symbol resembling a small infinity or a loop is placed above the staff between the first two notes of each melisma.

vay_ hi khir_ 'oth

NEHEMIAH 1:6

Musical notation for Nehemiah 1:6. A single melisma on a single note is shown on a treble clef staff. An upper sign (W) is placed above the note, and a lower sign (n) is placed below it. The lyrics "fe_thoû_hôth" are written below the staff, with a bracket under "fe_thoû_". The note ends with a fermata (F).

An upper sign occurring *within* a syllable (W) may have an *avoided return* (e). It is the *intervention of a new sign*, above or below the words, on the following syllable, which requires the *eluding* of the resolution of the appoggiatura or melisma during the syllable (since an *anticipated* resolution would appear as a disgracious surcharge);

SONG OF SOLOMON 1:4

Musical notation for Song of Solomon 1:4. A melisma on a single note is shown on a treble clef staff. An upper sign (W) is placed above the note, and a lower sign (e) is placed below it. The lyrics "na_ghî_lah ve_nis_me_hah bakh" are written below the staff, with a bracket under "na_ghî_lah". The note ends with a fermata (F).

EXODUS 15:19

Musical notation for Exodus 15:19. A melisma on a single note is shown on a treble clef staff. An upper sign (W) is placed above the note, and a lower sign (e) is placed below it. The lyrics "ki_ba sou_s par_oh" are written below the staff, with a bracket under "ki_ba". The note ends with a fermata (F).

unless, of course, by *coincidence* one finds a sign marking the expected degree which calls for the pure and simple *accentuation* of that degree.

LAMENTATION 5:2

Musical notation for Lamentation 5:2. A melisma on a single note is shown on a treble clef staff. An upper sign (W) is placed above the note, and a lower sign (n) is placed below it. The lyrics "na_ha_la_the_noû ne_hef_khah" are written below the staff, with brackets under "na_ha_la_" and "ne_hef_khah". The note ends with a fermata (F).

2) Upper sign occurring at the caesura

We now examine the **melisma*** in the situation where it concerns us the most (to demonstrate that this concern does not have the music for its basis, but that it derives from the *adopted punctuation* – cf. p. 305).

This is the case of an upper sign placed either at the beginning of or within the last syllable of a word *terminating a hemistich*, and most especially a *phrase member*. When the sign occurs on the last syllable of a word preceding a breath, the return to the basic degree will be generally *anticipated*. It is a matter of not *amputating* the resolution from the melodic line, a resolution which is often necessary in the phrase member itself in order to complete its musical sense. But this is often an affair of interpretation; each case is *individual*.

SONG OF SOLOMON 1:4

...has brought me / the king into his chambers

he_bí_ 'a_ní ham_me_lekh ha_da_ráv
(^)

Here it is not possible to postpone the resolution! The following example is less peremptory, being an example of descriptive music. The "evocation of a storm" also seemingly demands an *anticipated* resolution; so resolved, the musical phrase is more complete.

JONAH 1:4

[4] But the Lord sent out a / wind / violent into the sea,

va_dó_nay he_tíl roú_ah- ge_dó_lah 'el- hay_yam

and there was a / tempest / mighty in the sea.

However, let us note that here the resolution could be *normal* (that is, effected on the next word); but in this case the breath itself becomes tangent.

[4] But the Lord sent out a / wind / violent into the sea,

and there was a / tempest / mighty in the sea.

n)

As can be seen, certain cases allow for two options. However, such possibilities demonstrate that the *manner of speaking* (or *singing*) determines the final configuration of the monody. From the time of David, the choir directors⁵ and the singers themselves were musicians who passed their art from father to son. Their knowledge was transmitted orally and from practical experience. Consequently from *acquired habit* they must have answered such questions as these which can face us. We discover the answers by logical deduction.

The case of *normal resolution, even after a breath*, is not excluded; it is read in the music itself. The "added note" then serves as a *simple flexion* (as one often finds at the caesura in Gregorian chant).

LAMENTATIONS 1:1

[1] once so great among the nations, a princess among the provinces

↓ n)

ra_ba_thi ba_gô_yim sa_ra_thi bam_m_dî_nôth
(^) -

Here an anticipated resolution would constitute an error of taste (which is obvious to the trained musician's ear).

ra_ba_thi ba_gô_yim sa_ra_thi bam_m_dî_nôth
(^) -

The same remark applies when a *melisma* is used. With this one . the resolution on the next word, separated by a breath, is the most frequent.

THE BURNING BUSH: EXODUS 3:15

[15] Thus you shall speak to the children of Israel:

kô tho'_ mar el_ be_nê yis_ra_ 'el

"The Lord, the God of your fathers"

↓ n)

A_ do_nay e_ lo_ hê 'a_ bo_ thê_khem

This is all the more true since the sign is most frequently found *within* the last syllable rather than at its beginning.

Of course, it is necessary to *anticipate* this return if the first syllable of the first word of the next phrase member is affected by a *new sign*;

ESTHER 5:1

[1] and presented herself in the court of the house of the king,

va_ta_ 'a_ mod ba_ha_tsar bêth-ham_me_lekh

in the inner court, opposite the palace of the king.

↓ a)

ha_p ni_mîth no_khah_bêth ham_me_lekh

unless the text subsequently appears to be overloaded,⁶ which would lead to an avoidance of the resolution, in spite of the breath,

THE DECALOGUE: EXODUS 20:5

[5] Thou shalt not bow thyself down to them,

lo'- thish_ ta_ ha_ veh la_ hem

nor serve them; for I

ve_lo' tha_ 'ob_dem ki_ 'a_ no_ khî

The "conforming" power of the punctuation

It is in verses with *numerous* phrase members (as in some of our own sentences, even everyday ones) where the abuse of breathtaking is consequently *avoided* at certain caesuras of the phrase, for the sole purpose of not unnecessarily *cutting up* the text.

THE BURNING BUSH: EXODUS 3:8

[8] where inhabit the Canaanites, the Hittites, the Amorites,

the Perizzites, the Hivites and the Jebusites.

Under these conditions (as in the above example), the cases of resolution will be like those that we have previously treated. They will be considered as resolutions of subordinate degrees *within* a phrase member.

Once again, all these possible modifications place the accent on the *conforming power of the punctuation*. And it is clear that when indecision is provoked, the only rule is the *determination* (granted, as it should be, to the performer) as to the appropriateness (or not) of the caesura. Moreover, this is the deciding factor.⁷ If this basic concept is forgotten, then the question of resolution will be posed with unnecessary frequency and embarrass the meticulous realizer, ardent (as he should be) for perfection.

B: THE PSALMODIC SYSTEM

1) Upper sign occurring within an incidental phrase

a) *Normal* resolution is effected *on the beginning* of the next syllable. When the next syllable does not possess a sign,⁸ the resolution is effected upon it, as a *normal* resolution.

PSALM 86:1

↓ n)



The same solution applies even when the sign symbolizing the degree of resolution figures afterward;

PSALM 19:2

↓ n)



for in this case, the degree of resolution is simply *repeated with accentuation* (cf. p. 236). We have already seen how natural and graceful this reconstituted phrase is (cf. p. 374).

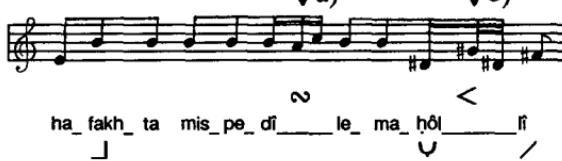
If the upper sign is a **melisma*** (even though it could only occur *within the syllable*), the resolution will still be *normal* (a).

PSALM 30:12

[12] You have changed my mourning into dancing / joyful / for me.

↓ a)

↓ b)



This will still be the case if the sign does not appear until *after the word* (a rarity)—as we see above (b); the melisma will then enter at the *extreme limit* of the allotted syllabic time, but *above all without prolonging it*. And in the present case, this retard underscores yet again the idea of "rejoicing." Of course, elsewhere it concords with the sense of the words as well (cf. Psalm 30:10; Psalm 31:10, 19, 21).

b) An *anticipated resolution* is effected *during* the same syllable.

The situation is no longer so simple when the next syllable presents a new upper or lower sign. If possible, the resolution will be *anticipated* in this case.

PSALM 3:8

[8] Arise, O Lord, save me, O my God!

↓ a)

Musical notation for Psalm 3:8. The melody consists of a series of eighth-note pairs. The lyrics are: "quô_ mah 'A_ do_ nay hô_ shî_ 'e_ nî 'e_ lo_ hai". The first two syllables "quô_ mah" have a grace note above "quô". The third syllable "do" has a grace note below "do". The fourth syllable "nay" has a grace note above "nay". The fifth syllable "hô" has a grace note below "hô". The sixth syllable "shî" has a grace note above "shî". The seventh syllable "e" has a grace note below "e". The eighth syllable "nî" has a grace note above "nî". The ninth syllable "lo" has a grace note below "lo". The tenth syllable "hai" has a grace note above "hai". There is a downward arrow labeled "a)" pointing to the beginning of the melisma over "do nay".

But this solution is not always a happy one, as we discover in the following example. The phrase is weighted down.

PSALM 86:2

[2] Preserve my soul, for / holy / I am.

Musical notation for Psalm 86:2. The melody consists of a series of eighth-note pairs. The lyrics are: "sham_ rah naf_ shî ki_ ha_ sid'a_ nî". The first two syllables "sham_ rah" have a grace note above "sham_". The third syllable "naf" has a grace note below "naf". The fourth syllable "shî" has a grace note above "shî". The fifth syllable "ki" has a grace note below "ki". The sixth syllable "ha" has a grace note above "ha". The seventh syllable "sid'a" has a grace note below "sid'a". The eighth syllable "nî" has a grace note above "nî". There are two downward arrows pointing to the beginning of the melisma over "naf shî".

In such circumstances, a third solution must be adopted.

c) Avoided resolution.

Finally, when conditions dictate, the resolution can be *omitted*. It should be noticed that this decision, made through careful reading of the verse, must always be confirmed by the perfection of the resultant phrase, attesting the cogency of the decision.

PSALM 86:2

[2] Preserve my soul, for / holy / I am.

The musical notation consists of a single line of music in G major. A melodic phrase begins with a series of eighth notes followed by a melisma (a rapid sequence of notes on the same pitch). The melisma ends on a note that is not the expected resolution (e), indicated by a downward arrow. Instead, the melody continues on a different note, indicated by a bracket labeled with a less than sign (<). The lyrics are written below the notes: "sham_ran naf_shi" (with a bracket under "sham" and a vertical line under "ran"), "ki_ha_sid 'a_ni" (with a bracket under "ki" and a vertical line under "ha"). The note where the melisma ends is also marked with a vertical line under "sid".

Thus unburdened, the same melodic phrase, previously ungraceful, becomes serious and eloquent. Its syntax totally responds to that of the words.

Another case of *avoided resolution* is when a new basic degree occurs, even within the syllable carrying the **melisma*** or **appoggiatura*** to be resolved.

PSALM 3:5

[5] With great voice / to the Lord / I cried, and He heard me

The musical notation consists of a single line of music in G major. A melodic phrase begins with a series of eighth notes followed by a melisma (a rapid sequence of notes on the same pitch). The melisma ends on a note that is not the expected resolution (e), indicated by a downward arrow. Instead, the melody continues on a different note, indicated by a bracket labeled with a less than sign (<). The lyrics are written below the notes: "qô_lî 'el_ 'A_do_nay 'eq_ra vay_ya_ 'a_ne_nî" (with a bracket under "qô" and a vertical line under "lî"). The note where the melisma ends is also marked with a vertical line under "el".

out of his mountain / holy! Selah!

The musical notation consists of a single line of music in G major. A melodic phrase begins with a series of eighth notes followed by a melisma (a rapid sequence of notes on the same pitch). The melisma ends on a note that is not the expected resolution (e), indicated by a downward arrow. Instead, the melody continues on a different note, indicated by a bracket labeled with a less than sign (<). The lyrics are written below the notes: "me_har qod_shô sé_lah" (with a bracket under "me" and a vertical line under "har"). The note where the melisma ends is also marked with a vertical line under "qod".

The pureness of the melody responds to the depth of the invocation. Without this evasion, it would be mitigated, ruined.

For the purposes of verbal euphony, an anticipated lower sign (within a syllable) is capable of suppressing the resolution. It should be noticed that often this anticipation with evaded resolution is dictated by an obvious concern for verbal euphony: by the necessity *to not accentuate the repetition* of the same vowel *by a new degree*. This was the case in the last example. The effect there would be ungraceful.

PSALM 3:5



The anticipation had to be avoided, then the word becomes gentler.



There are numerous such examples of anticipation of a new degree which, we assume, are motivated by this principle.

PSALM 19:8b

[8] the testimony of the Lord (is) sure, making wise the simple.



This presentation would have weighted down the phrase:



Of course, in the case of an **appoggiatura*** and when the anticipated degree is none other than that of the resolution, this poses no problem;

PSALM 19:1 et al.



but it was necessary to explain an uncommon set of facts in the cantillation.

2) Upper sign occurring at the caesura

a) *Normal* resolution despite an interruption.

The *measured* delivery of *psalmody* is the *primary cause* of the particular modalities which reign over the resolution of the melismas. The second, equally important, is that the caesura itself is *measured*. Whereas in prosody the resolution of the melisma is quite often anticipated before a caesura (without it, the phrase member loses its tonal basis – cf. p. 459), in psalmody this resolution normally occurs *only on the next syllable*, hence, *after the caesura* (unless there are unusual opposing conditions). Of course, it is the realizations themselves, thus finding their perfection, which demonstrate the necessity of this procedure.

PSALM 19:7

[7] From the edge of heaven (is) his rising,

miq_tseh hash_shā_ma_yim mō_tsa_ 'ō
< |

his orbit (extends) to its farthest edge

oūth_ quū_fa_ thō 'al- qe_ tsō_ tham
| /

A premature resolution would be most ungraceful in this case.

PSALM 19:7

[7] From the edge of heaven (is) his rising, his orbit

miq_tseh hash_shā_ma_yim mō_tsa_ 'ō oūth_ quū_fa_ thō
< |

Notice that we do not say this added note is always an **appoggiatura*** in the "classical" sense we know of; this formulation is often a simple *abbreviation*, an *economy of signs*. We are actually working with a veritable "flexe"⁹ here.

- b) The necessity of resolution *before the caesura* (when a new sign occurs on the beginning of the next syllable)

The following example demonstrates that the resolution of the sign ♦ cannot be eluded. It must take place *before the caesura*. The phrase then is made perfect, expressive and melodious.

PSALM 89:9

[9] O Lord, God of hosts, who is like You, eternally powerful.

↓ a)

Musical notation for Psalm 89:9. The melody consists of a series of eighth and sixteenth notes on a single staff. A melisma begins on the note 'e' and continues over the words 'lo', 'hē', 'tse', 'ba', and 'oth'. Below the staff, the lyrics are written with musical markings: a brace under 'do_nay', a brace under 'e_lo', a brace under 'hē tse', a dot above 'ba', a vertical bar under 'oth', a brace under 'khā_mō', a brace under 'khā_hā', a brace under 'sīn', and a circle under 'Yah'. The melisma ends on the note 'ā'.

c) *Avoided* resolution on the caesura (when it surcharges the phrase member).

It is when the melisma enters only during the last syllable of a phrase member that the necessity of *avoiding* the resolution can be sensed. Here, at the end of the phrase member, it would *weigh down the phrase* or even disfigure it, since the next syllable is marked by a new sign;

PSALM 6:3

[3] Have mercy on me, O Lord, for / beaten / I am.

Musical notation for Psalm 6:3. The melody consists of eighth and sixteenth notes. A melisma begins on the note 'n' and continues over the words 'hon', 'ne', 'nī', 'A', 'do', 'nay', 'ki', 'oum', 'lal', and 'a'. Below the staff, the lyrics are written with musical markings: a brace under 'ne_nī', a brace under 'A_do_nay', a brace under 'ki', a brace under 'oum_lal', and a brace under 'a_nī'. The melisma ends on the note 'nī'.

whereas when well-interpreted, the musical phrase is stirring, noble and gracious:

[3] Have mercy on me, O Lord, for / beaten / I am.

↓ e)

Musical notation for Psalm 6:3. The melody consists of eighth and sixteenth notes. A melisma begins on the note 'n' and continues over the words 'hon', 'ne', 'nī', 'A', 'do', 'nay', 'ki', 'oum', 'lal', and 'a'. Below the staff, the lyrics are written with musical markings: a brace under 'ne_nī', a brace under 'A_do_nay', a brace under 'ki', a brace under 'oum_lal', and a brace under 'a_nī'. The melisma ends on the note 'nī'.

When these very simple rules are applied, the "decanted" cantillation gives forth all the rhythmical subtlety which it can manifest, in the service of the expression and the poetry.

NOTES

¹ In these examples we indicate by initials (in upper or lower case) the expressions characterizing the case of the resolution.

² Or another upper sign.

³ This melodic procedure is correct. However, it is often preferable to omit the anticipated return to the basic degree (see the same text, p. 264, where the melody profits by this omission). The return is then avoided.

⁴ Let us remember it is a matter here of the intervention of an upper sign during the phrase and not at its end; in the latter case, cf. p. 459.

⁵ Cf. Postface.

⁶ Which is the case in the next example.

⁷ This cannot be construed as a lack. However, let us not forget that this notation was created for oral reading, in which certain liberties of initiative concerning the minor effects of the punctuation must simply be left to the performer. [The chironomy which paralleled the notation would have easily dealt with such nuances, as my experimentation shows (cf. Afterword).—Ed]

⁸ Or when this sign is none other than the degree of normal resolution.

⁹ That is, a simple melodic "flexion" before the caesura.

¹⁰ Cf. p. 463.

SUPPLEMENT II

THE TRADITIONAL CANTILLATIONS DO NOT TAKE INTO ACCOUNT THE ACCENT SIGNS

— Summary —

- 1) The "primitive" cantillations delete certain signs and change the position of others; they attach stereotyped, extensible formulae to entire chapters. They are divergent 474
- 2) These cantillations do not dictate the punctuation; they follow it. They do not constitute "music" in its real sense 480
- 3) These cantillations were already divergent in the Middle Ages. The first commentators of the Tiberian tradition underscored the efficacy of the original cantillation — an efficacy of which the traditional cantillations bear no trace 484
- 3) Present-day cantillations, which claim to be based on the *te'amim*, interpret each sign by musical meanings without fixity, respecting neither their location, their form nor their presence 487

Here then the notation disclosed by the School of Tiberias is completely elucidated; its delicate mechanism has been carefully disassembled. The music born from the deciphering process proves to set forth not only extremely remarkable qualities, (especially of expression), but also to possess an *impeccably logical syntax*. Let us now see how the cantillations that have come down to us, preserved by diverse synagogal traditions, interpret these signs. These traditions may be divided into two classes: the "primitive" cantillations (based on simple rising and falling melodic curves) and the various systems of melodic ornamentation attached to specific signs.

**1) THE "PRIMITIVE" CANTILLATIONS DELETE CERTAIN SIGNS
AND CHANGE THE POSITION OF OTHERS;
THEY ATTACH STEREOTYPED, EXTENSIBLE FORMULAE
TO ENTIRE CHAPTERS. THEY ARE DIVERGENT**

The impartial reader who has followed our analysis will be quite surprised to observe the incoherent, empirical manner in which the role of the accents was envisaged in the "primitive" cantillations. Yet the fact is in itself quite understandable, since these traditions are regarded as anterior to the rectifying notation (certain traditions even claiming to go back to biblical times!). However, we also know that the notation itself established the "true" tradition: that of the *Temple at Jerusalem*. Are the "primitive" cantillations more or less linked to it?

Still faithful to our procedure, let us consider first of all these monodies *by themselves*, especially as in relationship to the signs. One immediately sees that the ancestral cantillations *do not coincide, musically speaking*, with the signs of Tiberias. This is a serious observation, from the point of view where the discovery of our deciphering key (which interprets in such a spectacular manner the signs representing this Tradition) places us.

We need not seek whether these ancient synagogal cantillations coincide or not with one or the other of the two anterior notations. One (the "archaic" notation of *Palestine*) was abandoned; the other (the *Babylonian*) was *complicated* under the influence of the Tiberian notation (supposedly the most recent of the three), which was recognized as the only valid notation (in reality *divulged* by the very last master-teachers of Tiberias under the impulsion of the Karaites—cf. p. 105).

These traditions, orally transmitted¹ before the propagation of the Tiberian notation and in the centuries which followed, were not finally *fixed* until the beginning of this century, thanks to phonographic recordings (the majority cataloged in the important ten-volume compilation of A. Z. Idelsohn).² So we now have abundant documentation available for examination. It is hardly eloquent!

The notation (recently added) is rarely given

It is regrettable that in these vast collections, the concerned notation very rarely accompanies the musical text, when it is just this notation which should interpret each monody!

The signs are always supralinear

Whenever the signs are presented, they are always *supralinear*—a unique location which was used for the two earlier notations. But this is in contradiction with the notation of Tiberias, which employs *two* positions: *above and below the line*. Nearly all these signs have the shapes of the Tiberian signs, being either the same or *reversed*:³ $\underline{\text{—}}$ for $\text{—}\underline{\text{—}}$; $\text{—}\text{—}$ for $\text{—}\text{—}$ and vice versa; $\text{—}\text{—}$ for $\text{—}\text{—}$ and vice versa, etc. Therefore the *morphology* of these signs finds itself falsified (cf. p. 102). But let us go on, for this is only immediately disconcerting.

Similar signs with meanings which vary according to their position become non-differentiated

The *unique* position of the signs *over the words* is incorrect when one seeks for proofs of authenticity. Certain signs of analogous form (which, as we now know, have *completely different meanings* when they are positioned above or below the word) are found *non-differentiated*:

$\text{—}\text{—}$ and $\text{—}\text{—}$, $\text{—}\text{—}$ and $\text{—}\text{—}$, $\text{—}\text{—}$ and $\text{—}\text{—}$, etc.

The following example bears witness to this, without even taking into account the music attached to the signs. For purposes of comparison, it carries the real, authentic notation of the most ancient manuscripts and its interpretation as revealed by the deciphering key.

THE DECALOGUE: EXODUS 20:2

a) Synagogal tradition⁴

b) Melody according to the deciphering key

[2] out of the land of Egypt, out of the house of slaves.

me_e rets mits_ra yim mi_beth 'a_ba_dim

The first formulation is only an accommodation which is forcibly inexact, since a single upper sign cannot normally have the same meaning as two similar, superimposed signs. But we also see elsewhere that certain signs are displaced or even omitted.

Signs which are missing or displaced on other syllables

Actually, independent of such cases, numerous signs have an *incorrect position* or are even absent. Over the normally punctuated biblical text, we present in the following example the "supralinear" signs placed above one of the traditional cantillations (Idelsohn, op. cit., vol. 2, p. 47). The musical text of this chant is found on pages 479-480.

Deviated notation

L s . . . I: I:
 neshêkhem tapekhem oumiqnêkhem yeshvou ba'arets
 5 7 6 6

Normal notation

neshêkhem tapekhem oumiqnêkhem yeshvou ba'arets

Deviated notation

asher natan lakhem mosheh be'ever hayarden

Normal notation

asher natan lakhem mosheh be'ever hayarden

The traditional cantillations are mutually exclusive

These cantillations, as we know (cf. p. 48), are far from being a testimony of a single tradition; but one can only be surprised, if one wants to have confidence in them, at the profound divergences they reveal. They give contradictory faces to the tradition: *divergences in melodic scales, ambitus, configurations and rhythms*.¹⁰

That there were several traditions extant is not the most troubling fact; it would only be a matter of seeking which among them was "authentic." But this could not be done save by *being able to attribute a specific melodic design to a specific sign*, whether this sign is present or even assumed (since the signs are considered to be the "fixed" tradition).

Divergences within the same tradition, in the same monody

Within a given tradition, the same sort of divergences are found, according to which book of the Bible is being read¹¹—and even within a given unique monody! We observe that characteristic figures *intervene at places where no sign justifies their presence* (points marked by [A] in the following example). We also observe that the appearance of a new sign *provokes no change in the melody* [B]. We even find the *same melodic formula* attached to diverse signs [C]; moreover, the formula which is attached to a *specific sign* varies [D,E].

THE CREATION: GENESIS 1:1-2 (synagogal tradition)¹²

[1] be_re'_ shîth ba_ra' 'E lo_ him 'eth hash_shâ_ma_yim ve_ 'eth
 ⑧ ⑨ ⑩

ha_a_rets. [2] ve_ha_a_rets ha_ye_tah tho_hôu va_bo_hôu
 ⑪

ve_ho_shek 'al_pe_nê the_hôm ve_roû_ah 'E_lo_him_
 ⑫ ⑬ ⑭ ⑮

me_ra_he_feth 'al_pe_nê ham_ma_yim.
 ⑯

Those who specialize in the study of this codification justify these musical anomalies according to their own *totally particular conceptions*,¹³ which we respect but into which we need not further investigate. We are seeking genuine proofs of *coincidence* between these cantillations and the Tiberian notation. There are none.

This does not prevent interested musicologists from preparing comparative tables, lining up the various "interpretations" of the same sign for each of the numerous traditions.¹⁴ How, in comparison with the signs, could they be able to extract the original tradition from such a confused mass?

All these considerations, made in regard to the signs of Tiberias, are in opposition to the possibility of a veritable musical tradition being contained in one or the other of the synagogue communities.

Formula types in the primitive cantillations

But what crowns it all is the generalized practice, in all the Oriental communities, of "standard" formulae which repeat themselves for *whole chapters* of prose and even entire psalms. We have already described this primitive form (cf. p. 154). This fact could be overlooked when looking at relatively short excerpts.

It is all the more manifest upon closer examination of the cantillations *fixed in written form*. The *beginning* of a striking passage or chapter often has a certain character, a particular "shape;" but as the reading proceeds, the formula is repeated over and over with very few alterations. It simply "stretches" or "shrinks" itself to accommodate the number of syllables in each succeeding verse.

JOSHUA 1:14 (synagogal version)¹⁵

ne_shê_khem ta_pe_khem oû_miq_nê_khem ye_she_boû_

ba'_a_rets 'a_sher_na_than la_khem mo_sheh be'_e_ber



And here is the ultimate proof that, musically speaking, these cantillations do not follow the signs. The signs *differ in their forms and order from verse to verse*, while the monody endlessly repeats itself.

This repetition is visible in our noted examples, although here they are shortened, reduced to several successive verses. But upon the recital of *entire chapters*,¹⁶ the evidence of this incessant repetition of an initial formula or two is so obvious that one understands the truly *accessory* role of these *supportive* cantillations. We do not think it necessary to further burden ourselves with this subject!

**2) THESE CANTILLATIONS DO NOT DICTATE
THE PUNCTUATION, THEY FOLLOW IT.
THEY DO NOT CONSTITUTE "MUSIC" IN ITS REAL SENSE**

Now let us consider these *intrinsically* diverse cantillation traditions. Should we be surprised to learn that these pseudo-melodies do not have a *divisive power* in themselves? In no way do they dictate the punctuation; *they follow it* — and that is a completely different thing! In fact, a *non-leading* melodic inflection, without validation by its points of attachment at the core of the tonal axiality, is no "cadence"¹⁷ in the musical sense of the word. The musical sense is quite poor.

PSALM 19:1-2 (synagogal tradition)¹⁸

[2] The heavens declare the glory of God,



and / His handiwork / shows / the firmament.

A musical score in G clef, common time. The lyrics are written below the notes. There is a fermata over the note 'a' in the last measure.

and / His handiwork / shows / the firmament.
 ou_ma_ 'a_ seh ya_ dâv ma_gîd ha_ra_ qî_ 'a_ .

[3] Day unto day utters speech, and night

A musical score in G clef, common time. The lyrics are written below the notes. There is a fermata over the note 'a' in the third measure.

[3] Day unto day utters speech, and night
 yôm le_ yôm ya_ bî_ 'a_ 'o_ mer ve_ lay_ lah

unto night shows knowledge.

A musical score in G clef, common time. The lyrics are written below the notes. There is a fermata over the note 'ath' in the fourth measure.

unto night shows knowledge.
 le_ lay_ lah ye_ ha_ veh- da_ 'ath .

In order to create a *musical* sense, it is necessary to have more specific components! The same psalm, reconstituted according to the deciphering key, illustrates this point (cf. pp. 398, 394). There alone, the music is *wedded* to the verbal sense!

Moreover, it is not a copiously developed *ornamental complement* which will give us a sensation of a *suspensive* or *conclusive rest* in the phrase.

THE CREATION: GENESIS 1:5 (synagogal tradition)¹⁹

[5] and there was morning, (the) day / first.

A musical score in G clef, common time. The lyrics are written below the notes. There are fermatas over the notes 'bo', 'qer', 'yôm', and 'had'.

vay_hi- bo : qer yôm 'e_ had

Like road signs, such melodic "billboards" mark off the vicissitudes of the journey covered without participating in it. Whereas in our reconstitution, the *diversity* of the musical tones reflects not only the syntax, but also the *sentiment* of the words.

The same verse, according to the deciphering key²⁰

[5] and there was morning, (the) day / first.

vay_hi- bo_ qer yom 'e_ had
| \ / |

But how could these melodies, with such *interchangeable formulae* haphazardly juxtaposed, dictate the punctuation? When in the *comparative tables* one perceives that the melodic figures attached to the diverse traditions (Idelsohn, op. cit., vol. 2, pp. 52-53) give quasi-analogous meanings to signs clearly differentiated by the verbal syntax! We willingly choose the two principal signs—the most "marked" ones according to the deciphering key: *tonic* and *subdominant*—which, in the exegetical tradition, are respectively the *rests* at the end of the verse | and at the end of the hemistich ^.

Let us examine the following examples.

Here the same melodic figure, the same supports and the same rhythm (or nearly so) mark the "perfect" and the "half" cadence.

Yemenite tradition, for the signs | and ^

Ashkenazi rite, for the same signs | and ^

Here the elementary laws of tonal syntax are set aside!

Moreover, in the majority of these formulae, the placement in the tonal linkage remains unspecified. Intervening indifferently one after the other, they interpolate haphazardly!

One need only examine a traditional monody and its formulae with the aid of a comparative table to be persuaded of this. But to what purpose? In these very pages we have found that the formulae attached to a sign within a given melody not only varies in pitch, but in form, despite all musical logic. The position of these formulae in the tonal scale (which is the *sole place of tonal axiality*) is not fixed, but is dependent on *fortuitous encounters*; thus the melodic line can only be *empirical*, devoid of syntax and deprived of sense. Nevertheless, it is good that we see this.

**Having no syntax, these traditional monodies
are devoid of musical "life"**

What is striking to the musician is that these cantillations are *lifeless*. But who would not be astonished, when one realizes how they are constructed! Empirical relationships, ungoverned by tonal laws, have never created music in the *noble sense of the word!* The melodies of these traditional cantillations do not even move like whatever normal melody; *they are without flesh, muscles or limbs*, whatever the import of the words they accompany.

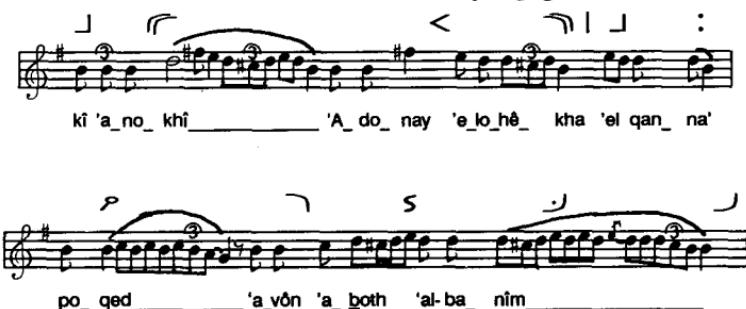
"HEAR, O ISRAEL:" DEUTERONOMY 6:4 (synagogal tradition)²¹

[4] Hear, O Israel, the Lord is our God, the Lord is one.

she_ma' yis_ra_ 'el 'A_ do_ nay 'e_ lo_ hé_nou 'A_ do_ nay 'e_had

They have no unity, nor in any way constitute a "body," existing and living by the *varying and relative functions* (attested by vibrational relationships) of its component tones.

All these traditional melodies—except those rarities which are borrowed (as one immediately recognizes) from local repertory—remain *inefficient*, whether they are schematic (as in the above example) or carry some artifices (cf. pp. 480-481), or even intentional embellishments (as in the following example).

THE DECALOGUE: EXODUS 20:5 (synagogal tradition)²²


They still remain *amusical*, hence *inexpressive*—whereas the music which emerges from the deciphering key, by the effect of the "art" which it testifies, is the *carbon copy (in the domain of sound)* of the *verbal syntax* of the biblical verses (the meaning of which is also magnified thereby).

3) THESE CANTILLATIONS WERE ALREADY DIVERGENT IN THE MIDDLE AGES.

**THE FIRST COMMENTATORS OF THE TIBERIAN TRADITION
UNDERSCORED THE EFFICACITY OF THE ORIGINAL
CANTILLATION—AN EFFICACITY OF WHICH
THE TRADITIONAL CANTILLATIONS BEAR NO TRACE**

Finally, these cantillations only give to the verbal text *a fluctuating tone, without form or soul*. However, the first commentators gave a completely different idea of the efficacy of the signs of the Tiberian notation: "The accents are necessary for adding clarity to the sense of the words and of the order in the discourse; without the accents, one would not have the division of the sense."²³ This can only be an allusion to the exegetical significance of the *te'amim*; the grammarians (as we know) have hardly penetrated this significance!²⁴ This is rather the persistent souvenir of the real efficacy of the signs of Tiberias, in their *original meaning*.

Perhaps some people may imagine that the echo which comes down to us of these ancestral cantillations is *not conformed to their original state?* Certainly the oral tradition is not "infallible," but could it not remain valid in its main points?

Formula types still in use in the 12th century.

We now know that certain traditional melodies attached to the public reading of the Bible today (which figure in the compilation of A. Z. Idelsohn) were already sung and musically notated in the 12th century. In fact, they were notated in occidental neumes by a Christian proselyte converted to Judaism, *Obadiah "the Norman."* I. Adler has set forth this correlation of the ensemble.²⁵

I have compared these diverse monodies. Some of the most recently notated are more ornamented than their primitive antecedents (fixed in writing by Obadiah), but their structure is unquestionably the same. Therefore the synagogal cantillation was in the 12th century just about the same as it is today.

These monodies too are without life. But they eloquently illustrate another, still more important reality. As early as the 12th century one took no account of the different cantillations signs which were supposed to accompany the biblical verses.²⁶ The following melody which Obadiah has left us accompanies several verses of *different books of the Bible*, which are provided (as one can see) with different signs, according to the consecrated notation of Tiberias.²⁷

**Traditional synagogue cantillations notated in occidental neumes
by Obadiah "the Norman":**

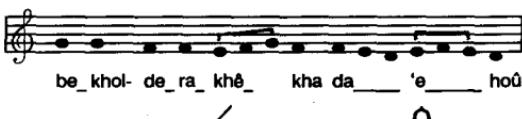
JEREMIAH 17:7

ba_rōūkh ha_ge_ ber 'a_shér yib_tah ba_dō nay

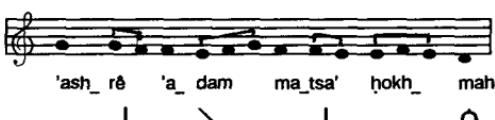
PROVERBS 3:5

be_tahh 'el-'A_dō nay be_khol- li_ be kha

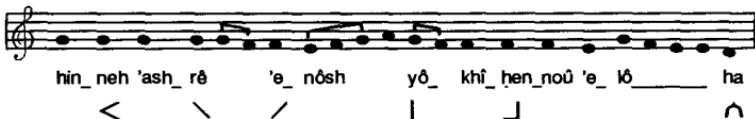
PROVERBS 3:6



PROVERBS 3:13



JOB 5:17



This unique musical phrase, repeated with various sequences of signs, speaks volumes! It confirms the existence *already* (or rather "still"), at this epoch (cf. pp. 48, 139-140), of "formula-types" adjustable over several verses. And we have observed in the supplement that we find here neither the often eloquent *refrains and couplets* found in plain chant (cf. p. 142), nor normally constituted melodies which could be beautiful. Instead we find *music without syntax and without existence*.

And as no other vestige or previous writing (cf. pp. 138-140) allows us to think that the synagogal cantillations had anteriorly used *a more noble form of chant* for the cantillation of the Holy Scriptures, this confirms our conclusion that it always must have been chanted thus in Israel, from the time of the multiplication of the synagogues—perhaps even as early as the time of their rise in Babylonia.²⁸

**4) PRESENT-DAY CANTILLATIONS, WHICH CLAIM TO BE BASED
ON THE TE'AMIM, INTERPRET EACH SIGN BY MUSICAL
MEANINGS WITHOUT FIXITY, RESPECTING NEITHER THEIR
LOCATION, THEIR FORM NOR THEIR VERY PRESENCE.**

We have stated above that the melodic definition given (in principle) by the Masoretes to the *te'amim*—one melodic formula per sign (cf. p. 48)—was never in fact given to the notation by the most ancient cantillations of the synagogue.²⁹ Rather, the biblical text was cantillated using "formula types" which did not take into account the ancestral signs. Of this we are certain, up to the 12th century (thanks to the manuscript of Obadiah the Norman). However, various synagogal communities today, both in Israel and in the West, use cantillations based on vocal formulae (commonly called "tropes") attached to the *te'amim*.

Since what period? We do not exactly know. No doubt such cantillations were created little by little, since by the beginning of the 16th century, the "tropes" were still attached to the biblical signs in a completely aleatory manner. Reuschlin, in *De accentibus et orthographia lingual hebraica* (p. 48), gives a particular melodic formula to each biblical sign, but the "trope" varies according to the *tessitura** of the cantor's voice! This is an inadmissible interpretation.³⁰ To my knowledge this is the oldest written record touching upon the relationship between the cantillation and the *te'amim*, and it is obviously of no value insofar as the *real* meaning of the *te'amim* is concerned.

We should imagine that the relationship between the signs of Tiberias and the "tropes" familiar to the modern synagogue is of rather recent origin. Whatever the actual age or origin of the particular "style" of cantillation in the synagogue, it seems likely that the use of one trope per "accent" developed only in the past several centuries at most.³¹

What results from this method, in fact, contradicts the indications of the Masoretic Text itself. Each biblical sign is given a very precise place in the text relative to the word or syllable—nuances which are simply ignored by the music (where they cannot be empirically "justified" by grammar). These "tropes" follow in principle the grammatical considerations set forth by Aaron ben Asher's *Diqduqê ha-Te'amim* and later treatises (cf. p. 47), in which neither the place of the sign, its form nor its very presence is respected (cf. Supplement I). Furthermore, in

these more recent cantillations a single formula may cover two or even three signs, causing them to lose the unique, autonomous value claimed for them by the ancestral definition cited above.

To this critique we must add that these present-day cantillations have no more musical worth than those much older. Should we be surprised? Since it is not a question of attributing single notes but a series of notes to each of both the lower and upper signs (the sequences of which vary from one verse to another), the result is a series of melodic groups with arbitrary "disjunctive" and "conjunctive" values strung haphazardly through the verses! What is more, certain groupings attributed to a particular sign are abnormally developed, rather in the manner of a *vocalise*.* The *shalshelet* , for example, is arrayed in at least one tradition with an arpeggio of three notes going up and down! This is hardly "music" in the real sense of the word.

And it is according to the particular rite — Ashkenazi, Sephardic, or otherwise — that the *te'amim* are "clothed" with diverse vocal formulae, impregnated with "local color," which vary yet again according to the particular book of the Bible being read or the season of the liturgical year (cf. pp. 477-478). These variations (which have to do with the reading of the *prosodic* texts of the Bible) exist despite the rigorous sameness of the notation throughout the "prose" books. Consequently none of these rites is concerned with the musical contribution *per se* of this sort of cantillation to the reading of the texts. An arbitrary *imposition upon*, rather than the *exegesis* of the text, seems to be the goal here.

The result of this procedure is a sort of shapeless music without any inherent punctuational worth (an exclusive privilege of the music rising from the deciphering key), without (we suspect) an autonomous syntax, and without the least real expression, which is infinitely regrettable for the cantillation of Scripture.³² We will not go so far as to pronounce an anathema on this kind of cantillation. The *hazzanim* (the specialized cantors of the synagogue), for reasons of conformity to tradition, had to "sing," not speak, the Holy Scriptures. They have followed the rules which they were taught to hold as authoritative.³³ Let us note, however, that the cantillation of the Psalms is still done everywhere with "formula types" in the primitive fashion. Consequently, there are still modern editions of the Hebrew Bible which give the *te'amim* for the prose texts but not for the psalmody texts.³⁴

What can we say in conclusion? The older, "primitive" cantillations, which took care to respect (empirically) solely local traditions, were never anything but "utilitarian." Modern cantillations, arbitrarily linked to the notation (in prosody) or unmindful of it (in psalmody), do a real disservice (as much as their "primitive" predecessors) to the written form, spirit and expression of Holy Scripture. For those trained to uphold these synagogal traditions, this may seem a harsh judgment. But it is one which can be fully supported, not only by the examples given in this chapter, but by countless others preserved on recordings and in transcription by musicologists.

There is a world of difference between such monodies and those which come back to life through the deciphering of the notation preserved by the Karaites (cf. p. 105), a notation sealed up for at least eighteen centuries! This contribution—the restoration of the authentic "music of the Bible"—is a sacred heritage, a treasure of inestimable value. Little by little, it will regain its true place, to the edification of believer and unbeliever alike.³⁵

NOTES

¹ Which does not exclude the usage of a chironomy of circumstance, still practiced today (cf. p. 37).

² A. Z. Idelsohn, *Hebraisch Orientalischen Melodienschatz* (Berlin, 1929).

³ Certain transcribers were no doubt influenced by the opposing direction of the modern written music (which is read from left to right).

⁴ Cf. p. 147-148, where the two versions are already amply cited.

⁵ The corresponding signs (L and -J) (cf. p. 475) are placed over different syllables.

⁶ The sign does not have the same place in the word or syllable.

⁷ The corresponding sign is lacking.

⁸ The sign does not have the same place in the word or syllable.

⁹ The corresponding sign is lacking.

¹⁰ Which excludes the observance of a rigorous dichotomy, since it is a matter of the same sequence of signs in the same verse.

11 "An identical series of *te'amim* gives a highly different interpretation, not only according to the various rites and traditions, but even within the same tradition, according to whether it is a matter of the 'mode' of the Pentateuch, the Prophets, Lamentations, etc." I. Adler, "Musique Juive," *Encyclopédie de la Musique* (Fasquelle), vol. II, p. 646.

12 Sephardic rite (France). Cf. Idelsohn, op. cit., vol. II, p. 36.

13 The specialists actually state that the primacy is given to the verbal syntax, which is the same in all traditional versions. The monody, impregnated by local customs, "clothes" the syntax in various ways without being affected by it.

14 Cf. particularly Idelsohn, op. cit., vol. 2, pp. 52-3.

15 A. Z. Idelsohn, op. cit., vol. II (*Babylonia*), p. 47, note 3.

16 Resulting from modern tape recordings, these latter excerpts are obviously less condensed than those given on phonographic disks.

17 With the diversity of meanings reflected by this word (cf. p. 284ff).

18 Yemenite tradition; cf. *Dictionnaire de la Bible*, vol. V, suppl., col. 1443.

19 A. Z. Idelsohn, op. cit., vol. II, p. 36 (Genovan tradition).

20 Already cited on p. 311.

21 A. Z. Idelsohn, op. cit., vol. V, p. 36 (Moroccan tradition). See the music for the same verse as reconstituted by the deciphering key on p. 219.

22 Idelsohn, op. cit., vol. II (*Babylonia*), p. 131, note 177.

23 Cf. *Manuel du Lecteur*, op. cit., p. 474.

24 Cf. Supplement I, p. 185ff.

25 "Chants traditionnels de la synagogue au XIIe siècle. La notation musicale d'ABDIAS le proslyte normand," article by I. Adler in *Ariel* (Jerusalem, 1967). The chants reproduced in our study here are transcribed by I. Adler on p. 48. [For a discussion of this manuscript and related documents, see Alfred Sendrey, *The Music of the Jews in the Diaspora* (Cranbury, NJ: Thomas Yoseloff, 1970), chapter 10. This manuscript is considered a *piyyut* (religious poem), encompassing several biblical verses. It is thought that "Obadiah was either the composer, or the notator of the melodies which he heard from European *hazzanim* who escaped to the Near East during the early period of the Crusades" (p. 160). The similarities between these melodies and Gregorian chant need not have arisen (as Sendrey, citing Norman Golb, suggests on the same page) because Obadiah spent part of his youth in a monastery. Gregorian chant drew from the "primitive" chants of the synagogue, as noted in an earlier chapter of this book.—Ed.]

26 According to the Tiberian notation, when compared with the local traditions.

27 The signs of Tiberias are added here by me to facilitate the confrontation of the melody with the signs, the former being consecrated (as we know) by tradition. [We have notated the melody under the same conventions as are used to transcribe Haik-Vantoura's prosodic melodies. Medieval neumes such as were used in this manuscript did not indicate time value.—Ed.]

28 For the Levites, experts in the cantillation of Scripture, could not officiate everywhere in each "house of prayer" during the exile; they were far too few. And it took a musician besides to cantillate the Bible according to the "Tiberian" notation or with reference to the chironomy it apparently represents. [And though we know that pilgrims were allowed to watch rather closely the Temple liturgy, their oral reminiscences would not have allowed the Synagogue to retain the melodies in their original purity.—Ed.]

29 In this regard, it is interesting that the *Manuel du Lecteur*, the other early treatises, and the *Masorah* itself, were unable to define the musical meaning of a single sign. These sources divide a majority of the "disjunctive accents" (ignoring the rest of the signs) into three quasi-musical categories, apparently defining them as markers of a "primitive" melodic curve or formula type. This division—the only "musical" interpretation given by the early sources—is not identical in all sources, nor is it related to how the *te'amim* are combined with each other. It appears to us that the Masoretes and their successors (as late as the 12th century, when the *Manuel de Lecteur* was written) were arbitrarily interpreting the *te'amim* in the light of the musical practices of their own time. Cf. Israel Yeivin, *Introduction to the Tiberian Masorah* (Chico, CA: Scholars, 1980), p. 168.—Ed.

30 Reuchlin's texts (given in four-part harmony) are the oldest known notations of Pentateuch cantillation (Western Ashkenazi rite). Not all signs are given a melodic formula. "The [actual] motives are given in the tenor part, while the *discantus*, *altus*, and *bassus* parts are mere harmonizations in contemporary art-music style, added arbitrarily to enhance the presentation." *Encyclopedia Judaica*, op. cit., col. 1100, figure 2.—Ed.

31 We find that "only in the Ashkenazi Diaspora was the system [of "tropes"] developed and augmented with the aim of having each accent sign expressed by a distinct melodic formation. The farthest point along this path is reached by the Ashkenazi cantillation of the Torah. Even there, however, one finds different accent signs expressed by identical melodic formations...or identical accent signs expressed by different melodic formations. Other traditions are still more limited in their repertoire of distinct melodic motives and content themselves with the expression of the divisive accents, or even of the major divisive accents only" ["Masoretic Accents (Musical Rendition)," *Encyclopedia Judaica*, vol. 11 (Jerusalem), col.

1100]. Whatever the origin of the "tropes," therefore, they cannot be said to be (as say so many American cantoral texts) the "real" musical interpretation of the *te'amim*. The "tropes" were unquestionably developed to their present state *after the unrelated "Tiberian" notation appeared*.—Ed.

³² If one hears a portion of a *maf'ir* (Torah reading) or an entire *haftarah* (Prophets reading) sung in the modern fashion on recording, the inevitable breakdown in correlation between the melodic and verbal sense is all the more painful to one accustomed to the perfect balance of Haïk-Vantoura's renditions. Contrary to the statements of cantors and musicologists, such cantillation seems to *muddy* the sense of the text, not *clarify* it! The readings of the *Megillot* and the High Holy Day chants are better—but *still arbitrary* in their interpretation of the text.—Ed.

³³ And which, first of all, had to be imposed upon them (cf. Postface).

³⁴ There are too few signs in psalmody, and they repeat over and over. The resulting melody, if interpreted as in prosody after the modern fashion, would be a real *ritournello*; that is why the signs are not given in these editions.

³⁵ Cf. Postface.

AFTERWORD BY THE EDITOR

In the end, it is only through the *message* inherent in Suzanne Haïk-Vantoura's restored cantillation than one can be convinced (or not) of the validity of her deciphering key.

Certain authorities we have cited in the pages below (Hebraist Gerard E. Weil and musicologist Israel Adler)—as well as others such as musicologist Eric Werner in the U.S.—have noted the "beauty" of the melodies restituted through the deciphering key, but they have not allowed their *intuition* in this sense to influence their opinion that the *te'amim* were the creation of the medieval School of Tiberias, intended to crystallize the interpretations of the Masoretes' own time.

Others more learned and gifted than I have answered their objections elsewhere.¹ But in closing this American edition, I believe it fitting to say a few words on my own behalf concerning Haïk-Vantoura's work.

It is not enough that a proposed interpretation of the *te'amim* give a melodic meaning to each sign, nor that the melodic interpretation be self-consistent, nor even that it be accessible and "beautiful" to a wide spectrum of people (professional musicians and composers especially). It must first of all account for every nuance of form of the signs and their particular positions relative to the texts and to each other—something which the traditional interpretations of the Masoretes, Hebraists and synagogue cantors, the various attempts at decipherment from the Renaissance to our time, and Haïk-Vantoura's critics have never been able to do.

The Masoretes and later scribes gave some eighty names to about twenty or so different graphical forms in the notation; no two ancient treatises on the notation have exactly the same list of names. Even in the lists of names retained by modern Hebraists and synagogues as representing the "original" names, identical graphical forms are given different names according to their grammatical context in a verse. A right interpretation of the *te'amim* should not only give meanings which *systematically* correlate with their ancestral names (which the interpretations of the synagogues and Hebraists do not do); it should also be able to assign (barring proof to the contrary) a single name to each graphical form, and to show why a particular graphical form should have (if necessary) a different name in a different context. It should also

allow one to demonstrate which of the names in our modern lists were added after the creation of the notation for grammatical or other reasons.²

Such an interpretation must not only clearly explain all the nuances of the relationship between text and notation which were noted by the Masoretes; it must also account for all that they did *not* explain, in particular the contradictions within their syntactical rules as well as those which appear when those rules are compared with the syntax of the Hebrew text itself.

The musical values within the interpretation must not only correlate with the forms and names of the signs, but also with the original hand-signs preserved in part by the *Manuel du Lecteur* and the *Diqduqe ha-Te'amim* of Aaron ben Asher—hand-signs corrupted by the synagogues and unknown to those who have attempted to reconstruct them by empirical means.³ It also ought to make possible the clear reconstruction of the original chironomy behind the notation—a feat which my own researches lead me to believe is possible (cf. p. 87).

The interpretation must be clearly datable to a particular era of time by means of comparison with the music theory extant at different periods of history. If that era happens to be pre-Hellenistic, one should not let the latter-day revelation of the "Tiberian" notation keep him from reevaluating the origin of the Masoretic Text, especially in light of the comment by Moses ben Asher that the *te'amim* were "established" by the first-century family of Temple priests called the "Elders of Bathyra," from which the Karaites and Masoretes inherited their doctrines as well as their tradition of Scripture reading.⁴

Such an interpretation ought to allow one to demonstrate (if he upholds and respects the chain of religious authority which created and transmitted the Bible as an act of faith) the reasons behind the variants among the different texts and versions of the Bible, the variants in accentuation found among the Masoretic manuscripts and printed editions, and the small alterations one finds in the forms of the accentuation in one or another of the extant manuscripts. These matters (which Haïk-Vantoura has but touched upon in her works) are subjects I hope to cover myself elsewhere at an opportune time.

If such an interpretation is able, by the simplest possible means known to music theory (which is based on universal physical and psychological laws respected by every culture), to *explain the syntax* of

the text at the same time that it *expounds its meaning, everywhere in Scripture*, one may have confidence in the correctness of the interpretation.

Moreover, since the *te'amim* (as their very name indicates) were intended to be an *interpreter* of the *sense* of the text, the reader who is a disciple as well as a scholar of the Bible ought to find in them the magnification of the *doctrine and spirit* of the text—and find the teaching they indicate to be that (as demonstrable where possible by other means) of the original authors of the biblical texts. Here the primary test has always been to *live by* the indications one's understanding of the message of the Bible—and now, its melody—brings.

As a lifelong student of everything that science and art can say regarding the meaning and value of the Bible, I can only express my profound gratitude for being able to study and then to assist in Suzanne Haik-Vantoura's work. In this endeavor, the editing of this American edition of her book has been the crown to date. May this effort bear fruit in enabling others to examine carefully her thesis and its implications.

John Wheeler

NOTES

¹ Notably musicologist and Hellenist Denise Jourdan-Hemmerdinger, in *Revue des Études juives*, CXLV (1-2), Janv.-Juin 1986, pp. 127-131.

² The attentive reader, familiar with synagogue chant or the grammatical rules used by Hebraists, will notice that the list of names given by Haïk-Vantoura for the signs (cf. pp. 97-100) lacks several names found in every modern list of names given by Hebraists or cantors: *azla*, *legarmeh*, *yetiv*, *debir*, *ga'ya* or *metheg*, and so on. This includes the list given by Mayer Lambert in his treatise (cited by Haïk-Vantoura as her source). Those graphical signs which have more than one name in the modern lists are precisely those which are found in more than one grammatical placement relative to the verbal text. In effect, modern specialists have chosen certain names (among the 80 or so found in the ancient treatises) which are found in all the early sources; their lists assign one of these names to each "grammatical accent" used in the text. Haïk-Vantoura's key assigns (from the same group of names) one name for each *graphical form* used; the names she rejects can be accounted for as later, secondary names added to distinguish between the different grammatical placements of certain signs. Since (as is acknowledged) the grammatical rules of the Masoretes are an arbitrary imposition upon the syntax of the verbal text, only a decipherment of the *te'amim* independent of the names given to various signs could clearly demonstrate which names are ancestral and which were added by the Masoretes and later scribes.

³ Cf. Richard Neumann, *The Roots of Biblical Chant* (New York: Board of Jewish Education of Greater New York, 1982). His proposed signs (like the melodic formulae he discusses) do not take into account the placement of the *te'amim* above and below the line; their form, while empirically related to that of the corresponding written signs, have no inherent indication of what melodic meaning they should represent. Moreover, some signs he proposes contradict the indications given by the ancient treatises themselves concerning what the original hand-signs were.

⁴ Cf. Paul Kahle, *The Cairo Geniza* (Oxford, 1959), pp. 82-85, 103. It is surprising that no one seems to have taken Moses ben Asher's statement at face value! Cf. Suzanne Haïk-Vantoura, *The 150 Psalms in their Ancient Melodies*, Part One (Paris: Fondation Roi David, 1985), pp. XLVII-XLVIII.

POSTFACE

Additional information as of 1990

Page 63: Signs similar to the *te'amim* the Greek notation

It must be added that the Greek papyrii using an alphabetic notation could also have contained neumatic signs such as in the papyrus of Euripides, discovered in 1973 by Denise Jourdan-Hemmerdinger.¹ This eminent musicologist and Hellenist carefully studied the signs added to the letters. Curiously, certain signs are identical in form to the *te'amim*. "All the *te'amim* are present here or there," she says, in the notation.² They are placed sometimes above, sometimes below the words as in the Hebrew Bible. Of course, we must not imagine that these signs had the same significance for the Greeks as for the Hebrews. Nevertheless, they do concern music. Consequently, the *te'amim* undeniably belong to the world of antiquity.³

Page 90: The use of chironomy at the time of Ezra

The Talmud mentions a chironomy in use at the time of Ezra. Gérard E. Weil states: "The use of chironomy that we are speaking of here consisted in guiding the public reader during his reading. His intonations were indicated to him by the *somekh* (assistant or master of the monodic chironomy) by means of mime gestures..."⁴

Page 91: The anteriority of the notation or of the chironomy

In the particular case of the cantillation of the Bible, no one can yet affirm that the notation gave rise to the chironomy or the inverse.⁵ Now with the deciphering of the *te'amim* we obviously have proof that an efficacious gestural system could have replaced notation at the time of David. But let us not forget that the Bible itself mentions the use of written music, with references going back to the time of Moses (cf. p. 161). Thus the *te'amim* would have existed before David's time. According to tradition, they were given to Moses on Sinai (cf. p. 47). We will see later on (Postface: Page 161) that the alphabetical Hebraic writing, according to the experts, dates back to the time of Joseph. Moses, when setting down the Pentateuch for posterity, would have used them, since they give (through their music) the sense of the Scripture.

But even earlier, the *Song of the Red Sea* was probably "conducted" by means of gestures before it was notated. (How else could Moses have taught a song of any musical value by oral means to such a large group?) So it is possible that a form of chironomy existed then, independent of the art of writing, as in Egypt and elsewhere (cf. p. 71).

This hypothesis bears closer examination, for if this song contains all eight of the lower written signs, only three simple upper signs are used, and those rarely (the system as a whole being "unelaborated," thus easier to learn). Whereas the *Song of Deborah* (Judges 5), a later work, contains many more upper signs. This could indicate that a form of chironomy existed before the writing of the Bible itself!

Page 97a: The names of the *te'amim* have their equivalents in the Bible

We cannot deny that the names for the great majority of the signs have a biblical source giving them an equivalent meaning. For example:

- zaqef* [erect] — Ps. 146:8
- galgal* [wheel] — Isa. 28:28
- tsinnoř* [tube, channel, circlet] — Ps. 42:8; 2 Sam. 5:8
- geresh* [expulsion] — Deut. 33:14; Ez. 45:9; Ps. 34:1
- munah* [placed] — Ps. 95:11
- pazer* [spread, dispersed] — Ps. 89:11
- pashta* [extension] — 1 Chr. 14:13
- tevir* [broken] — Dan. 2:42
- revi'a* [squatting] — Ps. 139:3
- zarga* [spurt] — Ex. 9:8

The word *te'amim* (which designates the notation as a whole) is itself a term rich in meaning, englobing meanings which when applied to music complement each other. The root word is also from biblical times and means "discernment" (Ps. 119:66; Prov. 26:16), "appreciation" (Ps. 34:19), "appearance" (Ps. 34:1), and "judgment" (Job 12:20; Prov. 11:22).⁶ All this is without noting the countless times we find *gadol*, *qaton*, *'oleh*, and *yored* in all the biblical books.

All these citations confirm that the etymological interpretations given on pp. 97-98 were not recently invented in order to justify the musical meanings attached to the deciphering key. They existed in fact as early as biblical times. This implies that these terms could really have been used by Moses himself to denote the cantillation signs—signs which, according to the tradition extant at the time of the Masoretes, were "revealed by God on Sinai" (cf. p. 63, note 10).⁷

Pages 97-98: The musical meanings correlate with the principal names of the signs

The etymology which I cite, taken from the grammar by Mayer Lambert, is confirmed as being the one which relates to the principal names of the signs (according to Gérard E. Weil in his book which was published in 1978).⁸

Pages 105-106: The "prophets" mentioned by Moses ben Asher are older than the Karaites

Paul Kahle believes that the "Assembly of Prophets" cited by Moses ben Asher (in the colophon to his "Codex of the Prophets") designated the Karaites themselves at the time of the ben Ashers (which themselves belonged to the Karaites). Like Nathali Wieder, he thinks that the expression "Oaktrees of Righteousness" is "a typically Karaite way of describing Karaites."⁹ Even if the Karaites did express themselves this way, that is not really our concern here. But the "prophets" mentioned in another writing of Moses ben Asher, the "Song of the Vine," are squarely situated in biblical times (cf. Postface: Page 107). We believe therefore that the "prophets" mentioned in ben Asher's colophon are also situated in antiquity.¹⁰

Page 106a: The precursors of the Karaites

The Karaites or *Benê Migra'* ["Sons of the Scripture"] designated themselves as being attached exclusively to the scriptural text. It was only in the 8th century that, as a sect, they asserted themselves under the banner of Anan ben David. "Study the Torah to its depths" was their watchword.¹¹ Scrupulously attached to the written texts, they consequently set themselves apart from their religious contemporaries, the "Rabbinites," who were less strict and more concerned with oral tradition than with the biblical text. This age-old oral tradition had been written down between the 1st century B.C.E. and the 2nd century C.E. in the Mishna¹².

At the time of the Mishna, polemics raged in the Sanhedrin about the legitimacy of the oral tradition. Through the Talmud we know that the *Benê Bathya* (the "sons of Bathya" or "Boethusians") held the opinion of the older sects that only the written texts of Scripture were legitimate. Refuted, they were excluded from the Sanhedrin by Hillel about the time of Christ.¹³ (These are the "Elders of Bathya" cited by Moses ben Asher in his poem "The Song of the Vine," which we will

discuss presently.) The conflict persisted between the Rabbanites and the *Benê Miqra* during the following centuries, but the Rabbanites dominated (being the stronger). Only in the 8th century did the Karaites gain the ascendancy, the circumstances being favorable to them.¹⁴ From thence in the 9th century came the publication of manuscripts complete with the *te'amim* and vowel-points (the so-called "Tiberian" interpunctuation).

But the quarrel goes much further back in time. Josephus, Jewish historian of the 1st century C.E., mentions the quarrel in his *Antiquities of the Jews*. "The Pharisees had presented to the people a multitude of observances inherited from their forefathers and not written in the Law of Moses, For this reason the Sadduceans rejected them."¹⁵ According to Gabriel Arié, these disputes were born during the time of John Hyrcaneus (135-106 B.C.E.).¹⁶ But undoubtedly there were antecedents to these disputes as well.

Page 106b: The signs of the *te'amim* at the time of Christ

That the signs of the *te'amim* are ancient is confirmed by Aaron ben Asher in the colophon¹⁷ to his manuscript of 930 C.E., known as the Aleppo Codex.¹⁸ There he states, "I wrote these vowels and the massora" (massora signifying tradition, hence the term Masoretes). This is reinforced by several references in the Talmud, such as the remarks of Rav Rabba and Rav Eleazer regarding Ecclesiastes 12:9. Rav Rabba interpreted the words "He also taught the people knowledge" in that verse as implying that Solomon taught the Law with its accent signs—*bismanê te'amim*.¹⁹ Moreover, the teachers of the Talmud considered this notation as lost three generations after the fall of the Temple of 70 C.E.²⁰ This obviously implies that they existed before that time.

But we believe that certain Levitical musicians or knowledgeable persons used the notation into the next century because Clement of Alexandria (2nd century) writes, "There exist [readers] who, when they read, completely modify the Scriptures following their own caprices, transforming them into their own commodity by changing the places of the points and the accents which had been justly and prudently arranged."²¹

But how long have these signs existed? This is what the "Song of the Vine" of Moses ben Asher tells us (as we note in the next section).

Page 107: The "Song of the Vine"—a decisive testimony

That the *te'amim* were not created by the Masoretes of Tiberias, but only recopied by them, is what is indubitably attested in the "Song of the Vine" by Moses ben Asher.²²

This work is hardly ever referred to. No doubt the exegetes kept away from it because it formally refutes the baseless opinion they hold concerning the age of the notation. First circulated in the 16th century, their opinion proposes (without the least proof) that the Masoretes were the inventors of these signs (cf. p. 173). This opinion is still uncorrected, despite the discovery of the two manuscripts of Moses ben Asher affirming the contrary. A tenacious prejudice!²³

Actually, we believe that the "Assembly of the Prophets," to which refers the colophon of Moses ben Asher, is really that of the prophets of the Bible. The simple reading of this important poem is convincing in itself. Woven with poetic allusions, it is largely composed of acrostic strophes. Here we cite the essential parts for our subject²⁴ (from the translation of Paul Kahle):

- Line 1: "Thou [God] hast planted a precious stock of vine..."
- Line 3: "The vine of God [was] the tribes of Jacob..."
- Line 4: "The branches of the vine are the Prophets..."
- Line 8: "The wise [ones] of the vine are the Prophets of the world, Moses and Aaron and Miriam, their sister."
- Line 22: "The perfect ones of the vine are the Elders of Bathyrā, the heirs of the prophets, who possess knowledge of understanding."
- Line 24: "As delights they have established the accents of Scripture (*hitqînu ta'amê miqra'*), giving sense and interpreting its word."²⁵

- Then the author situates the Elders of Bathyrā in the past:
- Line 28: "Afflictions surrounded them from the kings of the Greeks and exiled them and dispersed them to No (Egypt) and its provinces (daughter cities)."

We think they probably lived during the 2nd century B.C.E., a tragic period when the tyrant Antiochus Epiphanes tried to wipe out the tradition. It was then they would have copied the Twenty-Four Books of Scripture containing the massora (including the *te'amim*), piously conserved by the Levites, the guardians of the tradition, who cautiously hid them

within the Temple walls from the enemy. This is only a supposition, but it is supported by ben Asher in his poem:

Line 25: "They have erected as a fence round the Torah of our God well-arranged Masoras [or traditions—*masorot sedurot*] to instruct the ignorant." (Cf. p. 161).

Line 27: "Their souls they have given for the Torah of our God to make the many righteous, to extol the Torah."

Paul Kahle, quoting Naftali Wieder, concludes: "As B. Klar rightly observed, Moses b. Asher traced the chain of Karaitic tradition to the Elders of Bathyra, the spiritual ancestors of Karaism who had inherited the prophetic traditions and transmitted them to the Karaites. The latter are thus in direct line of descent from the prophets."²⁶

Let us meditate on this crucial subject. The "prophetic traditions" mentioned by Kahle are actually the *te'amim*. They are what explain the Bible, "giving sense and interpreting its word" (line 24). Until now we all wondered how! The interpretation of the *te'amim* as being signs of grammatical interpunctuation gives such poor results (cf. Supplement I)! But we now have the startling proof of this, thanks to the rediscovered meaning of the *te'amim* — and it is the music which results which gives us this marvel!

Page 126: The staggered creation of the biblical cantillation

This is demonstrated by my realizations, which have become greatly augmented in number since the publication of the first edition of my French book in 1976 (cf. Postface: Page 450).

Page 127: The Pentateuch was written before the other books

It is particularly regrettable that the anteriority of the writing of the Pentateuch in relation to the other books is still doubted. For the Pentateuch is the foundation of Scripture — and the Bible itself affirms that these books were written first.

We read in Deut. 31:24-25 that Moses entrusted the Torah to the Levites so that it could be read to the sons of Israel every seven years. Its writing is confirmed as prior to that of the Book of Joshua, which cites the book of the Law of Moses (Joshua 23:6). Later, it is stated that Joshua wrote in the Book of the Law of God (Josh. 24:26). It seems then that writing a book was a normal thing to do.²⁷

Why place a doubt on the reality of this information? Without denoting an inclination toward a critical spirit,²⁸ this negative opinion is shared by many because they have difficulty thinking that Hebrew writing, obviously alphabetical (which Moses would have used), could have existed before the Phoenician alphabet, since the Phoenicians supposedly "invented" the alphabet in the 11th century B.C.E.! However, history itself shows this latter idea to be false (as we will see in the next section).

Page 161a: Alphabetical writing already existed at the time of Moses

Based on the Scriptures, we believe that the Pentateuch was written by Moses. His texts contained *te'amim*. It may seem hypothetical to some that an alphabetical form of writing—that of the Bible—existed prior to the 10th or 11th centuries B.C.E., since we are told that it is at that time that the Phoenicians "created" alphabetical writing. This is untrue (as we noted earlier). Carl Grimbart states: "It was the Phoenicians who introduced literary writing into Europe, but to say that they were the creators of the alphabet... is another matter."²⁹ Moreover, we learn that alphabetical writing was already in use in the 12th century in Phoenicia, since it figures in a long inscription on a sarcophagus of Ahiram, king of Byblos, dating from that period.³⁰ Also found in Byblos are "letters which place the Phoenician writing much further back in time."³¹ The archaeologist Leonard Woolley (whom we are citing here) also mentions inscriptions discovered in Lachish, using archaic Canaanite characters attributed to the beginning of the 13th or the 15th century, and which "seem related to inscriptions called 'from Serabit,' found in the Sinai desert and which are a form of writing held as alphabetic, dating ca. 2000 B.C.E."³² These revelations are full of interest for us.

But let us briefly recount the evolution of writing. It had its birth in the country of Sumer, c. 3500 B.C.E. It consisted of cuneiform characters traced by a stylus on clay tablets. About 200 years later hieroglyphs appear on Egypt, engraved on stone (as the name indicates). These forms of writing were first composed of numerous figurative designs (pictograms). They were later completed or replaced by ideograms (an extension of the meaning of a design by an abstract sense).³³ Around 2000 B.C.E. in Sumer, the cuneiform characters served the Akkadian language (Semitic and consonantal), which (like Phoenician and Hebrew) was written from right to left.³⁴ At that period

of time appeared a certain number of syllabic systems where, alongside the ideograms which were not numerous, there were a limited number of phonetic signs (45-50), each transcribing only one syllable.³⁵ The cuneiform writing of Ugarit (14th-13th centuries) used alphabetic signs.³⁶ Thousands of clay tablets, indeed entire libraries of baked clay tablets, are extant and available for examination!

But written symbols were also made with a brush on papyrus. This kind of writing is called Egyptian "hieratic" which, during the Middle Kingdom (19th-17th c. B.C.E.), served to fix in writing the literary works, hymns and theological treatises of the time.³⁷ These facts render plausible the existence of a form of Hebrew writing, also drawn on papyrus or an analogous material, by Moses in the 13th or 15th century B.C.E. Consequently the Hebrews would have owed nothing to the Phoenicians, who would have only propagated alphabetic writing. This is the opinion of Frédéric Thieberger and others, who do not hesitate to make the Hebrews themselves the creators of the alphabet.³⁸ Earl Grimbart thinks alike and states: "It is probable that the Phoenician alphabet was born somewhere where cuneiform writing exercised less of an influence than in Syria.³⁹ According to all probability, this creation of enormous importance was the work of a western-Semitic people not living in Syria but in a place where the influence of the Babylonians gave way to that of the Egyptians—thus, perhaps the work of the Hebrews during their sojourn in the land of Goshen. . . They would have created an alphabet which they would have later brought to Palestine, from whence it would have spread to the other Syrian peoples."⁴⁰

F. Thieberger sees in the acrostic psalms the proof that the alphabet was already treated (in the time of David) "as a national possession inherited from an early date, which, at that time, meant a kind of religious possession."⁴¹

That the Hebrews were the inventors of the alphabet is not proven. But that a Hebraic form of writing could have existed from the time of Moses is entirely credible!

Page 161b: The fence around the Torah

This exhortation, attributed to Mattathias (beginning of the 2nd c. B.C.E.) is supported by Moses ben Asher's statement which attributes it to the Elders of Bathyr (who may have lived before Mattathias—cf. Postface: Page 107).

Page 162: Musical life in the Middle East before Moses

We would not want the reader to imagine that these marvelous songs, once again made part of the Bible through the deciphering of their notation, were spontaneously born into a world with a poorly-developed culture, a setting rather closed to musical art. This would engender suspicion regarding their authenticity.

First of all, the social life in Egypt and Sumer was quite brilliant (cf. pp. 14-23). The prestige of pharaonic Egypt is familiar to us all. Since the last century we can understand the great cultivation of the Sumero-Akkadian civilization as well, thanks to the deciphering of unearthed cuneiform tablets and important archaeological discoveries. Frédéric Thieberger writes, "If one has seen the excavations at Ur and in southern Babylonia, which (we are told) was the birthplace of Abraham, one realizes the fact that 1000 years before Solomon, the 'Near East' must have already been a land of refined civilization."⁴² The discovery of the Royal Tombs at Ur bears testimony to this.⁴³ The grandeur of the Babylonian civilization, according to Georges Roux, was at its height during the reign of the great Hammurabi when he extended his empire from Sumer to the Mediterranean. "This long reign of 43 years (1792-1750 B.C.E.) marks the flowering of the Sumero-Akkadian civilization in the 2nd millennium as it was adopted and enriched by the Semites in the West."⁴⁴

Even in Canaan itself, when the patriarchs lived there, social life was particularly well-developed.⁴⁵ While storing the writings of their own heritage, the public libraries "contained copies of the basic Sumerian and Akkadian classics."⁴⁶

We also need to admit that "we used to believe that each of the peoples formed an isolated world where each culture developed without any outside influence; this opinion is no longer held by anyone today. There were reciprocal influences among different cultures, and the Hebrew civilization did not escape from this rule."⁴⁷ Understanding these realities, we better understand the testimonies of a very rich musical life in the Middle East well before Moses. The following facts will help us to see this musical life more clearly.

In the *Répertoire d'Orient*⁴⁸ we read that from the time of Sumer there existed in Mesopotamia a form of religious music, along with musicians who were attached to the temple in various ranks. In the sovereign's palace music also had a place of honor (p. 228).⁴⁹ In the 2nd millennium B.C.E., religious texts were sung in Mesopotamia in solo,

choral, and antiphonal arrangements, accompanied by instrumental ensembles led by a director (p. 226). David was far from the first to institute an academy of singers and instrumentalists for use in the liturgy.

When the sons of Jacob immigrated to the land of Goshen under the leadership of Joseph, they found there, too, a people open to music. For centuries there were sacred singers, employing solo singing, multiple choirs and antiphony, accompanied by harps and woodwinds (p. 152). Beyond the religious context, various musical works were created—including types of oratorios and even operas (with costumes to boot) (p. 153).

The biblical narratives of Genesis, the work of Moses, had therefore certain suggestive antecedents! All the more since Moses grew up in the court of Pharaoh. This does not prevent his magnificent melodies from astounding us. But he was "the greatest of the Prophets" and of the Semitic branch of mankind (and we know of the intense sensitivity of the Semites). Surrounded by such antecedents, the music of the Bible was born simply and naturally, inserting itself into the composite setting of history.

Page 128: Numerical relationships and resultant harmony

The "natural" resonance of harmonic overtones or partials above a given pitch (called a "fundamental note") is a fact well enough established that we should discuss relevant aspects of it.

Since antiquity it has been known that primary numerical relationships (1/2, 1/3, 1/4, 1/5, 1/6 for the length of vibrating strings) were attested by the "consonance" of their corresponding musical intervals. This is a *tangible* musical testimony of the "harmony of numbers."

Many centuries ago it was discovered that when producing a low pitch, under certain conditions, we could *spontaneously* hear its overtones. This was even called "fundamental harmony."

THE OVERTONE SERIES—multiples of vibrating ratios



C C G C E G B^b
 $\frac{1}{1}$ $\frac{2}{1}$ $\frac{3}{1}$ $\frac{4}{1}$ $\frac{5}{1}$ $\frac{6}{1}$ $\frac{7}{1}$

The necessary conditions were the presence of "resonators" such as the sounding boards of pianos.

The supremacy of the octave at a ratio 2:1, the fifth at a ratio of 3:2 and the *major triad* in ratios of 4:1, 5:1 and 6:1 was obvious to all. But nothing seemed to prove the equal footing of the *minor triad*, though it is just as interesting to our ears as its major counterpart.

We must acknowledge that there is also another series of harmonics for each pitch, being "undertones" or lower harmonics:⁵⁰

THE LOWER HARMONIC SERIES – inverted numerical relationships

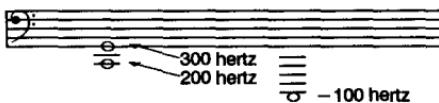


The octave and the fifth maintain their primary importance, at ratios of 1:2 and 1:3, and the *minor* triad replaces the major triad (being produced by the ratios of 1:4, 1:5, and 1:6).

Like the overtones, the lower harmonics are only heard under certain conditions. They are heard separately as *resultant* sounds.

The reality of the existence of lower harmonics was long doubted,⁵¹ but the modern science of experimental acoustics has finally proven their objective existence. They are always mentioned, but in a disconcerting and discouraging (and often incorrect) manner, as *resultant* partials or tones. "Resultant sounds were discovered by the organist Sorgene in 1745 and independently of him by the famous violinist Tartini in 1754. A resultant can be produced by making almost any note sound at the same time as its 5th... It was first admitted that these sounds were purely subjective (according to the meaning we have just stated). Helmholtz proved that they have an objective existence."⁵²

Here is a helpful demonstration of how resultant tones are created. By simultaneously producing two pitches in the overtone ratio 3:2 (here the note G and its lower 5th, C), we produce the resultant lower pitch of C:



This resultant pitch, superficially called a "differential" or "partial," is really the lower harmonic 1:3 of G and the lower harmonic 1:2 of C (ordinarily subjacent), both vibrating at a frequency of 100 hertz, and amplifying each other through coincidental vibrations by the *superposition* of two vibrating frequencies of the same period.⁵³ "Organ builders make use of this phenomenon in order to obtain extremely low pitches without the expense of creating much longer pipes... This is what we call *basse acoustique* [resultant 32' stops on the French organ]."⁵⁴ A similar process is also used by organ builders to produce the first lower common harmonic through the conjugated action of several higher-pitched pipes (in harmonic relationships). This becomes the *jeux de combinaisons* or *mixtures*.⁵⁵

In reality all pitches generate lower harmonics, and although they are subjacent or underlying, they retroact with their own vibrational frequencies and enrich them.⁵⁶ But at the same time the overtones which are subjacent by-products also retroact with the fundamental note and amplify it. Let me illustrate this with a striking demonstration concerning radio speakers: "Many of them are constructed in such a way as to suppress all vibrational frequencies lower than 250 hertz, which is about the frequency of middle C, in order to not transmit the fundamental notes of bass and tenor voices. This prevents us from hearing clearly contrabass, lower brass and men's voices."⁵⁷

The recognition of the objective existence of lower harmonics corrects our "static," fixed conception of the harmony of numbers. It reinstates the "minor" triad, and gives the diatonic modes which derive from it an equal footing with those derived from the major triad. And if it can be said that "Of course, the 'differential' is also produced when the chord is not quite in tune,"⁵⁸ this is because the interaction of harmonics always reinforces *primary* relationships. The causes are physical laws, for a given vibrational frequency will be more greatly amplified by a ratio of 1:3 to its lower harmonic than by a ratio of 1:17 to another lower harmonic.

This therefore establishes the *natural temperament* or "just" tuning, which prefers to use the primary numerical relationships (the most harmonious ones)⁵⁹ from the midst of mixed components.⁶⁰ This is why we can conclude that "To insist on the necessity of perfect tuning, as we have done until now in theory books, is rather without foundation."⁶¹

Page 169: The Masoretic interpretations are empirical

More recently, Gérard E. Weil placed himself as the ardent defender of the interpretation of Aaron ben Asher when he stated: "If we allow one breach in the edifice of the Massorah"—note this well—"all is henceforth debatable: phonetics, grammar, accords, syntax and meaning."⁶² But he contradicts himself when he writes elsewhere, "The Masorete is an empiricist who precedes the grammarian" (cf. Postface: Page 106). He confirms this when he further states that the knowledge of the language at the time of the Masoretes did not permit a valid interpretation (cf. Postface: Page 175a).

Page 170: The diversity of names is arbitrary

More than sixty secondary names are added by G.E. Weil (in his *Concordance de la Cantillation*, op. cit., pp. xxii-xxvi) to the "principal names" which he gives on p. xix. They indicate hypothetical shades of interpretation according to the location or context of the particular sign.

Page 175a: A computer analysis based on incorrect assumptions

The book to which we refer on p. 175 is the *Concordance de la Cantillation du Penteteuque et des Cinq Megillot* by G.E. Weil, P. Rivière and M. Serfaty.⁶³ We have cited its introductory pages above.

By means of numerical combinations utilizing 28 gradations of "disjunctive force" attributed to the twelve signs arbitrarily considered "principal," an interpretation which pretends to be scientific is presented. The additional sets of numbers are presented in the next 300 pages of small print. What worth are they to the reader of Holy Scripture? Each gets what he can out of it. Let us remember that long-standing tradition attributed a melodic meaning to these signs (cf. p. 68 and Postface: Page 176). Besides, his coded interpretation is now obsolete. In fact, the basis of his automatic calculations is a reworked manuscript dating from 1008 C.E.,⁶⁴ in which neither the precise location of the signs, their shape, nor their very presence are respected (in contrast with those manuscripts copied traditionally by the ben Ashers). Even beyond what Aaron ben

Asher says in his own treatise, G.E. Weil says: "The scribe, if he is well-surrounded by emended manuscripts by Aaron ben Asher, has nevertheless revised again his own work" (cf. p. xv of his book). Need we go on?⁶⁵

Page 175b: The Automatic Analysis of the Hebrew Bible and its Aramean Paraphrase

An article edited by Mario Bouble and Jacques Verbal (Paris: Ed. du CRNS, 1977, pp. 39-265). I possess a copy of this article made available prior to its printing.

Page 176a: The *te'amim* clearly explain the biblical text

The word *ta'am* is a word rich in meaning, clothed with various connotations (cf. Postface: Page 97a).

It is undeniable that the music which springs from the *te'amim* (thanks to the deciphering process) testifies to a complexity of mutually complementary meanings which explain the various etymologies of the names of the signs. However, their use as signs of interpunctuation is ambiguous (as we have seen) and completely devoid of expressive worth.

We are finally able to grasp the unique characteristics of this ancient notation. For, undeniably, the music which results from it *completes* and *clarifies* the biblical text.

First of all, it indicates the punctuation better than do traditional punctuation signs, for it makes a living punctuation. Second, through the varied intonations of the voice, it shows off the syntax: key words, principal phrases or sentence parts, and the nature of different interjections (such as exclamation points, question marks and commas). Above all, it reveals the full *meaning* of the texts.

In his "Song of the Vine," Moses ben Asher extols the incomparable virtue of the *te'amim* (which he knew only by word of mouth), "inherited" by the Elders of Bathyr from the prophets (cf. Postface: Page 107). Given that these Elders were those with "knowledge of understanding" (*yod'è binah*), what could this special understanding have been if not that encased in the music? Ben Asher also calls the Elders "deep waters that utter mysteries" (*hidot*, line 23). Is it not the work of the melodies rising from the *te'amim* to clarify and explain the sacred text? And again, "traditions (*masorot*) capable of enlightening the ignorant" (line 25). What other interpretation could be compared to that of the music?

So it is quite clear that the Elders of Bathyra (who were after all a priestly family) knew the *musical meaning* of the signs which they established "as delights" or "with delectation" (cf. line 24 of the Song).⁶⁶

This is entirely credible since at the time of the Mishna and the Talmud there are yet other allusions regarding the music of the Bible. We read in one place that the Bible should be read only with its melody (Babylonian Talmud, *Megillah* 32a). And then there is this convincing text connected with the Song of Solomon: "Only if the biblical text is read with adequate modulation [inflection] can one say, 'Honey and milk are under the tongue'" (*Bereshith Rabba, Shir Hashirim* 4:11).⁶⁷

We are not deviating from the subject when we add that the *vowel-points* also figured in the *Twenty-Four Books* mentioned by Moses ben Asher in the colophon of his "Prophets" manuscript, for he states that they were established "through the *te'amim*" and were "a clear word concerning the pronunciation from a liberated palate [a non-stuttering tongue] and the beauty of language."⁶⁸

The *te'amim* and the vowel-points must have accompanied the Text from the beginning. The often-observed grammatical anomalies of pronunciation would prove this, such as the use of *lakh* (feminine-pronoun form) instead of *lekha* (masculine form) or vice versa as in Isa. 60:5 and Ps. 120:3. These "transgressions" would have been expressly committed for the purposes of verbal-tonal euphony. The initiated reader can see this for himself in our realizations (cf. Postface: Realizations).

Page 176b: The antiquity of square writing

But then, a final question arises concerning the writing of the words themselves. The tradition states that the *te'amim* were given to Moses on Sinai (cf. Supplement I, p. 195 and note 17). Was it to what is considered "paleo-Hebraic" writing⁶⁹ that the *te'amim* were conjoined? If this were the case, several upper signs over a single letter would at times have meager support, since the tops of certain letters (such as 'ayin) were pointed. In the Talmud it is said that God attached "crowns" (*taggin*) to the letters (according to Rabbi Akiba), and only "square" writing, called "Assyrian," has such additions to the consonants (in the script used in Torah scrolls).

However, it is commonly said that this Assyrian form of writing dates back only to the time of Ezra (Babylonian Talmud, Sanhedrin 21b). Archaeology to this point would seem to bear this out—but let us

recall that no Levitical texts have been found dating from before Ezra's time either.

It is good to examine history more closely on this point, for this opinion was contested by the teachers of the Mishna of about the time of Christ (the Tannaim). We read that Rabbi Yehuda Hanassi (the Chief Rabbi) agrees that the Assyrian form of writing was the sacred, the original form of writing. Why? Because it is the most exalted⁷⁰ of the forms of writing (cf. *Ramban, Mishna Gadaim* 2/5). It was also the opinion of the majority of the Amoraim (2nd-4th centuries) that the Hebrews had always used the "Assyrian" form of writing.⁷¹ This is most reassuring!⁷²

Page 185: The Criterion of a Musical Ear

In the realm of musical practice, it is good to remember that for the tuning of instruments as well as vocal intonation, it is the human ear which controls musical intervals. It gives preference to primary intervallic relationships. According to acousticians, there is no "perfect tuning" of notes or intervals where there is only the very slightest difference (cf. Postface: Page 128).

Page 229: The use of the "chromatic-Phrygian" mode

After the 1976 publication of the first French edition of this book, while deciphering more biblical passages, we discovered the use of yet another mode by the poet-melodists who wrote the Scriptures. The **chromatic-Phrygian*** mode is found especially in Isaiah 61 and the book of Esther. It is characterized by augmentation of the 4th degree of the Phrygian mode, which gives these texts their full musical expression. Its modern notation is C#, D, E (tonic), F#, G, A#, B, C#.

Page 278: Extension of the proofs of authenticity of the deciphering key

Prior to 1976 I scientifically experimented with the deciphering key on countless verses. Still, the passages actually realized by that time were not that many. Today, thanks to my collaborators, approximately 5,000 verses have been restituted with their original melodies (cf. Postface: Realizations).

Page 280: The Decalogue

The *Decalogue* was deciphered in its entirety in 1979 and recorded (cf. Postface: Realizations).

Page 287: "Enharmonic" modes and the use of micro-intervals

Because of the simplicity of heart, the spiritual expression and fervor of this music, the modes of the "enharmonic" genre (which employ micro-intervals), being rather "affected," do not really suit the music of the Bible. The cantillation rather calls for modes based on *primary intervallic relationships*, as Alain Daniélou attests: "The simpler the [intervallic] relationships, the more harmonious the music."⁷³

Page 306: The use of the *te'amim*

The authors of the Sacred Texts were erudites, capable of reading the *te'amim* and making musical use of them (cf. Postface: Page 450).

Page 308: *The Elegy of David*

The *Elegy of David* has been recorded on *La Musique de la Bible révélée* (Harmonia Mundi) and published in its entirety in Volume 1 of the scores (Editions Choudens). (Cf. Postface: Realizations.)

Pages 309-310: *Abraham's Sacrifice (The Binding of Isaac)*

The Sacrifice of Abraham has been published in Volume 3 of the scores (Fondation Roi David) and recorded on *La Musique de la Bible révélée*, Volume 3 (cf. Postface: Realizations).

Page 311a: *The Creation*

Genesis 1:1 - 2:2 has been deciphered and will be published as part of *The Musical Message of the Bible* (cf. Postface: Realizations).

Page 311b: *The Song of Songs*

The entire *Song of Songs* by Solomon was published and recorded in 1986. The same year it was premiered in the *Festival des Arts Sacrés*, Paris (cf. Postface: Realizations).

Page 311c: *The Crossing of the Red Sea*

The Crossing of the Red Sea (Ex. 14) and *The Song of the Red Sea* (Ex. 15) will be published as part of *The Musical Message of the Bible* (cf. Postface: Realizations).

Page 311d: *The Book of Jonah*

The entire book of Jonah will be published as part of *The Musical Message of the Bible* (cf. Postface: Realizations).

Page 311e: The Book of Lamentations

The book of Lamentations was published in its entirety in the volume *Four Megillot* in 1986 (cf. Postface: Realizations).

Page 353: The Chanting of Short Syllables

In certain cases, it appears that a short syllable should be absorbed into the "syllable-time" of the preceding syllable, lest the melody be "weighed down." This is the case for the word *hanneshamah* in Psalm 150:6 (p. 352), *yehalelou* ("Let them praise") at the beginning of Psalm 148:5, and other places.

Page 424: An arpeggiated accompaniment for the Psalms

I finally opted for this form of accompaniment (a mixture of simple intervals and arpeggiated chords) for my realizations. Many eminent composers have expressed their appreciation of it, notably Alexandre Tansman.

Page 436: The most musically "inspired" Psalmist: David

This is the result of the realization of all the 150 Psalms and their study and analysis (cf. Postface: Page 450 and Realizations).

Page 445: The Aleppo Codex

The Aleppo Codex of Aaron ben Asher now exists in facsimile (published by Hebrew University, Jerusalem).

Page 450: Important Proofs Concerning the Antiquity of the Notation and the Music Itself

Here, in the Postface, I have produced striking new arguments and irrefutable evidence regarding the antiquity of this notation and the music it represents (cf. Postface: Page 176).

The volume of the musical realizations produced over the last few years gives us an important overview of the music which results from the *te'amim*. We now possess the technical proofs that these melodies were written during biblical times by the very authors whose texts they accompany; moreover, initiates in the musical tradition (notably various authors of Scripture) knew about the "text-melodies" created before their time.

Chapter 12 of the book of Isaiah gives a convincing example of this; two quotations from traditional texts are found within it. Verse 2 cites the second verse of the Song of the Red Sea (Ex. 15:2), while verse 4 cites the beginning of the Song of the Ark of the Covenant (I Chron. 16:8).⁷⁴

Undeniably, these two passages with their respective melodies must have been known to Isaiah. Incontestably, the prophet perfectly understood the musical notation, for he allowed himself to modify three *te'amim* in order to adapt these quotations to his own syntax.

But what is more significant still is the intermittent concordances encountered in the cantillation signs, in certain texts that were undoubtedly recopied by their contemporaries. I have carefully compared many of these, such as II Kings 19 (found also in Isaiah 37), I Kings 10 (found also in II Chron. 9), and many others.⁷⁵

These texts—recopied with an occasional word change, or a verse added or omitted—also show certain differences in the accompanying *te'amim*. The "copier" took certain liberties, thus manifesting his own personality (and right of authorship). These liberties prove that he was musically knowledgeable, and capable of creating melodies with just as much musical validity as those of the particular author which he cites.

All this shows that, first of all, the biblical texts were in circulation as they were written down, along with their *te'amim* (a testimony of the intense spiritual life at the time). This also shows that these texts were musically understood by their readers. And finally, it proves that the initiates were capable of writing music for their own texts.⁷⁶

Furthermore, as we have mentioned, it is the musical style, more than the written style, which reveals the personality of the author (cf. p. 293). Now that all the 150 Psalms have been musically deciphered, we clearly see that the "Psalms of David" were all written by the same hand. Whose hand could it have been, if not that of David himself? This fearless warrior was also highly sensitive, as attest his admirable Elegy (II Samuel 1:19-27) and so many of his psalms. He sang to God as he loved Him—with all his heart. He sought him with all his soul (cf. Ps. 27:7-8). No other psalmist or prophet ever expressed such deep love.⁷⁷

The musical personality of Moses is completely different. His mission was to serve; and to do this, his musical message (like exquisite bas-reliefs on commemorative monuments) highlights the omnipotence of the Creator (cf. Ex. 20 [The Decalogue], Ex. 14 [the Crossing of the

Red Sea], His infinite compassion (cf. Ex. 34:6-7), and His divine majesty. The transcendence of the message of the texts is multiplied tenfold by that of the melodies which support them.

Only Moses could have created these melodies. They describe the author, "the greatest of the prophets," more than do his words. There are indisputable proofs in the melodic concordances that the music of The Binding of Isaac (Gen. 22), Jacob's Ladder (Gen. 28) and The Burning Bush (Ex. 3) are from the same hand.⁷⁸ This hand belonged to Moses, for his musical "personality" is unique! His melodic style is inimitable; it is vast and majestic as well as lyrical. It even surpasses the melodic greatness of Isaiah, who alone in ability and style comes close to Moses.

Nor can we fail to remember the unique musical personality of Solomon. Some have compared the text of his Song of Songs to a *pastorelle*! But they did so in ignorance of its original melody. Who else could have created such melodies, endowing a quasi-divine essence to human love?

For all these imperishable texts the music is superbly adequate. These technical proofs constitute the ultimate criterion that the "music of the Bible" really is the work of those who authored the texts (from the most grandiose to the simplest), who musically inflected each passage as was appropriate.

Page 486a: The Cantillations of Today, Only Superficially Related to the Signs, Originated After the 10th Century .

In disregard of the historical facts, some have informed me that the cantillation taught in their particular community is very old, probably dating back to the time of Christ or even before.

Here we must insist on the facts: the biblical text, until rather recently, was cantillated in the synagogue according to "initial and concluding formulae or motifs of a conjunctive or disjunctive character." (Cf. p. 154 where we cite this quotation by Adler, who refers to Idelsohn and shares his views.) This form of cantillation he calls "primitive" and rejects any relationship between it and that of the Temple at Jerusalem (cf. p. 133). Adler further states: "To attempt to dig any further into the question of the nature of primitive synagogue chant, we must abandon the solid terrain of historical documentation and look into oral tradition."⁷⁹

We have done just that in this book (pp. 462-470), noting that the "formula-types" which constitute this sort of cantillation in no way take into account the signs themselves. This is why they are called "primitive." It was only in the 10th century that the *te'amim* of the "Tiberian" notation were made public. Adler says: "The so-called 'Tiberian' system, whose codification is attributed to Aaron ben Asher (10th c.), and which asserts itself, at least in its graphic formulation..."⁸⁰ In reality, it is only through its graphic formulation that it asserts itself. We have additional proof of this in the cantillations recopied by Obadiah the Norman. The "initial and concluding motifs" of the verses disregard the signs which are nevertheless present in the Masoretic Text (cf. p. 150). The interpretation proposed by Reuchlin (cf. p. 486) and the other extant series of "tropes" (as they are commonly called in the English-speaking world) are still hardly worth thinking about by anyone who is serious about this subject!

Page 486b: The Shir ha-Shirim Institute

In 1990 a center for the study and performance of the biblical cantillation was created at Yavne, Israel. It is called THE SHIR HA-SHIRIM INSTITUTE (after the Hebrew title of the Song of Songs). Gilles Tiar, a fine musician who has assisted me since 1976, is its director. Inquiries may be referred to:

THE SHIR HA-SHIRIM INSTITUTE
P.O. Box 4606
Yavne, ISRAEL

Page 460: The cantillation of the texts during biblical times

As we have noted, the initiates of the Holy Scriptures were knowledgeable of the musical meaning of the *te'amim* and were capable of reading and writing them. Undoubtedly they solved the question of their exact melodic rendition in various contexts through acquired habit.

NOTES

¹ "Un nouveau papyrus musical d'Euripide," *Comptes rendus des séances de l'Académie des inscriptions et Belles-lettres* (Paris: Klinsksieck, 1973).

² In musical mss. containing the Alpyian notation and the Aristide Quintilien notation.

³ Could we be seeing in these Greek "neumes" the transcription of a two-handed chironomy, such as was used in Greek antiquity? If so, this may tell us something about the relationship between the written biblical signs and the hand-signs paralleling them as preserved by the Masoretes.—Ed.

⁴ Cf. *Concordance de la Cantillation du Pentateuque et des Cinq Megillot* (Metz: CNRS, 1978), p. iv, where G.E. Weil cites in footnote 1 the Babylonian Talmud: *Megillah* 3a, *Nedarim* 37b, *Hagigah* 6b, etc.

⁵ However, a reconstruction of the chironomy behind the notation (or parallel to it) may be able to tell us.—Ed.

⁶ Paul Kahle again cites other important interpretations of the word, applicable to music and found in Bible dictionaries: "taste," "intelligence," "command," "reason or cause," "sense or meaning," "accent or intonation." Cf. *The Cairo Geniza* (London: Oxford, 1959), p. 103.

⁷ The use of the *te'amim* in the "text-melody" of the "Song of the Red Sea" (Ex. 15) would rule out a revelation of the *te'amim* on Sinai (it is surprising the medieval commentators did not notice this). Perhaps Ps. 81:2-6 gives us a clue as to their origin: as part of the sacred liturgy ordained while Israel was yet in Egypt, about which ordination we are told little more. Or perhaps the system was used even earlier; certain texts which seem to date from late patriarchal times hint at this.—Ed. .

⁸ G.E. Weil, op. cit., pp. xix, xxii-xxvi.

⁹ Cf. *The Cairo Geniza*, op. cit., p. 97.

¹⁰ The "community of Prophets" (Kahle's translation) mentioned in the colophon are described as the faithful revelators of what was transmitted to them (Kahle, op. cit., p. 96). It is for this reason (among others) that Kahle believed that these "Prophets" were the latter-day community of the Karaites themselves. But the biblical prophets were equally inheritors of and initiates in the musical interpretation of earlier texts (cf. Postface: Page 450).—Ed.

¹¹ Cf. André Paul, *Ecrits de Qumran et Sectes juives aux premiers siècles de l'Islam* (Paris: Letouzey et Ané, 1969), p. 104.

¹² Which was reported and commented upon in a vast work, the Talmud (Babylonian and Palestinian), concluding in the 6th century).

¹³ Babylonian Talmud, *Pessahim* 65a.

¹⁴ Cf. André Paul, op. cit., pp. 100, 103, 115.

¹⁵ F. Josephus, *Antiquities*, 13, 10, 6, cited by A. Cohen, *Le Talmud* (Paris: Payot, 1933), p. 23.

¹⁶ Cf. *Historie Juive* (Paris: Ed. du Monde Moderne, 1928), p. 59.

¹⁷ This colophon has been removed from the manuscript, but it is mentioned by an ocular witness in a work written between 1478 and 1484. Cf. Simon Sziszman, *La Famille des Massorères Qaraïtes Ben Asher et le Codex Alensis* (Paris: Gabalda, 1967), pp. 534, 546.

¹⁸ The scribe Ben Buya calligraphed the consonantal text.

¹⁹ Babylonian Talmud, 'Erubin 21b.

²⁰ So says Gérard E. Weil, he who so ardently promotes the idea that the Masoretes were the creators of these signs! Cf. the cover of his work, *Concordance de la Cantillation du Pentateuque et des Cinq Megillot*, op. cit.

²¹ Clement of Alexandria (150-211 or 216 C.E.), *Stromates* III, ch. 14, quoted by Solange Corbin in *L'Eglise a la conquête de sa musique* (Paris: Ed. Gallimard, 1960), p. 93.

²² Of which several fragments are extant, one of which was discovered in the Cairo Geniza (Paul Kahle, op. cit., pp. 82-83). I am grateful to John Wheeler for calling this song to my attention a few years ago.

²³ To be fair, we know of no other medieval source which links ben Asher's "Elders of Bathyrā" to the "Tiberian" notation. The medieval commentators cited in this book, while affirming the biblical and even Mosaic origin of the *te'amim*, never mention their links to the Karaïtes or the Elders before them. These links were forgotten by the Renaissance. By then, it was realized by various students of the notation that either the tradition of its biblical age or its traditional interpretation was in error. The former viewpoint won the day—so much so that when evidence was rediscovered which contradicted this view, it was simply ignored!—Ed.

²⁴ Here is the original Hebrew text of lines 22-28 of the "Song of the Vine" by Moshe ben Asher (from Kahle, op. cit., p. 84):

תְּמִימִי הַגָּנוֹן הַמִּזְקֵנִי בְּתִירָה יְרוּשִׁי הַגְּבִיאִים יְוּדָעִי בִּינָה
טַיִם עֲסָקִים טְבִיעִי חִידָׁזָה לְבָם טְלֵפִיל חֶכְמָה פְּנַחַל נָעָבָע
שְׁאַשְׁנִיעִים חַתְקִינוּ שְׁעַטְרִי טְקָרָא בְּשָׂום שְׁכָל וְנִיבָּטְפָרָע
הַקִּינְפָּה גַּדְרָה לְתֹזְנִת אֱלֹהִינוּ טְסָרוֹת סְדוּרוֹת לְמַחְפִּים פְּתִי
בְּאַטְמָנָתָם יִסְדֹּו פִּירּוֹת טְקָרָא בְּלָלִים בְּטָצּוֹת בְּלִי לְסִוְרָה טְדָרָה
נְפָשָׁם נְתַנוּ עַל חֹורֶת אֱלֹהִינוּ לְחַצְדִּיק רְבִים וּלְחַנְדִּיל תּוֹרָה
אֲפָפָם צָרוֹת טְפָלָבִּי יְוּנִים וְהַגְּלִים וּנְגַפְּצִים לְנָא וּבְנָעָתִיחָה

²⁵ We will return to this subject later. Cf. Postface: Page 176a.

²⁶ Cf. Kahle, op. cit., p. 85. The Elders of Bathyrā and the *Benê Batyra*, their descendants, are amply cited in the Talmud, as in *Pessaḥim* 65a (which we have already mentioned), *Sanhedrin* 11b (Soncino ed., p. 49, note 1), and

Pessaḥim 65a and 66b (Soncino ed., pp. 333 and 336).

²⁷ Besides, the act of writing is mentioned many times by Moses. We limit ourselves here to these examples: Ex. 34:27; Deut. 6:9; 17:18; 31:19.

²⁸ Such as was responsible for the "documentary hypothesis" and its offshoots, which would arbitrarily divide the Bible into various "documents" on the basis of the use of different divine names and other criteria. Actually, the melodies, even more than the words, indicate that the Pentateuch, the Psalms of David, Isaiah, and so on, were each the work of one author (cf. Postface: Page 450).—Ed.

²⁹ Carl Grimbart, *Histoire Universelle* (Vervier: Gérard & Co., 1963), vol. 1, p. 241.

³⁰ Leonard Woolley, *Abraham* (Paris: Payot, 1949), p. 16.

³¹ Woolley, op. cit., p. 16.

³² Woolley, op. cit., p. 16.

³³ Cf. Gilbert Lafforgue, *Histoire Universelle—La Haute Antiquité* (Paris: Larousse, 1969), pp. 138, 292.

³⁴ Woolley, op. cit., p. 100.

³⁵ As is the case for Protoelamite, the form of writing used in Crete and Cyprus. Cf. Lafforgue, op. cit., pp. 291-292.

³⁶ Lafforgue, op. cit., p. 292.

³⁷ Cf. *Dictionnaire Alphabétique et Analogique de la Langue Française* (Paris: Le Robert, 1972), vol. 3, p. 487.

³⁸ Frédéric Theiberger, *Le Roi Salomon et son temps* (Paris: Payot, 1957), p. 22.

³⁹ Canaanite was the principal Semitic language in Syria during the 2nd millennium B.C.E.

⁴⁰ Grimbart, op. cit., p. 241.

⁴¹ Thieberger, op. cit., p. 49.

⁴² Thieberger, op. cit., p. 22.

⁴³ In which were buried jewelry, precious furniture and other objects. Cf. Lafforgue, op. cit., p. 144.

⁴⁴ Georges Roux, *La Mésopotamie* (Paris: Ed. du Seuil, 1985), p. 175.

⁴⁵ "The triumph of the Semitic dialects is accompanied by a prominent Syrian culture (Canaanite) already in gestation in the 3rd millennium B.C.E." Lafforgue, op. cit., p. 293.

⁴⁶ Lafforgue, op. cit., p. 294.

⁴⁷ Grimbart, op. cit., p. 228.

⁴⁸ Wilhelm Stauder, "Die Musik der Sumerer, Babylonier und Assyrer" ["The Music of the Sumerians, Babylonians and Assyrians"], and Hans Hickmann, "Altagyptische Musik" ["The Music of Ancient Egypt"], in *Handbuch der Orientalistik*, suppl. 4 (Leyde/Cologne: Brill, 1970).

⁴⁹ The marvelous lyre discovered at Ur, city of Abraham, in the tomb of Queen Shubad (c. 2000 B.C.E.), is proof of this. It is presently housed in the British Museum.

⁵⁰ The ratios between string lengths and vibrational frequencies are inversely proportional. All else being equal, when the lengths of two strings are in a ratio of 2:1, their frequencies are in a ratio of 1:2.

⁵¹ "Like Rameau and Zarlino, Tartini relates the minor consonance to a (lower) harmonic series directly opposed to the overtone series and in whose resultant sounds he believes to have found the reality of its existence." Hugo Rieman, *Dictionnaire de la Musique* (Paris: Payot, 1931), p. 1322.

⁵² James Jeans, *Science et Musique* (Paris: Hermann et Cie, 1939), pp. 241-242.

⁵³ Because of the energy required to produce them, we do not hear lower harmonics without reinforcing their frequencies by superposition. According to J. Jeans, "It takes a trillion times more energy to allow us to hear a great C than to produce a note seven octaves higher" (op. cit., p. 225).

⁵⁴ Jeans, op. cit., p. 247.

⁵⁵ Jeans, op. cit., p. 249.

⁵⁶ "Oskar Sala has been able to show (with the aid of his *Mixturm-Trautonium*) that certain lower harmonics have a very characteristic influence on timbre." Fritz Winckel, *Nouvelles vues sur le Monde des Sons* (Paris: Dunod, 1960), p. 19.

⁵⁷ Jeans, op. cit., pp. 245-246.

⁵⁸ F. Winckel, op. cit., p. 98.

⁵⁹ This is why micro-intervals (such as are found in certain oriental modes) are classed as "ambiguous" conceptions.

⁶⁰ "Thus a pure sound never has silent frequencies but bands of frequency; the average height of the band corresponds approximately to what we call the pitch of the note." F. Winckel, op. cit., p. 122.

⁶¹ Winckel, op. cit., p. 123.

⁶² G.E. Weil, op. cit., p. xxxiv.

⁶³ *Edition du CRNS* (Metz, 1978), published after the second edition of my book.

⁶⁴ Ms. Leningrad B19 (cf. p. 445 and note 6).

⁶⁵ This manuscript has nevertheless served as the basis of several editions, including the famous "Stuttgart Bible" (BHS). The melodies in these editions are obviously mutilated! Fortunately, the authentic tradition, the one recopied by the ben Ashers, is universally recognized by the international rabbinate.

⁶⁶ Jesus ben Sira makes this clear when he boasts about the harmonious singing of the Levites (cf. pp. 23-24).

⁶⁷ Translated by Nadine Shenker, Docteur Es. Lettres, Professor at the Bezalel Academy of Fine Arts and at Tal ha-Nistar Bible Center, Jerusalem.

⁶⁸ Cf. the original Hebrew text and Paul Kahle's translation on p. 107.—Ed.

⁶⁹ An inferior type of writing (says Rabbi Hisda) which was used in amulets and *mezuzot* (small parchments placed at the entryway of a house).

⁷⁰ That is, *ashré*, which signifies "blessed, happy" (cf. Pss. 1:1, 11:1).

⁷¹ Cf. *Teshuvoth ha-Geonim* (responsum 358), cited by Mr. Margolis Hayan (on Sanhedrin 21b).

⁷² We owe these statements and clarification, along with their translation, to Prof. Nadine Shenker.

⁷³ Alain Daniélou, *Traité de Musicologie Comparée* (Paris: Herman, 1959), p. 161.

⁷⁴ The beginning of Psalm 105 itself coincides in its text with the beginning of this song. (Psalm 105 is annotated with the psalmodic notation, while the "Song of the Ark" uses the prosodic notation.)

⁷⁵ All these texts have been musically restituted for comparison purposes in a new collection: *The Musical Message of the Bible*. This volume, to be published in 1991 by the Fondation Roi David (Paris), will contain forty key passages and chapters of the Bible, along with analysis and commentary (approximately 400 pages).

⁷⁶ For them it was a necessity to facilitate comprehension. The same was true in classical Greece. Thanks to the work of the Hellenist and musicologist, D. Jourdan-Hemmerdinger, we now know that cantillation signs (independent of the alphabetic notation) figure in numerous Greek mss., and that each graphical form found in the *te'amim* is present (cf. Postface: Page 83). Let us remember that specific signs for punctuation only appear in the 3rd century B.C.E. (cf. p. 79).

⁷⁷ This comes from the analytical study included in *The 150 Psalms* (cf. Postface: Realizations) and numerous other realized texts. Certain "anonymous" psalms can now be attributed to David's authorship.

⁷⁸ Cf. Gen. 22:14 with Gen 28:19; Gen. 28:13 with Ex. 3:5b. The same mode is employed: the "chromatic-Dorian." All these technical details are compiled and commented upon in *The Musical Message of the Bible* (see note 75).

⁷⁹ Cf. I. Adler, "Musique Juive," *Encyclopédie de la Musique*, op. cit., p. 644.

⁸⁰ Cited on p. 154.

REALIZATIONS BY SUZANNE HAÏK-VANTOURA**The Music of the Bible Revealed****Published as of this date under the same title:**

- Book, in French* (Institute of France award), 560 pp. (2nd Edition by Dessain et Tolra, Paris, 1976)
- Resumé: The Deciphering Key of the Musical Signs in the Bible*, Fondation Roi David, 1990.
- Musical Examples* from the book, *Cassette* recorded by the author (57') (Fondation Roi David, Paris, 1976) (a)
- Cassette, LP or CD*, Harmonia Mundi (39'40"), 1976 (b)
- Cassette*, Erato - Fondation Roi David: *Volume 803 B* (42'40"), 1979, 1986 (b)
- Cassette*, Fondation Roi David: *Volume 803 C* (39'45"), Paris 1986 (b)
- Cassette, SONG OF SONGS*, Fondation Roi David: *Volume 802 A* (43'50")—see hereafter, *Score* (sung in Hebrew, Paris 1987)
- First Volume*: all the works on the Harmonia Mundi recording (21 cm by 30 cm), Ed. Choudens, Paris, 1978 (c, f)
- Second Volume*: all the works on Cassette Vol. 803 B (21 cm by 30 cm), Ed. Choudens, Paris, 1983 (c, f)
- Third Volume*: all the works on Cassette Vol. 803 C (21 cm by 30 cm), Fondation Roi David, Paris, 1988 (c, f)
- Three Choruses*: Psalms 122, 150, 24, *Score* (21 cm by 30 cm), Ed. Choudens, Paris, 1978 (d, f)
- Four Choruses*: Psalms 29, 96, 93, 19, *Score* (21 cm by 30 cm), Ed. Choudens, Paris, 1983 (d, f)
- Four Choruses*: Psalms 100, 98, 148, 121. *Scorè* (21 cm by 30 cm), Fondation Roi David, 1988 (d, f)
- The Real Meaning of the Musical Signs of the Bible* (12 pp.), brochure, Fondation Roi David, Paris, 1980
- The 150 Psalms in their Ancient Melodies*, Parts One and Two (without accompaniment): 52 pp. explicative text and 850 pp. of musical text, Fondation Roi David, Paris, 1985 (e)
- The 150 Psalms in their Ancient Melodies—EXTRACT*: same description with the first five Psalms, 52 pp. explicative text and 19 pp. musical text (f)
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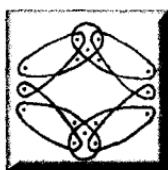
- (a) Sung *a capella* in Hebrew by the author; page numbers given in French.
- (b) Sung in Hebrew (transcribed into Latin characters) with accompaniment of soloists by Celtic harp, of TTBB by plucked strings, trumpet, cymbals, rattles.
- (c) Light accompaniment for Celtic harp or guitar; Hebrew text transcribed into Latin characters.
- (d) Version performed on the recording; Hebrew text transcribed into Latin characters; TTBB, plucked strings, trumpet, cymbals, rattles.
- (e) Format: 10 cm by 15 cm written music, explicative text in English; French translation above each verse; Hebrew transliterated into Latin characters.
- (f) Full English translation.
- (g) Explicative text and translation above each verse in French; Hebrew transliterated into Latin characters.

Inquiries concerning other available, unpublished biblical texts should be addressed to:

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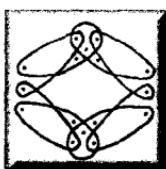
AS OF 2013:

John Wheeler (יוחנן רבָבָ)
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Available from King David's Harp, Inc.**Available 1991**

- Book: *The Music of the Bible Revealed*, Suzanne Haïk-Vantoura, translated by Dennis Weber (BIBAL Press / King David's Harp, Inc., 1991).
- Video-cassette: "The Biblical Musical Signs: A New Interpretation" by John Wheeler (King David's Harp, Inc., copyright 1990). An explanation of the bases and conclusions of Haïk-Vantoura's work, including a discussion of the original hand-signs behind the Tiberian notation.
- Article: "Music of the Temple," John Wheeler (*Associates for Biblical Research*, 1989). A summary of the conclusions and implications of Suzanne Haïk-Vantoura's work.
- Article: "Origins of the Music of the Temple," John Wheeler (*Associates for Biblical Research*, 1989). A summary of the internal and historical evidences for the origin and transmission history of the biblical cantillation, based on the literal historical sense of the Bible.
- Book: *The Musical Message of the Bible*, Suzanne Haïk-Vantoura, (Paris: Fondation Roi David, expected publication 1991).

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— Recording: Erato - Fondation Roi David

THIRD VOLUME (Fondation Roi David, Paris)

Psalm 100 — Psalm 52 — Psalm 1 — Psalm 13 — Psalm 67 — Ecclesiastes 1:1-9 — Isaiah 60:1-5 — Psalm 148 — Abraham's Offering [Binding of Isaac] (Gen. 22:1-14) — Psalm 113 — Psalm 98 — Psalm 121 — Amos 1:1-6 — Psalm 62

— Recording: Fondation Roi David

**SONG OF SONGS BY SOLOMON IN ITS ORIGINAL MELODY
(Fondation Roi David, Paris)**

— accompaniment by Suzanne Haïk-Vantoura

(for baritone — mezzo-soprano — concert harp — alto flute — men's and women's antiphonal ensembles)

— Recording: Fondation Roi David

GLOSSARY OF MUSICAL TERMS

- Alteration:** an accidental (flat, sharp or natural), a sign marking the raising or lowering of a natural degree by a half-step.
- Ambitus:** the range of a melody, without the consideration of its **tessitura***.
- Antiphon:** a response sung between single and many voices or between two groups of singers, such as in Catholic and Greek Orthodox church services.
- Antiphony:** the name given to the **octave*** by the theoreticians of ancient Greece.
- Appoggiatura:** an "added note" to the melody, recognizable as such, yet intimately linked to its contexture (it is the neighbor of the specific note to which it resolves).
- Architectonic:** the "form" of musical works, resulting from tonal relationships.
- Augmented** (interval): exceeding the normal interval; e.g., the *2nd*, the distance between two conjoint degrees, is *normal* when it is composed of a **step***, and called *augmented* when it is composed of a step and a half-step.
- Breve:** the ancient designation of the *proportional* duration of a sound (the **longa*** having a duration twice as long).
- Cadence** (melodic) [from Latin *cadere*, "to fall"]: the name given to a harmonic series (or a melodic line) which produces the impression of a resting point or a conclusion.
- Cadence** (rhythmic): the reappearance of the **strong beat*** at regular intervals of time (schematically, the **meter***).
- Caesura:** a break in the verse caused by the ending of a word within a foot; a rhythmic break (usually with a pause in the sense) about the middle of the verse.
- Chironomy:** the art of conducting or representing music by gestures of the hand, arms and/or fingers.
- Chord:** a *simultaneous* ensemble of distinct musical sounds: three notes in its simplest formation (two notes being only an **interval***), four and five notes comprising chords in "classical" harmony.

Chromatic (genre): the spacing of successive degrees characterized notably by the presence of the *augmented 2nd*: an interval of *a step and a half-step*, the normal distance being a **step***.

Chromatic (scale): in the "classical" system (the music of Western Europe), the scale of twelve degrees, taken from the scale of seven notes (differently spaced at intervals of one and one and a half steps) by the addition of **alterations*** (sharp, double sharp, flat, double flat). The ancients (who did not have specific signs for alterations) used the **chromatic genre*** with circumspection.

Chromaticism: the augmentation of an interval in a diatonic scale (or a normal diatonic progression in a melody) by one half-step.

Conjoint(degrees): neighboring notes (in the **diatonic*** scale) with different names (the alteration of a note does not constitute a new degree in relation to itself).

Degree: the classification of a note with reference to its position in the scale. Thus, the notes of our "classical" C major scale (in ascending order C-D-E-F-G-A-B-C) are called the *1st degree*, *2nd degree*, and so on, eventually returning to the *1st degree* on C.

Diaphony: the movement of the voices by *oblique* or *parallel* motion (or even *contrary* motion: *descant*) in the music theory of the Middle Ages.

Diastematic (signs or notation): signs of notation *visually* suggesting the pitch relationships between the sounds.

Diatonic (scale*, mode*, or melody): that in which the degrees are spaced according to the **diatonic genre***.

Diatonic (genre): the natural spacing of successive **degrees***, of a series of tones consisting exclusively of **steps*** or **half-steps***, unalterably arranged in the following pattern: step, step, half-step, step, step, step, half-step (each degree, however, being capable of being the point of departure for the series).

Diminished (interval): one half step less than the normal interval, e.g., the *5th* is called *perfect* when at a distance of $3\frac{1}{2}$ steps from the **tonic*** and *diminished* when only 3 steps away.

Divisiveness (in biblical exegesis): dichotomy; divisions of the verses which should be justified by the presence of the cantillation signs. Also known as *disjunctive*.

Disjoined: degrees* of a scale* separated in their succession.

Dominant: in our "classical" system, the most important degree of a mode* or melody after the tonic*. This is exclusively the 5th degree of the mode employed. However, one may thus name, more generally, any important degree of a mode* other than the tonic*.

Dorian (mode): the Greeks of antiquity so named the mode* resulting from seven notes normally spaced (natural, non-altered) which has *E* as its point of departure.

Double ison: see Ison*.

Ekphonetic: the most ancient Byzantine notation, derived from chironomy*.

Enharmonic (genre): an arrangement of the conjoint* degrees of a mode*, characterized by minimal intervals* (of a third- or quarter-tone or less). The Greeks and the Romans used the enharmonic genre; the Church forbade its use. The "classical" tonality* englobes the use of "enharmonics" in its temperament*.

Enharmony: here, the use of enharmonic* alterations of the pitches of the scale or of the melody.

Ethnomusicology: the comparative scientific study of the music of various ethnic groups (ancient and modern).

Ethos: the expression, actually undefinable, of a mode*, which is nevertheless connected to its structure. This was the term in antiquity used to describe the "ethical" power or "moral force" of a mode, that is, its ability to influence the development of character and attitudes in the listener.

Fifth (interval): the distance between the two outside notes of five conjoint degrees, e.g., between C and G, E and B (in ascending order).

Final: the last note of a monody, the function of which is equivalent to that of the tonic* in our modern music theory.

Flex: a note indicating a melodic flexion of the phrase (to a 2nd below); a suspensive cadence in plain-chant.

Fourth (interval): the distance between the two outer notes of a group of four conjoint degrees, e.g., between C and F, G and C (in ascending order).

Gapped: A mode or melodic succession (such as a scale*) in which certain degrees are lacking. (The Chinese scale, which only has five degrees* per octave, is a notable example of a "gapped" scale.)

Half-cadence: an important resting point in the musical phrase, non-conclusive by nature.

Half-step (interval): The small distance between two conjoint* degrees (justified by the laws of tonality; the half-step may also be chromatic* in nature).

Harmonics (science): The treatment of the *relationship* of simultaneous sounds.

Hemistich: a phrase member in a verse (each verse having two hemisitches in principle, sometimes more).

Heterophany: the simultaneous playing of two different melodies, or the same melody in an ornamented and unornamented form.

Hypodorian (mode): the name given to the natural mode* of A (thus, diatonic), which is none other than our "classical" minor* scale.

Interval (solfege): the distance separating two notes (including the first note, the last note, and the notes in between).

Interval (harmony): according to the *close* relationships of numbers (of vibrating strings, frequencies of vibration—cf. temperament*), the normal intervals are major*, minor* or perfect* (the normal 4th, 5th and octave being perfect intervals). The difference between major and minor intervals is that of one half-step* (e.g., a "major 3rd" is an interval of four half-steps, a "minor 3rd" of three). Taken from this basis, every interval may be augmented* or diminished* (the diminished 2nd and augmented 7th being excluded, since they are the unison* and the octave*, respectively).

Ison: vocal "drone" on the tonic* (principal note). A double ison* is the simultaneous holding of the tonic and dominant by the voices.

Leading tone (note): the name given to the 7th degree of our chromatic* minor* mode in "classical" music; the augmented* 2nd which characterizes it places the 7th degree at a distance of a minor* 2nd (a half-step) from the tonic. Thus related to the tonic, the leading tone follows its attraction and resolves naturally to the principal note of the mode.

Lied (German, pl. Lieder): in the modern, non-German-speaking world, the type of song with piano composed by, e.g., Schubert, Schumann, and Wolf.

Longa: in ancient rhythmical practice, the duration of the longa in relation to the breve* was proportional, equal to double the length of the breve.

Lydian (mode): the Greeks of antiquity so named the mode corresponding to our major scale (the **diatonic*** scale normally spaced).

Major (interval): an interval considered large, in relation to the **minor*** interval, each being a *normal* interval. Normal **thirds*** are either **major*** (four half-steps) or **minor*** (three half-steps). On the other hand, the intervals called **perfect*** are neither major nor minor (as sensed by the ear and justified by vibrational relationships).

Major (mode): a scale of **diatonic*** genre whose composition is the following (in ascending order): step, step, half-step, step, step, step, half-step. The natural **degrees***, without **alterations***, constitute the scale of C major, C being the **tonic*** note.

Mediant (mode): intermediary note between the **tonic*** and the **dominant*** (in Occidental theory, the *3rd degree*).

Melisma (Greek *melismos*, division): in the ancient theory of **prosody***, a melodic figure (of two or three tones) occupying the allotted *syllabic time*, in place of (and by extension of) a single note. Later, the number of notes in a melisma grew (in the *vocalised* form).

Mensural: in music, having notes of fixed rhythmic value (as in one beat per syllable in certain kinds of vocal music).

Meter: succession of equal *beats*, characterized by the periodic return (*symmetric* or *asymmetric*) of a **strong beat*** (the **meter** of biblical prosody is *asymmetric*).

Minor (interval): considered as smaller by comparison (see **major***).

Minor (mode): a mode of **diatonic*** genre, characterized by the scale of A without **alterations***, or of **chromatic*** genre, characterized by the **augmented*** 2nd between the 6th and 7th degrees (in our "classical" theory).

Modality: the state of tonal relationships of an ensemble of sounds, resulting from the **mode***.

Mode: the state of being of a series of degrees (of a **scale***, or by extension, of a melody) resulting from the characteristic arrangement of the degrees comprising it: step, half-step, step and a half, etc. They are classed in three genres: **diatonic***, **chromatic***, and **enharmonic*** (the last genre not being used in Occidental theory today). The notion of **mode*** implies that of the **tonic***.

Modulation: in the "classical" tonal system, the transposition to one of the two **modes*** (**major*** or **minor***), in taking as a point of departure a particular degree of the **chromatic*** scale.

Monodic: music consisting of only one melody to the exclusion of all others (*polyphony**) or of *chords** (harmony).

Neumatic (notation): derived from gestures (from Greek *neuma*).

Neume: a generic name for each of the various signs in ancient musical notation showing the note(s) to which a syllable of vocal music was to be sung.

Octave: the 8th degree, lower or upper, from any particular note, thus possessing the *same name*—which justifies the *tonal analogy* on one hand and the *vibrational relationship* on the other (the ratio of frequencies being 2:1).

Perfect (interval): The name given to certain intervals—the *4th*, *5th*, and *octave*—which, on the basis of physical laws, cannot be considered "major" or "minor". The term is applied to these intervals in their "normal" dimensions: e.g., C to F, C to G, C to C, respectively. These intervals become *diminished* if reduced by a half-step, *augmented* if increased by a half-step.

Phrygian (mode): the Greeks of antiquity so named the mode* resulting from seven notes normally spaced (natural, non-altered) which has **D** as its point of departure.

Polyphony: in the literal Greek sense, any simultaneous sounding of different notes; as commonly used today, the sounding of two or more different melodies simultaneously in "counterpoint"—a concept unknown to antiquity.

Position (of chords): an *adopted arrangement* of sounds presented in an invariable order, in natural (*harmonic**) resonance. This has to do (in "classical" theory and practice) with the "layout" of a chord, the determination of its "bottom" note. For example, with the chord consisting of the notes C, E, and G, if the note C (the "root" of the chord) is at the bottom, the chord is in *root position*; if E is at the bottom, the chord is in *first inversion*; if G, the *second inversion*. The *various positions* of chords modify their character.

Prosody (from Greek *prosodia*): a chant which is added to the common pronunciation of a vowel. The accent, among both the Greeks and Romans, was *melodic*: it marked the rising, then the falling of the voice. The prosody of a verse of poetry was the quasi-melody resulting from the succession of its vowels, accented or not, and which Cicero qualified as "*obscure chant*". *Biblical prosody* used well-differentiated *musical tones*.

Resolution: in speaking of **appoggiaturas*** or **melismas***, the return to the basic constituent degree from which they are derived as "*added notes*".

Scale: a theoretical succession of musical **degrees***, their spacing being determined by the *genre* of the scale (**diatonic***, **chromatic*** or **enharmonic***) independently of the choice of **mode*** (which implies the choice of a **tonic***, a center of tonal attraction). "Classical" tonality considers a complete scale of musical degrees (of approximately seven **octaves***), either from the **diatonic*** aspect (which is easily concretized by the white keys of the piano keyboard, seven per octave) or from the **chromatic*** aspect (using both the black and white keys, twelve per octave). In ancient Greek theory, the complete scale did not go beyond two and a half octaves. The partial scales coincided with their **degrees*** (in the **diatonic*** genre); the **chromatic*** and **enharmonic*** genres were only *partial, specific alterations* of the **diatonic*** genre.

Second (interval): the interval between two neighboring notes, e.g., between C and D, G and A.

Step (interval of sound): the *normal* spacing between two **conjoint*** degrees—the degrees being called by different names for this reason (their difference being sensed by the ear and justified by their vibrational relationships).

Strong beat (rhythm, meter): the *first beat* of a measure is considered *strong* in duplet or triple meter; in 4/4 time, the *first* and *third* beats (the first being always the strongest). In biblical prosody (which is not "metrical"), the *accented* syllable carries the *strong beat*; unaccented syllables are *weak beats*.

Subdominant: the name given to the *4th degree of a mode* (in "classical" theory), since it is actually placed *under* the dominant. The **tonic***, **dominant*** and **subdominant*** are the three primary degrees in tonality.

Subtonic: in classical tonality, the name given to the note immediately below the tonic (i.e., the 7th degree) when it does not immediately resolve to the tonic (cf. **leading tone***).

Syllabic (prosody): in which the sounds *accentuate* the syllables. Rarely, however, two or three sounds succeed each other in the allotted *syllabic time* (forming a **melisma***).

Temperament: the "tempering" (by slight enlargement or diminution) of musical intervals away from those of the "natural" scale (that derived from natural **harmonic*** resonance), in order to fit them for practical performance. Our modern fixed-keyboard instruments are tuned to a scale of *equal temperament* (see below).

Tempered (scale): a scale in which the degrees, fixed *theoretically* by *numeric rapports* are grouped and equalized in their distances by **temperament***.

Tenor (note): the ancient name employed for the equivalent of the **dominant*** in our modern "classical" theory.

Tessitura: The high or low location of the ensemble of sounds of a voice or an instrument in the tonal scale*.

Tetrachord: The theoretical name of a group of four conjoint notes (in ascending or descending order), with their spacing characterized by the **mode*** employed and its specific *genre*.

Third (interval): the distance between two degrees which are separated by a third, in natural order (e.g., between C and E).

Tonal notes: the notes which begin and end the tetrachords* (the 1st, 4th, 5th and 8th degrees) within an octave.

Tonality (science): The theory of the relationship between musical sounds or "tones", taking into account their *vibratory relationships* and their appreciation by the ear. This word can also be employed as describing a systematic musical *structure* (see below).

Tonality (structure): the name given to a **mode*** when it is situated upon definite degrees (in "classical" theory); e.g., the tonality of *G major* (*G* being the 1st degree of a scale of the major mode based on *G*).

Tonic: the principal note of a **mode***; the center of attraction of its particular structure—which confers on the mode its particular **ethos***. The melody normally ends on the tonic (its ancient synonym being "*finale*").

Unison: the *same* sound, produced by two or more instruments or voices.

Vocalized (prosody): a style which is clearly *ornamental*. The syllable may be the support of a long series of notes, such as in the "Alleluias" of Gregorian chant.

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COMMENTS OF NOTED PERSONALITIES**ISRAEL ADLER**

Director of the Center for the Study of Jewish Music,
Hebrew University, Jerusalem
July 11, 1973.

I was very impressed by your musical interpretation of the biblical texts. It is very beautiful music, and I congratulate you wholeheartedly. You have succeeded, in taking as a base the role of the interpunctuation of the biblical accents (*te'amim*), in creating melodic lines which adapt themselves to the text in the most perfect manner. Your efforts to make known and diffuse this beautiful music deserve to be fully supported.

TONY AUBIN

Professor of Composition at the Conservatoire National Supérieur de Musique de Paris
Member of the Institute of France
Paris, 21 May 1974

Retracing the process of your discovery, you give a real view of ancient music theory, which, in the absence of concrete examples, has appeared nebulous and contradictory.

But also, the works which you present testify of an accomplished art, of a high degree of expression which resists (curious as it is to ascertain this) the formal constraints imposed by the gestural formulation of the music, which formulation prevailed in antiquity.

Your interesting historical study sheds light on these facts, and brings a reassuring support to all the determinative speculations which end in this restitution. Notably, the denominations of the values symbolized by the signs which you have deciphered, and of which the etymology confirms, undeniably, your Key.

M. M. DAVY

Fellow of Philosophy and Letters
20/1/75

I have shared your excellent work with Robert Aron...it has impassioned him, and he offers to write a preface to it for you.

I am happy to bring you this good news.

NORBERT DUFOURCQ

Musicologist—Professor of Music History at the Conservatoire National Supérieur de Musique de Paris
Paris, 13 November 1972

Strongly gifted for research, my old friend Suzanne Haïk-Vantoura has attached herself to one of the thorniest problems of ancient musicology: to decipher the Hebraic musical notation, such as it has been preserved in the Bible over the centuries; to attempt a reconstitution of the scales employed; to explain the system of biblical prosody, which involves that of the notated music; to discover two complementary musical systems—one composed of signs below the text, the other of signs above it—and by this to throw new light on certain signs evoking the tonic, dominant and subdominant; to show that certain of those signs are interdependent; then, with the aid of this arsenal, to reconstitute the cantillation such as it comes down to us from the depths of the distant past, an original cantillation which leaves aside the deformations which it underwent over the centuries [in the synagogues]. . .

One can see the immensity of the author's work, enhanced by a wisdom equaling her energy. The whole culminates in the restitution of a chant whose greatness and serenity—even when certain melismas superimpose themselves on it, even where certain dynamic accents adorn it—are the product of a simplicity both strange and moving, and of a moderation and efficiency which are unmatched.

MARCEL DUPRÉ

Member of the Institute of France, Former Director of the Conservatoire National Supérieur de Musique de Paris
19 February 1971

My dear Suzanne,

It is with greatest interest that I listened to the recording of the magnificent music which you reconstituted for the Psalms of the Bible. I admired the intimate harmony that exists between words and music, expressing in turn ardent faith and hope, with moving accents that touch the heart. It heralds plain-song. You have made this a work which merits admiration. Mine you have acquired.

Most affectionately yours, (signed) Marcel Dupré

MAURICE DURUFLE

Composer, Professor of Composition at the Conservatoire National Supérieur de Musique de Paris
Paris, 28 November 1973

The remarkable task undertaken by Suzanne Haïk-Vantoura of reconstituting these chants from the signs accompanying the biblical texts deserves all our admiration. Thanks to the very particular scales, these melodies take on a strange and moving accent. It is very lovely music, of great mystical expression.

HENRI DUTILLEUX

Composer, Professor of Composition at the Conservatoire National Supérieur de Musique de Paris

The journey taken by Suzanne Haïk-Vantoura towards recovering the key to the Hebraic musical notation from the signs accompanying the biblical text is particularly passionate and moving.

Admirable are the patience and faith with which this outstanding musician has managed to accomplish so ambitious a task. Instinct and reason, wisdom, sensitivity and intelligence also served her in her pursuit; and if there is always—by definition—a part for speculation in this genre of research, how can one not be impressed by the alluring poetry which pervades the musical texts, drawing them into such close harmony with the verbal texts, and bestowing upon them such an accent of authenticity?

ROLANDE FALCINELLI

Composer, Professor of Organ Music and Improvisation at the Conservatoire National Supérieur de Musique de Paris

21 May 1972

It is difficult to conceive of the sum of the courage, the patience, the deduction, the musical intelligence, which Suzanne Haïk-Vantoura must have displayed over so many years of tenacious research, in order to bring to a conclusion the overwhelming task of discovering the key which restores for us the music of the Bible.

But, independently of the admiration which this immense work calls for, an authentic musician can only be stunned, even overwhelmed by the surprising interpretation of the text and of the music; they complement each other so intimately, so magnificently that the music gives the impression of having been "revealed" itself.

None among the greatest playwright-musicians of genius have surpassed, in their declamations, the "musical truth" contained in these melodic texts, as varied as the biblical texts themselves.

My wish is that this work finds the complete comprehension of those who will take the trouble to penetrate it, and that it will be rapidly divulged. There is no doubt that, by the superhuman power of true music, it will bring a more profound understanding of each word of the Holy Bible.

This is my dearest wish.

Paris, 30/9/73

After careful study of the progression of Suzanne Haïk-Vantoura's thought during her extraordinary periples revealing to us a musical truth which has lain dormant for centuries;

After having tested in an evident musical sense the different hypotheses which she advanced—and in this always ending with the same conclusions concerning the syntax (demanded by the nature of the music and its spirit) at which she ended herself;

After realizing that her interpretation of the redéciphered key was of impeccable logic and that the musical result became indeed evident under both systems, prosody and psalmody; I conclude that we have here a coherent musical structure, beautiful, moving on every level required for the constructive reality of any music, namely: melody, form of scale, rhythm, and even theme.

The astonishing economy of means employed offers such a density and diversity of expression that this composer is highly impressed.

BERNARD GAVOTY

Music Critic, "Clarendon" of *Le Figaro*, Member of the Institute of France
7 July 1975

Researching the significance of the musical indications which accompany the texts of the Hebrew Bible, you have striven to decipher these symbols. Like Champollion facing hieroglyphics, you have sought the key to the enigma. By repeated experimentation, comparisons and hypotheses verified one by one, you have established the musical meaning of these enigmatic signs. And now, today, you offer us examples of what could have been, long before Greek music, that of biblical times. The hypothesis, so long held, that this music was lost forever because it was transmitted only orally for centuries, has now become obsolete.

Humble and haunting is the way this music appears to us, unearthed from ages past and thousands of years old, contemporary with the epic saga of the Chosen People. The kinship of these cantillations with certain *prima*

lectio Gregorian expressions—and moreover, with Indian melismas—establishes a line of kinship between Western music and Far Eastern music. A fundamental and rich discovery—perhaps one of the most significant of this half-century. Could universal music have a single source?

YVETTE GRIMAUD

Director of Studies at the University of Paris VII, and at the School of Anthropology
Paris, 1 June 1972.

Your research and musical transcriptions of the biblical cantillation go far beyond being a simple work of erudition; they reflect, moreover, the exigencies of an age which tends to be tied, as directly as possible, with its singular reality—not at point after it but immediate with it; an age where the beings, the events, are envisaged by the profundity of their content.

MICHEL HUGO

Musicologist, Doctor of Research at the Centre National de la Recherche Scientifique

Your work, which testifies to a great intuition and enduring patience in arriving at the proposed restitutions, brings new elements to these questions concerning which discussions rise, in the absence of solid bases [for discussion].

JACOB KAPLAN

Chief Rabbi of France

These *negrinoth* ["modulations"] are very old. Over time, they have been more or less modified according to different rites and regions.

Madame Haïk-Vantoura has given herself to the task of recovering them as they were at their origin, and she has admirably succeeded. Restored (thanks to her efforts) in their original purity, this Hebraic music, completely penetrated with piety, is profoundly moving, and arouses in the soul a living religious fervor.

From a private communication:

The melodies you have recorded are moving to hear in their restitution of our ancient airs. As for your book: THE MUSIC OF THE BIBLE REVEALED: this work will bear authority. I heartily congratulate you on it.

[In so saying, the late Rabbi Kaplan was giving his support to the *religious authority* of Haïk-Vantoura's deciphering key and its results.—Ed.]

DANIEL LESUR

Honor. Inspector General of Music at the Ministry of Culture
23 June 1974

Who is not seized with emotion by these chants which rise once more from ages past and reach us once again in their full strength? Anyone who has not lost—or has rediscovered—the value of monodic purity, feels himself touched by it.

Madame Suzanne Haïk-Vantoura has devoted herself, with a profound esthetic sense, to giving life to this music, the body of which, tied down with cords, lay immobile in the cold underground galleries where civilizations lay entombed.

The Bible, book of all books and prodigious collection of sacred texts, is also the receptacle of admirable music. We did not know it. The signs above and below the Hebrew letters kept their secret. It took a valiant musician to delve into this enigma with passion, patience and thoroughness—and little by little emerged the marvelous monodies buried under the dust of centuries. Starting with precise points, obvious cadences, Madame Haïk-Vantoura managed to find Ariadne's thread leading to the stupefying discovery of an entire art dating back to antiquity. This revelation takes on vital importance from both a musical and historical point of view.

OLIVIER MESSIAEN

As a musician and deeply devout, I can only admire the beauty of the biblical musical texts reconstituted by Madame Suzanne Haïk-Vantoura. The biblical musical texts offered us here approaches the Gregorian cantilena and the semi-chromatic modes of India (in much simpler form in both cases). Since biblical music preceded these two great traditions, it is thrilling to be able to sing or hear sung the result of the immense work of Suzanne Haïk-Vantoura, who—like Champollion at last reading Egyptian hieroglyphics—has brought to life a musical past almost 3,000 years old.

DARIUS MILHAUD

Paris, 18 October 1972

Dear Madame Haïk-Vantoura:

I looked with intense interest into the important discovery you have made on the biblical cantillation signs.

Your extensive work deserves to be widely known, and I wish you success in this important enterprise.

ANDRÉ PARROT

Member of the Institute of France

25 June 1972

This music is so beautiful that I constantly think about it, for I am certain that it represents the truth.

It supports the text with such exactitude that it seems that it could not be otherwise.

And all of this without any striving for "effect" but with a total simplicity, in a style by turns vigorous or tender.

It appears thus as the sole manner of chanting these texts, and when one considers that this naturalness and ease of expression represents for you such research, science, and hard work, one can only express to you his very deep thanks.

HENRI SCHILLER

Chief Rabbi, Former Director of the Rabbinic School of Paris

It is always very moving to find a thread which connects us to the past, in whatever domain it is found. But this is especially so where the research is particularly arduous, above all when documents from the past are missing.

This statement applies notably to the cantillation of the sacred texts of the Hebrew language. By the simple form and position of the signs and tonic accents, Madame Haïk-Vantoura has succeeded in making an overwhelming discovery. The results of this discovery are all the more remarkable in that the prosody of the texts is scrupulously observed. This convergence between prosody and cantillation makes the discovery legitimate. We congratulate Madame Haïk-Vantoura (and that is hardly saying enough) for the success which has crowned her patient efforts.

MORDECHAI SETER

Composer, Recipient of the Italia Prize, 1962, and the Israeli Government Prize, 1965

As an Israeli composer familiar with both Hebrew and the biblical cantillations of the various Jewish communities, as much through hearing them as through my practice of composition, I can attest to my profound amazement at and admiration for Madame Suzanne Haïk-Vantoura's work in deciphering the cantillation signs of the Bible. Her strictly personal approach to the signs accompanying the biblical text led her to extraordinary results, as much in the exactitude of transmitting content as from a purely musical point of view.

Completely divorcing herself from the oral tradition of cantillation in the different communities, Madame Haïk-Vantoura has succeeded in forming an organic whole, convincing by its mere simplicity.

GÉRARD E. WEIL

Hebraist, Professor of the Université de Nancy II, Chief of the Biblical Section at the Centre National de la Recherche Scientifique

Dear Madame:

You have requested at two stages of your research my scientific advice concerning the work which you have undertaken.

In the first phase, I have attempted to give you all the indications concerning the meaning of the signs such as we understand them and such as we study them according to the rules enacted by the Masoretes.

The monody imposed by the Masoretes was intended to serve the oral realization of the texts for the sacred service as well as for study, and prescribed in some sense an *intoned* syntactical division of the textual reading, which is post-imposed in an arbitrary fashion. The text should therefore be read according to a prescribed syntax which impedes the traditional reader from soliciting the text in any other way but through the mold which was imposed upon it by the socio-theological milieu which had taken charge of the transmission of the text.

Through a totally personal intuition, you have separated yourself from the traditional interpretation of the values which we give to these signs and, distancing yourself from the system of combinations which we know, you have written them in a system totally new to us, of which you yourself have discovered the key and fixed the melodic values.

At the end of your work, you have come back to see me to let me partake of it and to permit me to hear the results which you have obtained. They are very beautiful and certain monodies remind me of chants heard in the most ancient communities of the Oriental Jewish Diaspora. I should tell you, Madame, that you are very dangerous to me as a scientific researcher.

I can only repeat to you all the admiration which I have for your art and for your sincerity, and thank you for the artistic emotion which you have given me in listening to these new chants, of which you have so kindly given me the firstfruits.

MARCEL LANDOWSKI

Secretary of State for Culture (France), Director of Music of Lyric Art and of Dance

23 October 1974

The fact that Madame Suzanne Haïk-Vantoura has been able to find a key permitting the elucidation of the sense of the accents which accompany the text of the Old Testament and to deduce from it the restitution of the original cantillation, constitutes an event of significance.

These chants from an ancient era have surprised musicians by their beauty at the same time as they have received the approbation of specialists.

ERNEST GUGENHEIM

Chief Rabbi, Former Director of the Rabbinic School of France

I read your book with very great interest during a holiday in Jerusalem and want to express to you all my admiration for your fine and very thorough work which is so convincing. I wish you all the success it amply deserves.

AMI MAAYANI

President of the League of Composers in Israel; Professor in the Department of Theory and Composition at the Rubin Academy of Music, Jerusalem

I must tell you that I find this work completely remarkable, and I emphasize the seriousness as well as the undeniable logic of your interpretation. I am happy that we in Israel had the opportunity to learn about this new deciphering which I hope will become dominant in the near future. In regard to this you may count on my help.

MENDI RODAN

Co-Director of the Academy of Music and Dance, Jerusalem

We are very happy that you accepted [our invitation] to come to Jerusalem to give a conference on the biblical accents in the setting of a seminar at our Academy. After the various reactions we have heard, it seems that your musicological work is not only of great importance, but also of deep interest.

ALEXANDRE TANSMAN

Composer

I consider this to be a major work of research from a musicological point of view, a real discovery of enormous importance. The deciphering is based on incontrovertible facts and the result of this painstaking task gives us a poetically fresh and penetrating song.

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THE MUSIC OF THE BIBLE REVEALED



After her studies at the Conservatoire National Superior de Paris, Suzanne Haïk-Vantoura made her career as an organist, teacher, composer and music theorist. During World War II she first attempted to decipher the musical signs (*te'amim*) of the Hebrew Bible, the original meaning of which had been lost. Since 1970 she has devoted herself exclusively to this task and to the publication of the texts she has deciphered.

This book is based on the second edition of *La Musique de la Bible révélée* (1978).

"The immense surprise, the overflowing joy of archaeologists who unearth vestiges of a little-known past has often been recounted. Yet music is even more precious—more than the ruins of a temple, an intact work of art, or even at times words themselves; for music is thought itself, under its subtle and transitory covering. Romain Rolland has underlined this well: "To take (music) at its very essence, is not its greatest interest to reveal to us the totally pure expression of the soul, the secrets of the inner life?" In effect, it is the soul of the Bible that the recovered cantillation of the Temple of Jerusalem restores for us. And this unexpected harvest of masterpieces constitutes an extraordinary adventure in itself."

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