Stemma Codicum and Urtext:
The Stemma of the Hebrew Manuscripts of Ben Sira as Test Case

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In the history of research, the question of *Urtext* has been closely related to the question of reconstructing the genealogy of manuscript witnesses: the *stemma codicum.* The field of stemmatology has undergone a major revival in recent years, articulating both the reconstructionist perspectives of Lachmanian (or neo-Lachmanian) models and the non-reconstructionist perspectives of neo-Bederism or *New Philology* approaches.

This article, divided into four parts, would like to contribute to this discussion. The first part proposes a complete reconstruction of the stemma of the Hebrew manuscripts of Ben Sira. The second part proposes a theoretical and historical reflection on the genealogical model which, like the critical editions, oscillates between two perspectives: that of the truth of the author and that of the truth of the scribe. We would like to emphasise that the stemma may have a different potential from that of reconstructing the *Urtext* or the archetype of a textual tradition. The third part draws the practical consequences of the two previous parts: on the basis of the stemma codicum of the Hebrew manuscripts of Ben Sira established in the first part, we will show how the stemma can be fruitful, not to reconstruct the Urtext, but to understand certain scribal practices and, in our case, how they tended to biblicize the text of Ben Sira. Finally, in a fourth part, we will propose openings for the use of computational approaches in stemmatological studies.

1. A Stemma for the Hebrew Manuscript of ben Sira

1.1 State of Research

The reconstruction of the stemma of the Hebrew Manuscript of Ben Sira has mainly been a perpetual conondrum. With the exception of a few attempts made by I. Lévi at the beginning of the twentieth century about the relationship between MSS B and D,[1] by J. Marcus about MS E[2] or by Di Lella about MS F,[3] no systematic studies have been proposed. The main authors who have worked on this question, such as Paul Kahle,[4] M. Segal[5] and Hans Peter

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[1] Lévi, "Fragments de deux nouveaux manuscrits hébreux de l'Ecclésiastique."

[2] Marcus, "A Fifth MS. Of Ben Sira."

[3] Di Lella, "The Newly Discovered Sixth Manuscript of Ben Sira."

[4] See, Paul Kahle remarks: "These manuscripts were not copied from each other, they contain various readings, and such kinds of readings which already existed in ancient times." Kahle "The Age of the Scrolls," 47.

Rüger,[6] have not achieved any convincing results or have conclude that the reconstruction of this relationship is impossible. The discovery of new fragments of Manuscript C in 2007 and of Manuscript D in 2012 has made it possible to reconstruct part of the stemma of the hebrew manuscript. In two recent articles[7], such a reconstruction has been proposed for MSS A, B, B margin, D, E and F as represent in figure 1.
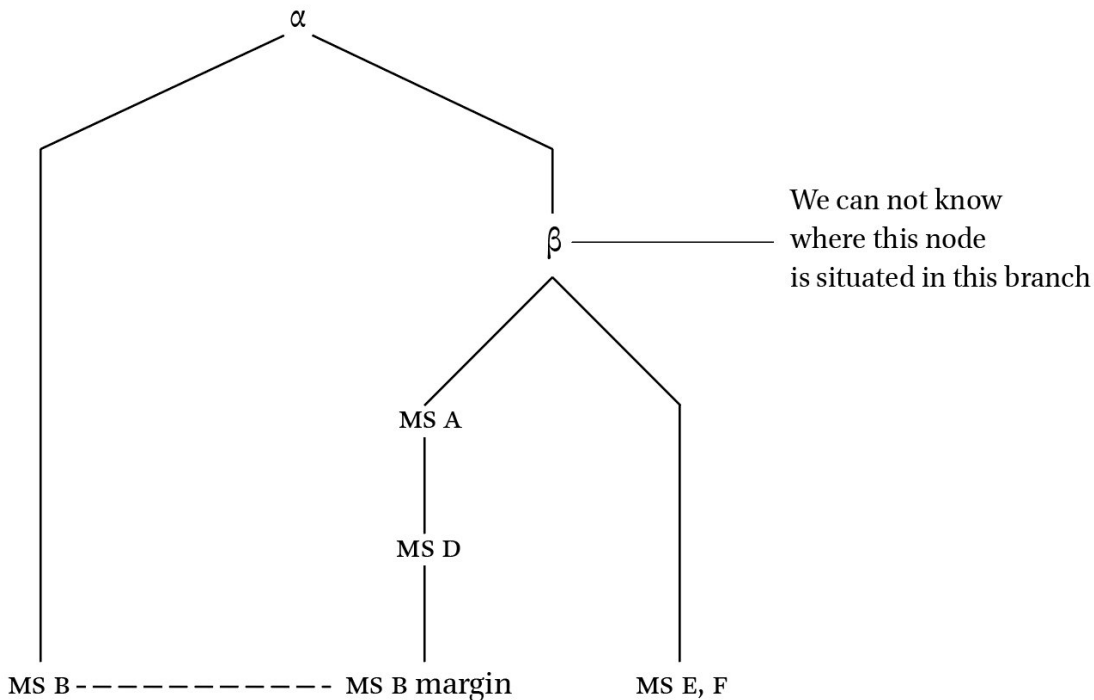
Stemma of the Ben Sira Hebrew Manuscripts A, B, B margin, D, E and F

However, the complex situation of MS C into this stemma, as well as, the question of the relationship of the complete stemma of the medieval hebrew manuscripts with the text of masada has not yet been analysed.

1.2 The manuscript C of Ben Sira

The mansucript C is a small witness (14 x 10 cm), probably dated back to the 13st century CE.[8] It has the particularity of being an anthology of Ben Sira and of presenting huge

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[5] "The material provided by these short and fragmentary parallel passages is too scanty to enable us to establish a classification of the Hebrew MSS. on the basis of their textual character." Segal, "The Evolution of the Hebrew Text of Ben Sira," 91. However, later in the article he notes that "in spite of their numerous differences theses Mss. all belong to one and the same type of text." Segal, "The Evolution," 132.

[6] Rüger, *Text und Textform im Hebräischen Sirach.*

[7] Rey, "The Relationship Between the Hebrew Manuscripts B, (B Margin), E and F of Ben Sira"; Rey, "The Relationship Between Manuscripts A, B, D and the Marginal Readings of Manuscript B of Ben Sira."

[8] Olszowy-Schlanger, "The 'Booklet' of Ben Sira," 86.

differences with the main manuscript with which it overlaps.[9] MS C parallels mainly with MS A with which he presents important divergencies. But in some rare occasion, several sentences overlap with MSS B, C, D or Masada. As the actual stemma presents two clear group of manuscripts — B in one side and A, B margin, D, E and F on the other side — it seems legitimate to start by testing whether MS C belongs to one or the other branch.

1.2.1 Conjunctive Variants Between MS B and C

Conjunctive variants of MSS B and C against the rest of the textual tradition are frequents.

Case 1 - Sir 37:19

MS B	יש חכם לרבים נחכם ולנפשו הוא גוֹאל:נואל
MS C	יש חכם לרבים נחכמולנפשו הוא גואל
MS D	יש חכם רבים נחכמולנפשו הוא נואל:
Syriac	⬚⬚⬚⬚ ⬚⬚⬚⬚⬚⬚ ⬚⬚⬚⬚⬚ ⬚⬚⬚ ⬚⬚
	⬚⬚⬚⬚⬚

Greek
ἔστιν ἀνὴρ πανοῦργος πολλῶν παιδευτής,
καὶ τῇ ἰδίᾳ ψυχῇ ἐστιν ἄχρηστος.

MS C and B
There is a sage who becomes wise for the many,
but who redeem themselves (mg. (but) who, to themselves, is unreasonable).

MS Bmg and D
There is a sage who becomes wise for the many,
but who, to themself, is unreasonable.

In this example, the most obvious explanation is that here, MSS B and C share a common innovation against all the textual tradition and ancient translations. The reading גּוֹאֵל, "redeem" of MSS C and B makes hardly sense in this context contrary to the reading of MS B

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[9] For the relationship of C to the other manuscripts, see among others, Corley, "An Alternative Hebrew Form of Ben Sira."; Aitken, "The Synoptic Problem."

margin and D, נוֹאֵל, "unreasonable," that perfectly agrees with the Greek ἄχρηστος as well as with the Syriac ☐☐☐. Consequently, the reading attested in MS B and C is later than that of MSS B margin and D and, in any cases, later than the Greek and Syriac translation. An observation of this type undoubtedly allows us to classify MSS B and C on a same genealogical branch of the stemma.

However, it must also be noted that, while, the etiology of the variant may easily be explained as a confusion between the two letters *noun* and *gimel*, it may also be see as a semantic innovation. The reading does not make sense in this context, if the form גֹּאֵל is derived from the verb גאל, "to redeem." But two alternative suggestions may be proposed for these letters: (1) the abstract noun from Biblical and Qumran Hebrew גֹּאַל "defilement" (i.e., "he is a defilement to himself") or (2) the participle of געל "to loathe," spelled here with *aleph*: "There is a sage who becomes wise for the many, but who loathes themself."[10]

A second conjunctive variant is clearly visible in Sir 37:1, where the second part of verse 1, which is present in MS B margin, D, the Syriac and the Greek, is missing in MSS B and C. This common alternative is a further indication that MSS B and C belong to the same branch of the stemma. However, we still need to clarify how these two manuscripts relate to each other.

1.2.2 Separative errors between MS B and MS C

Case 2 - Sir 37:1

MS C		כל אוהב יאמר אהבתו
MS B		כל אומר אמר אהבתי
MS Bmg		
	אך יש אוהב שם אוהב:	כל אוהב אומר אהבתי
MS D		
	אך יש אהב שם אהב:	כל אוהב אומר אהבתי
Syriac		
		☐☐☐ ☐☐☐☐☐☐ ☐☐☐☐☐ ☐☐☐☐☐☐☐

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[10] The two roots (i.e., גאל "to defile" and געל "to loath") already seem to overlap in meaning in Biblical Hebrew (cf. געל in the *niphal* "to be defiled" in 2 Sam 1:21) and in Rabbinic Hebrew (cf. געל in the *nithpael* "to be soiled" in b. Zebaḥ. 88a). See QWB 2:3, which characterizes גאל and געל as variants. The confusion or variation between *aleph* and *ayin* within a root is also found in the curiously similar (both phonologically and semantically) root(s) כאר and כער "to be repulsive" (see Sir 11:2 in MS A).

Greek

Πᾶς φίλος ἐρεῖ Ἐφιλίασα κἀγώ·
ἀλλ᾽ ἔστιν φίλος ὀνόματι μόνον φίλος.

MS C	Every friend will speak their love.
MS B	Everyone who speaks says, "I love."
MS Bmg	Every friend says, "I love" but there is the friend (who is only) a friend in name)
MS D	Every friend says: "I love" but there is a friend (who is only) a friend in name.
Syriac	And to his friend, one says: "I love (you)" but there is a friend whose name is friend.
Greek	Every friend will say, "I, too, have been a friend," but there is a friend who is a friend in name only.

In the first stich of verse 1, the variant אומר of MS B is clearly a later reading than the reading אוהב of MS C that agrees with MS B margin, D, the Syriac and the Greek. In consequence, either MS B descends from MS C and introduces the variant or MSS B and C depend on a common ancestor.

Case 3 - Sir 41:14

MS C	תולעת בש[תיהם]	ומה חכמה טמונה ואוצר מ[וסתר]
MS B	מה תועלה בשתיהם:	חכמה טמונה ואוצר מוסתר
MS Bmg	תעלה ...	וסימה מסותרת . . .
Masada	מה תעלה בשתיהם	ח[כמה טמונה ושימה מסתרת]

MS C	Hidden wisdom and con[cealed] treasure, what worm is in either of these two things?
MS B	Hidden wisdom and a concealed treasure, what profit is in either of these two things?
MS Bmg	(…) and concealed treasure, (…) profit (…)
Masada	Hidden [w]isdom and concealed treasure, what profit (is) in these two things?

In Sir 41:14, MSS C and B offer another shared innovation through the Hebrew word אוצר "treasure" instead of its Aramaic synonym שימה which is attested in B margin and Masada, and should therefore be considered as a later evolution. Furthermore, as in the previous example, we observe a separative innovation, but in the opposite sense. It is now MS C, which clearly represents a later variant than the readings of MS B through the metathesis תולעת "worm," instead of תועלה "profit" attested in MSS B, B margin, Masada and the Greek (ὠφέλεια).

Since both MSS B and C have separative variations, we can conclude that they are not derived from each other, but that both come from a single missing ancestor. This allows us to reconstruct the complete stemma of the medieval Hebrew manuscripts of Ben Sira (figure 2).
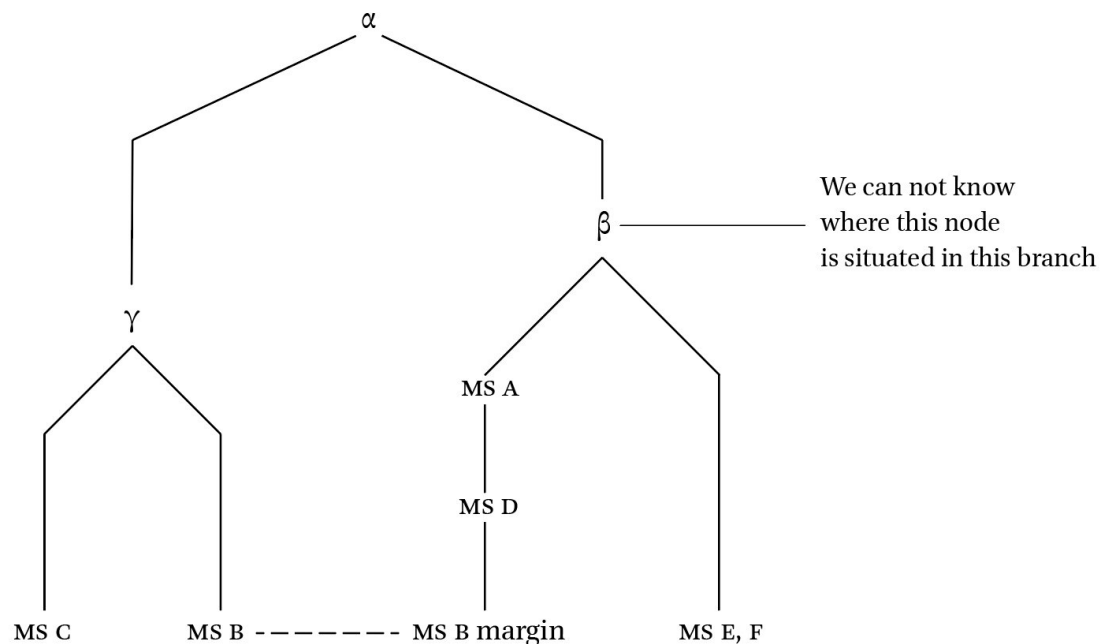
Stemma Medieval Hebrew Manuscripts of the Ben Sira

1.3 The case of Masada

The position of the Masada manuscript in the stemma presents particular difficulties due to the fragmentary nature of the text and its chronological distance from the other surviving witnesses. The Masada text overlaps only MSS B and B margin, with the exception of Si 41:14-16 where three verses overlap MSS C, B and B margin. Three points can be made. First, overall, the Masada text is very close to the β branch as opposed to the γ branch. This can easly illustrated by the preceding example of Sir 41:14 (**case 3**) where the Aramaic word שימה of Masada is preserved in B margin (סימה). Second, however, the reverse is also attested and the agreements of Masada and MS B against MS B margin are also well documented.[11]

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[11] Yigael, *The Ben Sira Scroll from Masada*, 9.

This can be illustrated by Sir 41:15, where MSS Masada, B and C agree with the word מאיש while B margin has מאדון.

Case 4 - Sir 41:15

MS B	מאיש מצֹּפִין חכמתו:	טוב איש מצפין אולתו
MS Bmg	מאדון . . .	. . .
MS C	מאיש מצפין חכמ[תו·]	טוב איש מצפין] אולתו]
Masada	מאיש מצפן חכמתו	טוב֞ איש מטמן א֞ולתו ֗

MS B	Better a person who hides their folly, than a person who hides their wisdom.
MS Bmg	. . .a master ~~who will hide~~ . . .
MS C	Better a person who hides [their folly] than a person who hides [their] wisd[om.]
Masada	Better the person who hides their folly than the person who hides their wisdom.

Third, and finaly, it should be noted that MSS B and B margin share common innovations. For example:

- in Sir 40:16, both use the word מטר, "rain," where Masada use חציר, "grass" also attested in the Greek χόρτου and the Syriac ;⬜⬜⬜⬜

- in Sir 40:30, both have לאיש, "to a person," where Masada has בפי, "in the mouth," also attested in the Greek ἐν στόματι and the Syriac ;⬜⬜⬜⬜

- in Sir 42:3, both have ואדון, "and a master," where Masada has ודרך, "a traveler," also attested in the Greek ὁδοιπόρων and the interlinear variant of MS B, וארח, which is a synonym of דרך and may be at the source of אדון through letters confusion;

- in Sir 43:25, both attest the methatesis רבה, "great," instead ot the name רהב, "Rahab" (see the Greek κήτη, "sea monster," this later also translates רהב in Job 9:13 and 26:12).

As a consequence of the three preceding elements, we can legitimately assume that Masada precedes the α node in the stemma. However, the enormous chronological distance between the Masada text and the oldest medieval manuscripts is such that it is impossible to imagine the extent and complexity of the lost traditions. The modelling of lost traditions is a particular area of research that will need to be explored in future studies.[12] Finally, the very

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[12] For the modelization of lost textual traditions, see Weitzman, "The Evolution of Manuscript Traditions"; Hoenen "Silva Portentosissima"; Camps and Randon-Furling, "Genealogical Variant Locations and Simplified Stemma."

fragmentary state of 2Q18 and the fact that 11QPsa only has contact with MS B means that we cannot place it in the stemma.

2. Stemmatology and history of textual traditions

After this attempt to reconstruct the *stemma codicum* of the Hebrew manuscripts of Ben Sira, it may be useful to provide a synthesis of the different philological practices and their theoretical framework as regard the *stemma codicum* and its goals. This later is closely related to the way we are designing critical editions and perceiving the very concept of texts. In the history of philology, critical editions oscillate between two theoretical models: one oriented to the faithfulness to the author and the text they produced and the other one oriented to the faithfulness to the textual witness.[13]

2.1 Faithfulness to the Author

The first theoretical model, oriented toward a faithfulness to the author, is resolutely reconstructionnist. It aims to reconstruct the original work produced by the author or, failing this, a hypothetical archetype that would be the common ancestor of all the witness manuscripts. This model is designated as Lachmanian editions (or neo-Lachmanian, much represented in the Italian philological tradition[14]) according to one of its main representant, the German Scholar Karl Lachmann (1793-1851) followed by the French scholar Gaston Paris (1839-1903).[15]

These scholars take into consideration the fact that the various witness manuscripts to a literary work can be organized into families and linked together by genealogical ties. In the course of its transmission, the text would undergo "alterations" produced by copyists that the editor aims to correct. The method for retrieving the archetype is to reconstruct a diagram exhibiting the inter-relationship of the witnesses, the family tree of manuscripts, called *stemma codicum*. More recently, Philipp Roelli defines the *stemma codicum* in terms borrowed to philogogy and mathematics as "an oriented tree-like graph representing a hypothesis about genealogical relationships between witnesses of a text." [16] This method

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[13] This distinction has been formulated by Avalle, *La Doppia Verità*, see also his two chapters "Fenomenologia dell'originale" and "Fenomenologia della copia" in Avalle, *Principî Di Critica Testuale.* More recently, see Duval, "La philologie française, pragmatique avant tout ?" and Poirel, "L'édition des textes médiolatins."

[14] "Now, my intent is to renew a membership, which I will not be troubled if it is called Neo-Lachmannian (Ora, intento mio è di rinnovare un'adesione, che non mi turberò se sarà chiamata neolachmanniana)." Contini, *Breviario Di Ecdotica*, 68. For an overview of the philological tradition in Italy, see Pugliatti, "Textual Perspectives in Italy" and Zinelli, "L'édition Des Textes Médiévaux Italiens En Italie."

[15] Trovato, *Everything You Always Wanted to Know about Lachmann's Method*; Timpanaro, *The Genesis of Lachmann's Method.*

[16] Roelli, *Handbook of Stemmatology*, 212.

was codified as an almost algorithmic process by Paul Maas in a very influential book first published in 1927 in German.[17]

According to this Lachmanian school, the *stemma codicum* is conceived as a methodological means of reconstructing the archetype, the highest node of the stemma codicum. Each variant point is evaluated according to its distance from the archetype and its position into the stemma, through the notion of successive "errors" that need to be "corrected." The lower the variant point in the stemma, the less reliable the tradition. These conjunctive or separative errors are the theoretical basis for reconstructing the *stemma codicum*.

The very algorithmic conception of the *stemma codicum* by Maas as to be complemented by the seminal work of Giorgio Pasquali, *Storia della tradizione e critica del testo*,[18] initialy conceived as a review of Maas's book. For Pasquali, the *stemma codicum* is not only a tools for reconstructing the original, but also a representation of the history of the tradition of a text, a history subject to the editor's investigation. Both authors, Maas and Pasquali, have very contemporary accents, the first one with his highly mathematical conception of the problem and the second by raising important questions about the notion of multiple archetypes, not only verticale, but also horizontal transmission, the notions of author variants and non-deterioration of textual traditions (*recentiores, non deteriores*).

In biblical studies, scholars such as Paul Anton de Lagarde in the 19th century or, in the contemporary period, Ron Hendel with his project for an ecclectical edition of the Old Testament[19] can be easily associated with this reconstructionnist model. As a reminder, according to De Lagarde,[20] all Hebrew manuscripts can be traced back to a common archetype. His hypothesis is based on the faithful reproduction of certain graphic details—such as raised dots or suspended letters—in all the Massoretic manuscripts he was able to consult at the time. He applies the same principle to all the Greek manuscripts of the Septuagint, which according to him all derive from a single archetype. On this basis, De Lagarde considers that by a carefull comparision of the two hyparchetypes of the Hebrew text and the Septuagint, it would be possible to reconstruct the original text, or at least the archetype of the two versions.

However, some philologists consider that the stemmatic method, which allows for the reconstruction of the archetype, is not the end of the process. What matters is not so much the fidelity to the archetype as the fidelity to the original, the *Urtext*, beyond the archetype. For Maas, "The business of textual criticism is to produce a text as close as possible to the original (*constitutio textus*)."[21]

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[17] Maas, *Textual Criticism*.

[18] Pasquali, *Storia Della Tradizione e Critica Del Testo*.

[19] See his contribution in this volume, and Hendel "The Oxford Hebrew Bible: Its Aims and a Response to Criticisms."

[20] Lagarde, *Anmerkung zur Griechischen Übersetzung der Proverbien*.

[21] Maas, *Textual Criticism*, 1.

Fundamentally, this raises the question of the original and its problematic definition, especially when it comes to biblical literature.[22] Is it "the manuscript traced back to the author,"[23] "an autograph" or "the text dictated and revised by the author"[24]? In the case of printed works, is it the author's manuscript or the first edition? For Avalle "the concept of original, in the sense of authentic text expressing the author's will, is one of the most elusive and ambiguous concepts in textual criticism."[25] Dom Froger goes so far as to consider the original to be "the work in the state of inner discourse that the author forms in his mind." But how does this work when, for example, as is the case most of the time with biblical texts, we have no author or we have multiple authors from different periods.

In this perspective, as noted by Contini, "what is reconstructed is truer than the document."[26] Consequently, an archetype judged to be wrong — but on what basis? — should be corrected.[27] But if all the witnesses agree that the archetype is at fault, where do the reconstruction work stop? To what extent should not be corrected anything that might seem strange or unusual from the editors?

2.2 Faithfulness to the Witness

The second model shifts the focus away from the original or the archetype to the manuscript witness, transfers faithfulness from the author to the scribes and turns away from a reconstructed text that may never have existed to the evidence and certainty of what we have.[28] This theoretical model of critical editions is termed Bedierist (or neo-Bedierist)[29] editions after the French scholar Joseph Bedier,[30] a pupil of Gaston Paris. This model of editions has been particularly well established in the French philological tradition.[31]

The core of Joseph Bédier's thinking is clearly presented in his 1928 seminal article: *La tradition manuscrite du Lai de l'ombre. Réflexions sur l'art d'éditer les anciens texte*.[32] His

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[22] For the question of the definition of the notion of "original" in textual criticism, see (Duval, *Les Mots de l'édition de Textes*, 208–9 and Beltrami, *A che serve un'edizione critica?*, 153–57.

[23] Dain, *Les manuscrits*, 103.

[24] Maas, *Textual Criticism*, 1.

[25] "Il concetto di originale, nel senso di testo autentico esprimente la volontà dell'autore, è uno dei più sfuggenti ed ambigui della critica del testo." Avalle, *Principî di critica testuale*, 33.

[26] "Il riconstruito è più vero del documento." Contini, *Breviario,* 22.

[27] See R. Hendel's argument in this volume.

[28] "Those are the preserved versions that call for our study, no longer their hypothetical lost models (ce sont les versions conservées qui appellent notre étude, ce ne sont plus leurs hypothétiques modèles perdus.)" Joseph Bédier, *Légendes épiques*, t. IV, p. 475, quoted in Duval, "*La tradition manuscrite du Lai de l'ombre,*" 212.

[29] Duval, "À la recherche des bédéristes."

[30] Duval, "*La tradition manuscrite du Lai de l'ombre.*"

[31] Duval, *Pratiques philologiques en Europe.*

[32] Bedier, "La tradition manuscrite du Lai de L'ombre. Réflexions sur l'art d'éditer les anciens textes." See also Frédéric Duval's recent commentary and reprint of Bédier's article: Duval *La tradition manuscrite du Lai de l'ombre.*

distrust of the Lachmanian (and Dom Quentin) model is essentially based on three arguments: (1) similar data can lead to several possible stemmas; (2) the majority of reconstructed stemmas, including the one mentioned above, tend to be bifid, which is unlikely to reflect reality; (3) lachmanian editions propose texts that never existed, as they do not correspond to any specific witness or the lost original.

Contrary to the reconstructionist model, Bédier proposes to edit a single manuscript—the best one—which will only be modified in cases of "obvious necessity," and to record the variants of the other witnesses in a critical apparatus. The conclusion of Bédier's study and his debate with Dom Quentin deserve attention and clearly summarize his views:

> "So, in the final analysis, perhaps the most recommendable editing method is one governed by a spirit of self-doubt, prudence and extreme "conservatism," an energetic desire, carried to the point of bias, to give scribes the widest credit and to modify the text of a manuscript being printed only in cases of extreme and almost self-evident necessity: all conjectural corrections should be relegated to appendices. "Such a method of editing," writes Dom Quentin, "is likely to be very prejudicial to textual criticism." Perhaps; but it is, of all known methods, the one least likely to be prejudicial to the texts."[33]

In the field of the Hebrew Bible, one could certainly associate Paul Kahle with the bédierist model through his decision to edit the Leningrad Codex instead of producing an eclectic edition. It is still the editorial model for the *Biblia Hebraica Quinta* or the *Hebrew University Bible Projet* that reproduce one manuscript with a ciritcal apparatus presenting variants.

Bédier's thinking has strongly influenced both advocates and detractors of reconstructionist methods, and in many respects his thinking has strongly contemporary overtones that resonnates with the so called "New Philology."[34] For example, Bédier argues in favor of abandoning the vocabulary associated with the notion of "error" or "alteration" of the text in favor of the more neutral notion of "variant." [35] By proposing to work on the manuscript witnesses that we have rather than on hypothetically reconstructed texts, Bédier has

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[33] "Aussi la méthode d'édition la plus recommandable est-elle peut-être, en dernière analyse, celle que régit un esprit de défiance de soi, de prudence, d'extrême 'conservatisme', un énergique vouloir, porté jusqu'au parti pris, d'ouvrir aux scribes le plus large crédit et de ne toucher au texte d'un manuscrit que l'on imprime qu'en cas d'extrême et presque évidente nécessité : toutes les corrections conjecturales devraient être reléguées en des appendices. 'Une telle méthode d'édition, a écrit dom Quentin, risque d'être bien dommageable à la critique textuelle.' Peut-être ; mais c'est, de toutes les méthodes connues, celle qui risque le moins d'être dommageable aux textes." Bedier, "La tradition manuscrite du Lai de l'ombre," 356.

[34] As reflected in Duval's recent commentary and republication of his 1928 article Zinelli, "L'édition des textes médiévaux italiens en Italie." as well as the many recent publications linked to the figure of Bédier, see among others: Baker et al., *L'ombre de Joseph Bédier*.

[35] "Rayons donc de notre vocabulaire ces termes 'bonne leçon', 'leçon moins bonne', ou 'suspecte', ou 'altérée', ou 'refaite', etc. Nous n'emploierons que le mot 'variante', en regrettant que la langue n'en offre pas un autre qui soit plus neutre encore. Bedier "La tradition manuscrite du Lai de l'ombre," 183.

emphasized the individuality of manuscripts. What becomes important is no longer the common trunk that unites the witnesses in order to reconstruct the original, but rather what distinguishes them from one another, their variance, their own identity, their own historical, cultural and literary life.

In 1990, the issue of *Speculum* entitled "*The New Philology*," strongly influenced by the works of Paul Zumthor, *Essai de poétique médiévale*[36] and his concept of mouvance and by Bernard Cerquiglini's *Éloge de la variante*,[37] opened the way for a new debate in critical editions. Instead of considering variants as alterations of the pristine text and transmission as a degenerative process of the *Urtext* like Lachmanian or Bedierist approaches do, "New Philology" approach considers that texts are seen as an open and always unfinished entity in perpetual writing or rewriting.[38] Each manuscript becomes a precious witness that carries a specific, unique form of the text, presented in an equally unique form and layout, and carries a specific history that deserves to be studied for themselves. Doing this, the *New Philology*, totally reframe the notion of texts: "Authenticity being everywhere, it is no longer possible to edit a text except by editing all its copies."[39]

The links between Bédier and the New Philology are obvious in the attention paid to the witness as opposed to any form of reconstruction, but their goals are radically opposed. If Bédier is interested in the manuscript, it's because it's the surest way to get closer to the original text. Conversely, if the new philology is not interested in the original, it is not because it is inaccessible, but because the concepts of text, author, and original are considered anachronistic or inappropriate.[40] As noted by Duval: "By killing the author, elevating variance to the defining rank of medieval literature, and challenging the notion of the original, the New Philology paradoxically made every copy a new original: the original is now everywhere where there is writing or rewriting."[41] Consequently, if Ben Sira's text exists, it exists in the global multiplicity of all its manifestations, as well as in the individuality of each of its manifestations. The debate, which includes all the positions between the two endpoints of the interval, between the diachronic reconstruction of the original or the synchronic vision of the document, raises the question: what kind of truth researchers are looking for? Interestingly, both options claim to be the best scientifically. On the one hand, for the reconstructionists, for whom what is reconstructed is truer than the document,[42] it is the postulate of successive scientific hypotheses that enables us to get closer and closer to a truth concerning the origins

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[36] Zumthor, *Essai de poétique médiévale.*

[37] Cerquiglini, *Éloge de la variante.*

[38] Duval, *Les mots de l'édition de textes*, 203.

[39] Duval, *La tradition manuscrite*, 240.

[40] For the question of text, see among others Hay, "Does "Text" Exist?" and Greetham, *Theories of the Text*; and for the question of the author, see Barthes, "The Death of the Author." and Foucault, "Qu'est-ce qu'un auteur?".

[41] Duval, *La tradition manuscrite*, 209, see also Beltrami, *A che serve un'edizione critica?*, 153–57.

[42] Contini, *Breviario*, 22.

of a textual tradition. Bédier takes the opposite position: the probable nature of the reconstruction is of less value than the certainty of the manuscript witness. He notes: "*everything is as if…* is appropriate in the purely speculative sciences: it does not authorize a doctor to offer his patient a potion he knows might kill him."[43] Bédier cares little about Bayesian probability: If the stemma codicum obtained is not certain, it is better to be suspicious of it.[44]

2.3 Faithfulness to Textual Variations: Rethinking the Stemma Codicum

The truth of the text would thus oscillate between the search for its origin (that of the author's intention or archetype and its avatars) and the observation of its multiple and diverse manifestations through its manuscript witnesses. In response to this double truth, and following the proposals already formulated by several scholars, such as N. Altschul[45] and L. Leonardi,[46] we would like to propose a third way, which would seek to reconcile the history of origins and the history of reception, which would consider the text as a historical phenomenon in constant mutation, whose multiple developments we would have to trace, without prioritizing one or another of its diverse and multiple manifestations.

The New Philology, by treating each manuscript as a unique witness, presenting a specific manifestation of the text in a unique form and layout, carrying a specific history worthy of study in its own right, also runs the risk of atomizing the text by separating it from the textual tradition that supports it.[47] Each manuscript has value in its own right, but also in the close relationship it maintains with the other textual witnesses of the tradition on which it depends.

If the *stemma codicum* was an essential element for the reconstruction of the archetype according to the lachmanian method, was perceived as suspicious in the bedieris approach and was considered as totally useless for the New philology, it has become an indispensable tool for tracing the history of textual traditions. The stemmatological approach may not be used to reconstruct the lost paradise of textual origin, but as a means of understanding how a textual traditions lives and develops.[48]

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[43] "*Tout se passe comme si…* convient dans les sciences purement spéculatives: elle n'autorise pas un médecin à offrir à son malade une potion dont il saurait qu'elle risque de le tuer." Bedier "La Tradition," 354–55.

[44] "Is it then according to the most likely classification that one must establish the texts? Only one is true: that's the one we've been looking for, that's the one we need, absolutely." ("Est-ce donc d'après le classement le plus vraisemblable qu'on doit établir les textes ? Un seul est le vrai : c'est celui-là que l'on a cherché, c'est celui-là qu'il faut, absolument."). Bedier " La Tradition," 355.

[45] Altschul "The Genealogy of Scribal Versions."

[46] Leonardi, "Filologia Della Ricezione"; Leonardi, "Romance Philology Between Anachronism and Historical Truth" and Leonardi, Minervini, and Burgio, *Filologia Romanza*.

[47] See Camps, "Copie, authenticité, originalité," 63 and Altschul, "The Genealogy of Scribal Versions."

[48] See: "It is true that Lachmannian philology has traditionally looked only upward. It is true that an appreciation of individual manuscripts cannot be ignored if one wants to understand the life of the text in its

In this way, each manuscript is carefully analysed for itself in relationship to the others and the stemma become an heuristic tools to grasp: (1) the history of the textual transmission that may be linear or non linear, vertical or horizontal, (2) the history of the textual variance, (3) the scribal behaviour and the way they behaves as authors in front of the text, (4) the linguistic evolution from one witness to another, (5) the cultural, theological and political transformations, and finaly (6) to precisely quantify and evaluate varriance from one node of the stemma to another.

Finally, this global approach to textual tradition avoid the invisibilisation of minorized textual traditions by the famous *eliminatio codicum*, for example. Each textual tradition is a specific witness in this global tradition to a specific historical, theological and anthropological realities that text editors have a responsibility to document.[49]

Ultimately, texts are represented by multiple interconnected manifestations in perpetual variation. The task of the editor is to transmit these multiple manifestations and variations in all their amplitude, from the hypothesis of its perhaps multiple origins to its singular and often neglected manifestations.

3. Example: Scribal Biblicization of the Hebrew Text of Ben Sira

From an analytical point of view, a stemmatological perspective oriented toward studying the textual tradition provides the basic material for a comparison between the different branches of the stemma. Unlike reconstructive approaches, which diachronically cross the stemma backward vertically, the investigation of the development of textual transmission can move horizontally, shedding light on the different scribal tendencies that have traversed a text's history. The stemma of the Hebrew MSS of Ben Sira can provide an excellent example in this direction. As shown above, although we are unable to trace precisely the time of the division, we know that the witnesses available to us suggest a bipartite tradition in two families, indicated by β and γ. A systematical comparison between the two families – B and C on the one hand and A, E, F, D, B margin on the other – may be useful in assessing the nature of innovation, in providing elements necessary to delineate certain aspects of "scribal habits" or the motivations underlying the tendency to make various kinds of changes.

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history, that is, the way it fits into the literary system and thus into the literary tradition. it is not true — I would argue — that in order to describe and understand this history, and the receptive mechanisms that follow from it, one can, much less should, disregard the genealogical-stemmatic model." (È vero che la filologia lachmanniana ha tradizionalmente lo sguardo rivolto solo verso l'alto. È vero che una valorizzazione dei singoli manoscritti non può essere ignorata se si vuole comprendere la vita del testo nella sua storia, cioè il modo in cui si inserisce nel sistema letterario e quindi nella tradizione letteraria. non è vero — vorrei sostenere — che per descrivere e comprendere questa storia, e i meccanismi ricezionali che ne conseguono, si possa, tanto meno si debba, prescindere dal modello genealogico-stemmatico. Leonardi, "Filologia della ricezione," 8–9.

[49] "This is the true faithfulness that the philologist must commit to: faithfulness to the history of a text via its written witnesses, a faithfulness that implies the responsibility to offer an edition that does not betray the true nature of medieval textuality, that is to say, its variation in time."

To provide an example of this approach, it is possible to focus on a type of innovation that scholars have sometimes pointed out, namely the inclination of some witnesses to prefer a style, lexicon, and syntax closer to those of the Hebrew Bible. This phenomenon, which we might call biblicization, has been particularly emphasized by Beentjes in relation to MS B. He cites as an example the different readings in Sir 40:15b:[50]

Masada	על [שן] צר
B	על שן סלע
B mg	ען שן צור
Greek	ἐπ᾽ ἀκροτόμου πέτρας

On the general meaning of the sentence, these variations do not produce a substantial difference. However, compared to the other readings, B's directly takes up a biblical formulation found in Job 39:28 (סלע ישכן ויתלנן על שן סלע ומצודה) and that closely resembles 1 Sam 14:4.[51] As Goff notes, the idea behind this here is not necessarily to connect Ben Sira 40:15 these scriptural texts. Rather, to convey the image of a sharp rock, the scribe decided to use a biblical idiom (as in 31:6; 40:30).[52] Mizrahi also noted a similar trend in MS B in a study of the Ben sira poetic language. He states: "A stylistic development, particularly evident in MS B, is the retraction from lexical novelty and the restitution of biblical diction. This trend targeted, first and foremost, rare lexemes or other non-standard forms."[53] The effect, of course, is to create in the post-Second Temple reception of the text a more "biblical" Ben Sira, or, in other words, a text more integrated, at least lexically, to the wisdom tradition contained in the Hebrew Bible. Moreover, Beentjes drew attention to a further trend. From his analysis of the marginal notes of MS B, he concludes that B contains within it biblical quotations and formulations that would appear to be secondary innovations, while B marginal, in cases where it agrees with the Masada manuscript, would report readings from what we might consider the original.[54] Leaving aside the question of the original, if Bentjees is correct, the MS B version differs from that given in the marginal notes because the scribe who composed it probably modified the verse later to conform to the biblical wording.[55] Since, following the stemma, B and B marginal are on two different branches, it would seem that the branch containing B (γ) reveals a somewhat more biblical tendency than the parallel branch (β). Of course, one must be cautious in formulating general theories from partial analyses. However, the possible biblicization of a branch of the tradition can be taken as a working hypothesis to show not a

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[50] Bentjees, "The Book of Ben Sira in Hebrew," 288.

[51] A certain influence of the biblical idiom on the same passage was already recognized more than a century ago by Smend, *Die Weisheit des Jesus Sirach*, 375.

[52] See Goff, "Ben Sira – Biblical Sage, Rabbi, and Payyeṭan," 184-5.

[53] Mizrahi, "Transmission and Transformation of Ben Sira's Poetic Language,"345.

[54] Bentjees, "The Book of Ben Sira in Hebrew," 308.

[55] Although there is a biblicizing tendency in MS B as opposed to MS B margin, it is worth pointing out how, in some cases, this relationship seems to go in the opposite direction, with the latter being secondary. See Bentjees, "Reading the Hebrew Ben Sira Manuscripts Synoptically," 309.

necessarily unidirectional or exclusive attitude, such as the systematic biblicization of γ with respect to β or vice versa. Rather, this may be a way to reveal new aspects of the history of the transmission such as, for example, a certain shared tendency regarding specific aspects by a group of interconnected manuscripts in a way that explains, at least in part, the nature of innovations.

As an example, following the division of the stemma's branch, we will take as the witness belonging to the γ family the MS C, and as the witness belonging to β the MS A. The consistent overlap between the two MSS allows us to focus on a seemingly marginal and infrequent phenomenon, namely inversion. In the following examples, I will consider inversion in its most exact form, that is, the swapping of the order of terms within a word pair that are encountered in these two MSS when compared: Sir 4:21, 5:6a, and 7.25b.

In the first passage, Sir 4:21, we read:

MS A   כי יש בשאת משאת עון ויש בשת כבוד וחן

For there is shame that leads to sin, and there is shame that is **honor and grace**

MS C   כי יש בשאת משאת עון ויש בשת חן וכבוד

For there is shame that leads to sin, and there is shame that is **grace and honor**

Greek   ἔστι γὰρ αἰσχύνη ἐπάγουσα ἁμαρτίαν καὶ ἔστιν αἰσχύνη **δόξα καὶ χάρις**

For there is a shame that bringeth sin, and there is a shame which is **honor and grace**

Syriac   ̈

For there is a shame that creates the sins and there is shame which is **honor and grace**

As can be seen, in the different versions available, the tradition is lexically consistent. The only obvious difference is the reversal in the MS C of the word pair "honor and grace" at the end of the verse. Since this word pair appears in the Hebrew Bible (Ps 84:12) in the same "inverted" form as witnessed by the MS C (חן וכבוד) and never in the form that appears in most versions, it is reasonable to consider that of the MS C as an innovation introduced by the scribe for the purpose of biblicizing the passage.

The second example of inversion is found in Sir 5:6a:

MS A	ואמרת רחמיו רבים לרוב עונותי יסלח

[...] while saying: "**His mercy is great**, he will pardon my many sins."

MS C	ואמרת רבים רחמיו לרוב עונותי יסלח

[...] while saying: "**Great is his mercy**, he will pardon my many sins."

Greek	καὶ μὴ εἴπῃς·**ὁ οἰκτιρμὸς αὐτοῦ πολύς**, τὸ πλῆθος τῶν ἁμαρτιῶν μου ἐξιλάσεται

And say not: "**His mercy is great**; he will be atoned for the multitude of my sins."

Compared with the previous example, the tradition is slightly less consistent. First, this part of the verse is not present in the Syriac version. Second, while the Greek version repeats the negation by tying it directly to εἴπῃς, from the Hebrew it relies on the negation אל at the beginning of v. 5. The most significant variation in this passage is the inversion of the two terms "His mercy (רחמיו / ὁ οἰκτιρμὸς αὐτοῦ)" and "great (רבים / πολύς)" in MS C respect the other texts. On the level of meaning, this inversion does not produce particular changes since the concept expressed remains essentially the same. However, it should be noted that the sequence רבים רחמיו as witnessed in MS C is in the Hebrew Bible (2 Sam 24:14; 1 Chr 21:13) while the order found in MS A, which also seems to be the basis of the Greek version, is not. As in the previous case of inversion, the innovation witnessed in MS C points toward biblicization.

The last case of inversion encountered by comparing MS A and MS C is found in Sir 7.25b. Here, where MS A reads ואל נבון גבר חברה, MS C presents an inverted order between the name (גבר) and its qualifier (נבון). Unlike the previous examples, it should be noted that in this case neither form is found in the Hebrew Bible. However, two considerations can be made. The first is that, although the exact sequence of terms is not properly biblical, the pair in the MS C (גבר נבון) closely echoes a formulation found in Gen 43:11 (איש נבון) with the only difference that the term for "man" is expressed through a synonym. The second is that, compared to MS A which places the adjective before the noun, MS C shows a syntactic style much more common in the biblical idiom that makes the noun precede the attributive adjective.[56] Although in a different way, once again MS C suggests, compared to A, a propensity of making the passage more biblical through the use of inversion.

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[56] On this point see, for example, Arnold and Choi, *A Guide to Biblical Hebrew Syntax. Second Edition,* 32-3.

In summary, the brief analysis shows that from comparing MS A and MS C in cases of reversal of a word pair MS C tends to arrange the words in the order found in the Hebrew Bible. Moreover, in cases where the inversion cannot be traced back exactly to the text of the Bible, C's tendency is to bring the style closer to the biblical style through the use of references to biblical formulations or syntactic changes that classicize the style by making it more like that of the Bible. Since, in the cases observed, the tradition seems to be consistent with the order witnessed by MS A, that of MS C can be seen as a behavior of later scribes to modify the style of Ben Sira's text by giving it, when possible, a stylistic trait closer to the biblical one. Moreover, if, as Bentjees suggests, MS B, which is on the γ branch of the stemma, shows a greater degree of biblicization than margin B, which is on the β branch, the analysis of the inversion phenomenon that emerges from the comparison of MS A (β) and MS C (γ) shows the same tendency.

Continuing this analysis, it is interesting to see if the phenomenon of biblicization affects the inversion cases not only in MS C compared to MS A but also on a higher level. In other words, one can ask whether it is possible to detect the same trend about inversion between MSS belonging to β and those belonging to γ. Of course, since we do not possess complete manuscripts, the possibility of verification is limited to cases where witnesses overlap. However, although partial, an examination that considers a phenomenon in an entire branch of the stemma can help show a certain inclination of one part of the tradition over another. On this basis, the first case of inversion is in Sir 15:16a, witnessed in A (β) and B (γ), which I report below along with the other versions:

MS A   מוצק לפניך אש ומים

Set out before you are **fire and water**

MS B   מוצק לפניך מים ואש

Set out before you are **water and fire**

LXX   παρέθηκέ σοι **πῦρ καὶ ὕδωρ**

He has set before you **fire and water**

Syriac   ··

They leave before you **fire and water**

As in the case of Sir 4:21, the tradition here is essentially uniform. The pair "fire and water" appears in this order in all versions showing a certain standardization of the text with the only exception of MS B which reverses the order of the elements by reporting מים ואש, water and fire. Again, as in the previous cases, the inversion does not affect the meaning of the sentence in any way. However, it should be noted that the order witnessed by B is found twice in the Hebrew Bible, in Joel 1:20 and Prov 30:16, unlike the order reported in the other versions, which never occurs in the biblical text. Although the change appears minimal, here, as in the cases seen for MS C, the scribe's intention is to intervene in the text through an innovation that does not invalidate the general sense or interpretation of the passage but aims to bring it closer in idiom to the biblical texts. This inversion confirms the hypothesis made earlier, namely that the γ branch of the tradition reveals a tendency to biblicize the text through the use of inversions as opposed to the β branch.

The last example of inversion in the manuscripts allows for further considerations. This is found in Sir 37:25 and is witnessed in MSS B (γ) and D (β):

MS D   חיי אנוש ימים מספר וחיי ישרון ימי אין מספר

The life of a person is **a few days** but the life of Yeshurun is days without number.

MS B   חיי איש מספר ימים וחיי עם ישראל ימי אין מספר

The life of a person is **(fixed) number of days** but the life of the people of Israel is days without number.

The inversion here concerns the pair ימים מספר which results in this order in MS D and reversed in B (מספר ימים). First, it should be noted that both expressions occur in the Hebrew Bible, the one witnessed in D in Num 9:20, the one given in B, though in slightly different forms, in Num 14:34; Ezk 4:9; 4:4.5; 1 Sam 27:7; 2 Sam 2:11; 1 Chr 27:24. Second, in this case, unlike the previous cases, the inversion produces a change in the meaning of the expression. If one considers the meaning of the two expressions in the Bible, the version of D indicates that a man's life is of a few days and is contrasted with the life of Yeshurun, i.e., Israel, which is instead endless. In, B, the reversal produces a slight change: man's life is not short-lived but has a fixed limit. Consequently, it may be that the scribe who produced the innovation used the inversion, in this case, not to biblicicize the passage – since both expressions are biblical – but to produce a different nuance. This hypothesis can be confirmed by the same inversion that occurs in the opposite direction if one compares the Masada manuscript, B and B margin in Sir 41:13:

Masada   חיי מספר ימים וטובת שם ימי אין מספר [ט]ובת

The good of life is a **(fixed) numbers of days** but the good
of a Name is days without number.

MS B   חיי ימי מספר וטובת שם ימי אין מספר טובת

The good of life is **a few days**, but the good of a name is days
without number.

Bmg   מספר ימים

(fixed) numbers of days

According to Bentjees' hypothesis given just above, since B marginal is and Masada are in agreement, we would be dealing with a textual form that predates B. The inversion witnessed in B would thus represent an innovation by the scribe that, significantly, goes in the opposite direction of that seen previously in Sir 37:25. This suggests that the use of מספר ימים or its inversion ימי מספר ימים) is used by B's scribe to give the text different shades of meaning and not directly to a desire to biblicize a certain passage. In the case of the inversion with respect to Masada, it is likely that the scribe found it more plausible on the level of meaning to state that the good of life is a few days, and not a fixed number of days, and, for this reason, decided to make an inversion.

In conclusion, of this brief examination based on a comparative analysis of the two different branches of stemma has shown how when considering the phenomenon of inversion the γ branch (MSS B and C) reveals a tendency toward biblicization compared to the β branch (MSS A, D, E, and F). This is manifested in those pairs of terms whose inversion does not produce changes in meaning and, therefore, should be considered a stylistic choice of the scribe who inserts this innovation in order to bring the idiom of Ben Sira closer to that of the Bible. Of course, it bears repeating, an analysis such as the one just illustrated is not sufficient to comprehensively show the trend toward biblicization of an entire branch of the tradition. Investigations of textual aspects other than inversion may show different trends. For example, from a comparison of the same MSS, A and C, Sir 4:31 shows a tendency for A to use a diction closer to that of Deut 15:7-9, while C has a distinctly later and less biblical lexicon.[57] The tendency to rearrange word pairs in a more biblical style does not seem to be systematically reflected in the scribe's lexical choices. Nevertheless, this stemma study-oriented approach shows how useful it is at the analytical level to stimulate new perspectives

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[57] For a discussion on this point, see Joosten, "The Hebrew of the Ben Sira Manuscripts from the Genizah," 321-2.

on different scribal habits, to show the extent to which a given phenomenon is present within the branches that make up the tradition, and to help show how variants are not only useful from a reconstructive point of view, but are significant evidence of the vitality of a text and the creativity of those who produced it.

4. Digital Perspectives

The digital turn of the last fifty years has had a massive impact on every aspect of scholarly research, humanities included: the huge increase in both the capacity of data storage and computing speed, as well as the development of new algorithms for data processing, has radically transformed traditional research approaches. The applications of these digital methods to humanities are usually gathered under the umbrella term *digital* or *computational* humanities, covering a wide range of possible applications. These include leveraging Web based techniques for data visualization and the application of automatic algorithms for in depth data analysis. Stemmatology, and more generally philology, can benefit greatly from these two approaches, both by leveraging newer Web technology for the vizualisation of textual evolution over time and by relying on algorithms to automatically generate stemma and infer textual relationship between textual witnesses.

4.1 Computational approaches to stemmatology

As section highlights, stemmatology can be easily systematized using an almost mathematical-like rigor. This lends itself perfectly to using algorithmic approaches to automatically reconstruct stemmata using automatic approaches, while being able to take into account a larger dataset than what can be taken into account using manual approaches. Several computational approaches are available in the literature and have been tested to reconstruct lineage tree between manuscripts. Since the 2000s, approaches taken from phylogeny have become prevalent and can be separated into three main categories: **(1)** distance based methods[58] **(2)** parsimony methods; **(3)** model-based methods who require to compute the probability of a manuscript being the offspring of another one.[59] With the exception of few algorithms specifically designed for stemmatology which aim is to encode manual algorithms (Poole-Camp-Cafiero,[60] RHM algorithm[61] and SemStem),[62] most stemmatology algorithms assume a similar alteration mechanism between DNA bases and text modifications. Taking into account the specificity of scribal behavior with specific

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[58] Marmerola et al., "On the Reconstruction of Text Phylogeny Trees."

[59] Ronquist et al., "MrBayes 3.2."

[60] Camps and Cafiero, "Genealogical Variant Locations and Simplified Stemma."

[61] Roos and Heikkila, "Evaluating Methods for Computer-Assisted Stemmatology."

[62] Friedman, "The Bayesian Structural EM Algorithm."

statistical models the development of such models is still at its infancy[63] and is currently being investigated by our research team.

4.2 A case study: Computational stemmatology within an eclectic paradigm

Another major use of stemmatology based approaches in the CBGM algorithm designed by the INTF institute and one of the corner stone of the new critical edition of the New Testament, the *Editio Critica Maior* (ECM). Since the 2003 ECM edition of 1 John, the textual edition relies on the the *Coherence-Based Genealogical Method* (CBGM) designed by Mink et al.:[64] they introduce a new paradigm for stemmatology, called *local* stemmatata, *to establish a comprehensive hypothesis for the genealogical structure of the textual tradition and to examine the validity of textual decisions.* Rather than locating texts as a whole within the stemmatology tree, they focus on the genatology of variation units, hence the term *local stemmata*: this algorithm relies on the unbelief that *manuscripts* can be ordered genealogically as the New Testament tradition is too contaminated, and that only *texts* can be genealogically placed within a tree, considering that the manuscript tradition differs from the textual one. This approaches does not rely on the traditional idea of hyper-archetype, but uses the concept of initial text (*Ausgangtext*), a hypothetical text from which all extant witnesses are descended. The most likely reading given a variant unit is then selected. This new re-purposing of stemmatology approach is highly eclectic, approaches which currently dominates the New Testament field, but shows the promising impact of computational stemmatology for philological studies: regardless of the disagreement regarding methadological approaches, computing thousands of local stemmata for thousands of witnesses has been until now impossible to do. Major advances regarding our understanding of the transmission of texts, beyong the standard paradigm of stemmatology, are to be expected.

4.3 Variant conscious digital edition

Another major perspective regarding the use of digital technologies for computational stemmatology is the leveraging of new Web approaches for an easy visualization of the inferred evolution of witnesses over time:[65] while it is impossible for standard paper edition to display in a collation fashion several witnesses without making the study difficult, Web editions will offer the possibility to provide such vizualization, and thus move from eclectic paradigms to stemmatological ones.

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[63] Marmerola et al., "On the Reconstruction"; Weitzman, "The Evolution of Manuscript Traditions."

[64] Mink, "The Coherence-Based Genealogical Method; Gurry, *A New Approach to Textual Criticism*.

[65] For a possible proposition of a digital design, see Epp. "It's All about Variants."

5. Conclusion

This article has enabled us to make progress on four important points. First, we were able to propose a reconstruction of the *stemma codicum* of all the Ben Sira manuscripts. In the second part, we wanted to show that the *stemma codicum* could have another relevance than the very hypothetical reconstruction of the original version of a text or its archetype: understanding the evolution and transformation of the text in the course of its history and, correlatively, the practices of the scribes from one step of the process to the next. In the third part, through the example of word pairs, we illustrated the interest and relevance of this methodology by showing how in one of the branch of the stemma, the scribes have biblicized the text of ben Sira. Finally, we wanted to open up the perspectives of the interest that digital philology and, in particular, computational stemmatology could bring to this field of research.

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