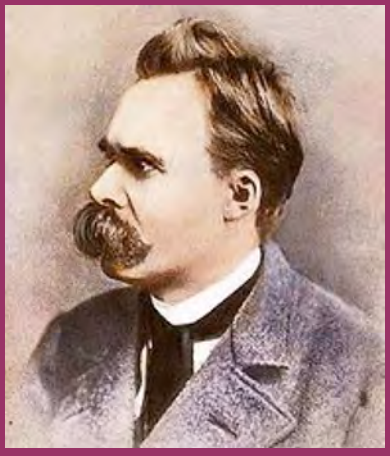
Gerry Stahl's assembled texts volume #7

Essays in Social Philosophy



Gerry Stahl

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Essays In Social Philosophy

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Introduction

To publish one's notes under the banner of "philosophy" requires one to adopt a balancing measure of modesty. The term "philosophy" itself has been kept on a pedestal for centuries. If it was ever attainable, it probably is not any longer. Even Heidegger, who was arguably the last great philosopher, once said he was only "aiming toward a star, nothing more." He proclaimed that philosophy had come to its end with Nietzsche, who himself strayed from the academy and struggled to enter the mundane world. Certainly, with Marx the pursuit of philosophical issues led to empirical research in the sciences.

Looking over the essays gathered in this volume, it is particularly clear that my philosophic writings are student efforts. If I have approached philosophical insights, it has been in my writings within the disciplines of computer sciences, cognitive sciences, learning sciences and information sciences. As I have studied and worked in these fields, I have been guided and urged on by my philosophy studies. While I do not feel that I have yet articulated the philosophic perspective that has driven my research situated in disciplinary practices, I know that what I have had to say has been thoroughly colored and even shaped by that perspective.

My academic study falls into three distinct periods, and the writings in this collection have been grouped accordingly. The first period was my undergraduate years at MIT from 1963-1967. Representing this period is my bachelor's thesis on Nietzsche. Having gone to MIT to study math and physics, I nevertheless spent a roughly equal amount of energy pursuing the study of philosophy, primarily German philosophy. My thesis on Nietzsche (1967) was my first extended writing. As a freshman at MIT reading Plato, I discovered that I did not know how to write. I took literature courses and worked on writing prose. At best, I developed a method of collecting quotations and stringing them together with sketchy narrative. That technique is quite visible in the Nietzsche thesis, particularly its first half. The approach to the thesis was rather stiff and formal—certainly in comparison to Nietzsche's own flamboyancy—due largely to my advisor's commitments. However, the second half of the thesis starts to develop an argument about how to interpret Nietzsche's philosophy, itself very interpretation centered.

The second period included my graduate study of continental philosophy at Northwestern University (see my dissertation on *Marx and Heidegger* in another volume). Before going to Northwestern, I spent a year at the University of Heidelberg, studying with Gadamer—Heidegger's research assistant who developed philosophical hermeneutics (theory of interpretation). For my

dissertation research, I returned to Germany for two years at the Frankfurt Institute for Social Research, where Adorno and Habermas had taught. While working on my dissertation at Northwestern, I taught courses on Marx, Heidegger and Adorno. During this period, I published my first journal articles: "The jargon of authenticity: An introduction to a Marxist critique of Heidegger," (*Boundary 2*, 1975, *III* (2), 489-498) and "Attuned to Being: Heideggerian music in technological society" (*Boundary 2*, 1976, *IV* (2), 637-664). The first of these formed part of my dissertation. The second was related to two essays I wrote as part of my teaching: on "Sound and society" (1974) and "Utopian optics" (1974). These essays elaborated the implications of philosophical ideas from Marx, Heidegger and Adorno for electronic music and other cultural phenomena.

The German language—as practiced by Hegel, Heidegger, Adorno and Habermas—had a powerful impact on my writing style. I was enamored of the power of dialectical locutions and the flexibility of German syntax. The nature of the German language supports an astounding level of complexity within sentences, and the masters of German philosophy exploit this power with grace. This mode of thinking took over my mind, making some of my pronouncements impossible to follow. The writings from my second period reflect this.

Following my study of philosophy from 1968-1975, I returned to Philadelphia and worked as a computer systems analyst, community organizer, neighborhood planner and director of a computer-consulting firm for non-profit organizations. I taught occasional courses on Marx, producing the review of the new translation of *Capital* (1978) and the essay on democratic socialism (1976). One summer, I went on a tour of worker cooperatives in Europe and published an interview about the comprehensive coop system in Mondragon, Spain (1984). As a neighborhood planner, I wrote many successful funding proposals for community programs, helping to create a network of community development institutions. Grant writing forced me to develop a narrative style that was easily readable and a clear, persuasive argumentative sense. Also, working with neighborhood groups and teaching courses for the general public helped me to overcome the often dense and convoluted syntax that I had acquired from my contact with German philosophy.

The third period covers my graduate study of computer science at the University of Colorado at Boulder from 1989-1998. (See my dissertation on computer-supported cooperative design in another volume on *Tacit and Explicit Understanding*.) From this period, a number of brief notes are included in this volume. Some were little more than emails sent out to members of a research group or a course. They cover my time as a graduate student and a post-doctoral researcher: "Evolution of knowledge" (1992), "Rapid evolution" (1992), "The future now" (1996), "Neural correlates" (1997), "LSA Chinese room" (1997),

"Software as art" (1998) and "Software semiotics" (1998). These were often written light-heartedly, to try out a thought or to spark a controversy.

In 1999, I became a Research Professor with my own projects funded by grants, and I started to become active at academic conferences. That is another story, involving many more publications.

This volume includes my early publications before my academic career. Decades later, in retirement, I returned to the theme of my first journal article, "Attuned to Being: Heideggerian music in technological society" (1976), and published "The working of aural being in electronic music" (2021). This is a much clearer articulation of my reflections on electronic music and of the argument of my philosophy dissertation more generally. It also extends my analysis of artifacts in my later theory of group cognition. This essay is republished at the end of this volume and an extended version is included in volume 11, *Essays in Philosophy of Group Cognition*, which includes other recent publications. The version here was for a book on Heidegger and music; the extended version adds philosophical reflections motivated by Marxian social theory.

References

The essays in this volume were originally published as: (Stahl, 1967; 1970; 1974a; 1974b; 1975; 1976a; 1976b; 1978; 1979a; 1979b; 1984; 1992a; 1992b; 1996a; 1996b; 1997a; 1997b; 1998a; 1998b; 1998c; Stahl, Koschmann & Barrows, 1998)

Stahl, G. (1967). *Truth as value: Nietzsche's escape from nihilism*. Unpublished manuscript. Web: http://GerryStahl.net/pub/Nietzsche.pdf.

Stahl, G. (1970). *Time and Being: A translation of Martin Heidegger's Zeit und Sein*. Unpublished manuscript. Web: http://GerryStahl.net/pub/time&being.pdf.

Stahl, G. (1974a). *Sound and society: An essay on electronic music*. Unpublished manuscript. Web: http://gerrystahl.net/publications/interpretations/music.htm.

Stahl, G. (1974b). *Utopian optics: Theodor W. Adorno's Prisms: Cultural criticism and society*. Unpublished manuscript. Web: http://GerryStahl.net/pub/utopian_optics.pdf.

Stahl, G. (1975). The jargon of authenticity: An introduction to a Marxist critique of Heidegger. *Boundary 2. III*(2), 489-498. Web: http://GerryStahl.net/publications/interpretations/jargon.htm.

Stahl, G. (1976a). Attuned to Being: Heideggerian music in technological society. *Boundary 2. IV*(2), 637-664. Web: http://GerryStahl.net/publications/interpretations/attuned.pdf.

Stahl, G. (1976b). *The theory and practice of democratic socialism*. Unpublished manuscript. Web: http://GerryStahl.net/pub/democratic_socialist_theory.pdf.

Stahl, G. (1978). *A modern voice for Marx*. Unpublished manuscript. Web: http://gerrystahl.net/publications/interpretations/capital.htm.

Stahl, G. (1979a). Attuned to Being: Heideggerian music in technological society. In W. V. Spanos (Ed.), *Martin Heidegger and the question of literature.* (pp. 297-324). Bloomington, IN: Indiana University Press. Web: http://GerryStahl.net/publications/interpretations/attuned.pdf.

Stahl, G. (1979b). The economic facts of unemployment. *Neighborhoods -- Institute for the Study of Civic Values. 5*(1), 4-13, 51. Web: http://GerryStahl.net/pub/unemployment.pdf.

Stahl, G. (1984). *Education for democracy at Mondragon*. Unpublished manuscript. Web: http://GerryStahl.net/pub/mondragon.pdf.

Stahl, G. (1992a). *The evolutionary analysis of knowledge*. Unpublished manuscript. Web: http://gerrystahl.net/publications/ideas/analysis.html.

Stahl, G. (1992b). *The rapid evolution of knowledge*. Unpublished manuscript. Web: http://gerrystahl.net/publications/ideas/rapid.html.

Stahl, G. (1996a). *On Alexander's pattern language as end-user programming*. Unpublished manuscript. Web: http://gerrystahl.net/publications/ideas/pattern.html.

Stahl, G. (1996b). *We have to work in the future now. (in fact, we are already late.)*. Unpublished manuscript. Web: http://gerrystahl.net/publications/ideas/future.html

Stahl, G. (1997a). *Consciousness without neural correlates*. Unpublished manuscript. Web: http://gerrystahl.net/publications/interpretations/Neural Correlates of Consc.html.

Stahl, G. (1997b). *LSA visits the Chinese room*. Unpublished manuscript. Web: http://gerrystahl.net/publications/interpretations/Chinese Room.html.

Stahl, G. (1998a). *Lela's birthday is a "lela birthday"*. Unpublished manuscript. Web: http://gerrystahl.net/publications/ideas/Lela Birthday.html.

Stahl, G. (1998b). *Software as a new art form*. Unpublished manuscript. Web: http://gerrystahl.net/publications/ideas/software_art.html.

Stahl, G. (1998c). *Software semiotics*. Unpublished manuscript. Web: http://gerrystahl.net/publications/ideas/semiotics.html.

Stahl, G. (2021). The working of aural being in electronic music. In *Heidegger and Music,* eds. C. Rentmeester & J. R. Warren. Rowman & Littlefield Publishers.

Stahl, G., Koschmann, T., & Barrows, H. S. (1998). *Problem-based learning: White paper for a collaboration*. Unpublished manuscript. Web: http://gerrystahl.net/publications/ideas/PBL white paper.html.

Contents

1. Truth as Value: Nietzsche's Escape from Nihilism

By

Gerry Stahl

Submitted in Partial Fulfillment
of the Requirements for the
Degree of Bachelor of Science
at the
Massachusetts Institute of Technology
June 1967

Signature of Author: *Gerald M. Stahl*

Department of Humanities, May 10, 1967

Certified by: *Mark Levensky*

Thesis Supervisor

Accepted by: *Roy Lamson*

Chairman, Departmental Committee on Thesis

Abstract

Nietzsche's conception of truth provides the foundation for his entire philosophy. To clarify his view of what it means for a proposition to be "true," this thesis considers Nietzsche's attacks (in his writings from 1885 on) on three previous conceptions of truth. Nietzsche's own view then appears as an attempt to satisfy the needs out of which the belief in the truth of the various propositions arose. "Will to power" is viewed as men's need to fulfill their basic human needs and Nietzsche's conception of truth as value is seen as making human life the basis of valuations, thereby avoiding what Nietzsche considers "Nihilism."

Acknowledgments

The suggestion of writing a thesis on Nietzsche came from Professor Samuel J. Todes, to whom I owe a great debt of gratitude. Although unable to advise me in the actual work of the thesis, Prof. Todes left a pervasive influence on my philosophic thinking, which is clear throughout my "original" ideas in the thesis. A background in phenomenology, which proved extremely useful in interpreting Nietzsche's writings and the emphasis on understanding the role of human needs, are results of several courses and a number of private conversations with Prof. Todes.

The general structure of the thesis as well as numerous technical improvements are due to the conscientious assistance of my thesis advisor. Credit is also due my typist, Doris Whiteman, for providing moral support throughout and her diligent labors in the last stages.

With topic, structure and typing supplied by others, the pleasure (and frustration) of reading and contemplating Nietzsche's philosophy remained mine.

Note on references

With the exception of Nietzsche's own works, references are cited throughout the thesis by their author's name. Works quoted and those useful in the preparation of the thesis are listed in the Bibliography with their publishing information.

The following abbreviations are used in referring to Nietzsche's writings:

BG&E	Beyond Good and Evil
	(*Jenseits von Gut und Bose*, 1886)
GM	Genealogy of Morals
	(Zur Genealogie der Moral, 1887)
HAH	Human, All-Too Human
	(Menschliches, Allzu Menschliches, 1882)
JW	Joyful Wisdom
	(Die Frohliche Wissenschaft, 1882)
Twil.	Twilight of the Idols
	(Die Gotzen-Dammerung, 1889)
WP	The Will to Power
	(Der Wille zur Macht, posthumous)
Zar.	Thus Spoke Zarathustra
	(Also Sprach Zarathustra, 1885)
PN	*The Portable Nietzsche*, W. Kaufmann (ed.)
	(includes Twil. And Zar.)

Content

Introduction

Friedrich Nietzsche has been one of the most influential writers of recent times. He has also been one of the most misunderstood. This is partly due to the distortions by his sister on behalf of the Nazis. But it is due to other things as well. One problem is merely formal. Nietzsche seemed to hide his thoughts behind images and obscure references, which can only be understood after his ideas have been understood. He was aware of this problem in other writers and may have consciously adopted it for his own purposes. In his discussion of the "Free Spirit," Nietzsche says, "Every profound spirit needs a mask, around every profound spirit a mask is growing" (BG&E 40). Luckily, Nietzsche's personal notes, which are often quite clear, have been published in *The Will to Power*, although they have been very poorly translated. By seeing Nietzsche's arguments for his views in his notes, we can then go back to his works and understand their meaning. The other problem with understanding Nietzsche is that he held a conception of truth that is in many ways different from the traditional view of truth and that is the foundation, or at least a corollary of nearly all of his philosophy. It is my purpose in this thesis to explore that conception of truth, which forms the basis for any understanding of Nietzsche's writings.

In order to make Nietzsche's conception of truth clear, I shall first consider his attack on three different ways of establishing the truth of a proposition, and in order to do this I will consider the way in which particular people have attempted to establish the truth of three propositions: "Thou shalt love thy neighbor," "X is the cause of Y" and "The world is composed of unities." After seeing Nietzsche's objections to these three ways of thinking about the truth, I can show what Nietzsche's own conception of truth is and how it arises from his criticisms.

A concluding section will show the relevance of Nietzsche's conception of truth to wider issues.

Chapter I. The truth of the statement, "Thou shalt love thy neighbor"

The view

The principle that people should obey the Christian moral imperative to love one's neighbors was supposed to be true by virtue of its foundation—the will of God. The imperative was supposed to be a necessary principle for a moral Christian society. Furthermore, it was thought that those who followed the principle of neighbor love could thereby attain a higher spiritual state than those who did not, and would continue to improve themselves by the continued practice of this principle. Because it was thought to have been proclaimed by God, the principle of neighbor love was not considered to be open to rejection or modification on the basis of its actual results or the will of men.

Nietzsche argued that the statement, "Thou shalt love thy neighbor," had an immoral origin in the hate or fear of neighbors. He thought that a society that truly believed in neighbor love would not make a virtue or morality out of it and that if neighbor love were completely accepted than its very *raison d'etre* would disappear and it would no longer be accepted as a rule. According to Nietzsche, those who investigated and preached the principle of neighbor love were of low or only average spiritedness; they feared the stronger instincts of their neighbors and were disinclined to self-improvement. Neighbor love, Nietzsche thought, leads to conformity and stagnation. Moreover, any moral judgment is susceptible to criticism and replacement if it proves unacceptable by empirical standards of the utility of its results. The fact that morality does not have a divine origin deprives it of any *a priori* superiority to any other possible system of how to lead one's life.

> Morality in Europe today is … merely one type of human morality beside which, before which, and after which many other types, above all *higher* moralities are, or ought to be possible. But this morality resists such a "possibility." (BG&E 202)

Outline of a criticism of morality

A. *Morality* as the work of *Immorality*.

1. In order that moral values may attain to *supremacy*, a host of immoral forces and passions must assist them.

2. The establishment of moral values is the work of immoral passions and considerations.

B. *Morality as the work of error*.
C. *Morality gradually contradicts itself*
….
D. To what extent was morality *dangerous* to life?
….
E. Contra-account: the usefulness of morality to Life.
….

4. Morality may be a preservative measure opposed to the terrible outbursts of the mighty: it is useful to the "lowly."

(WP 226)

Morality as the work of immorality

In times such as the "best period of the Romans," strong instincts like the desire to be a powerful master were diverted, according to Nietzsche, to activities outside the society. Romans became involved in conquering other lands. When energies were later centered within the societies, the instincts of the previously honored strong became a threat to the majority. Fear of the neighbors arises in the weak masses who once praised their strong neighbors. Those who were praised as "chosen by the gods" and honored for their piety are now condemned as immoral. "Love of the neighbor" is preached by those who fear their neighbors in the hopes of preventing their neighbors' strength from doing them any harm. "Love" has its origin in fear. Morality results from a reversal of the older morality, not from an absolute commandment. Morality is proclaimed out of the fears of weak men, not by revelations of an all-powerful god.

> In the last analysis, "love of the neighbor" is always something secondary, partly conventional and arbitrary—illusory in relation to *fear of the neighbor*…. Certain strong and dangerous drives like an enterprising spirit, foolhardiness, vengefulness, craftiness, rapacity, and the lust to rule, which had so far not merely been honored… are now experienced as doubly dangerous, since the channels to divert them are lacking and, and, step upon step, they are branded as immoral and abandoned to slander…. Fear is again the mother of morals. (BG&E 201)

Morality as the work of error

Nietzsche claimed that the morality of neighbor love was an excuse to avoid the hard work of improving oneself in the sense of overcoming the temptations of conformity to set and strive to attain personal goals based on personal needs. The charitable response is an avoidance of the proper task: creating one's own life. Neighbor love represents a lack of real love and concern for oneself due, quite possibly, to a self-repulsion and a weakness of the will to create. Creating a virtuous appearance through manifesting neighbor love impresses others and leads to a deceptive sense of self-satisfaction with one's own virtuosity when it is really an escape from dissatisfaction with oneself.

> On Love of the Neighbor
>
> You crowd around your neighbor and have fine words for it. But I say unto you: your love of the neighbor is your bad love of yourselves. You flee to your neighbor from yourselves and would like to make a virtue out of that; but I see through your "selflessness" …. You invite a witness when you want to speak well of yourselves; and when you have seduced him to think well of you, then you think well of yourselves. (Zar., PN. 172-3)

Morality as contradictory

Nietzsche thought that the very fact that neighbor love and all it stood for were consciously considered virtuous and moral was a proof that they were not instigated as virtues by a moral (in these terms) force or group of people. Nietzsche argued that the concept of "moral" entails that the given action not be done in order to be virtuous, but rather because of the actor's virtue. If people loved their neighbors because they really loved their neighbors, there would never have arisen the notion of calling this moral.

> Supposing that even then there was a constant little exercise of consideration. Pity, fairness, mildness, reciprocity of assistance; supposing that even in that state of society all those drives are active that later receive the honorary designation of 'virtual' and eventually almost coincide with the concept of 'morality'—in that period they do not yet all belong in the realm of moral valuations; they are still extra-moral. (BG&E 201)

Here Nietzsche apparently thinks that "morality" only pertains to principles of behavior that are not naturally accepted and must be consciously imposed by

preaching. In a time when nobody would think of not "loving their neighbors," nobody would proclaim "Thou shalt love thy neighbor" as a moral principle. Only when people begin to hate their neighbors, must the principle of neighbor love be preached as morality. As long as everyone in society remains "decently" dressed, nobody proclaims "Thou shalt dress" as a principle, but when some people stop following the "natural" conventions, then dress becomes a moral issue. Thus, on Nietzsche's view, principles of behavior become moral issues when they are not being followed; morality arises from immorality.

Similarly, when a moral imperative is completely successful, it is obeyed naturally and no longer considered "morality." Thus, Nietzsche thinks that the fact that neighbor love is considered a virtue shows both that it arose out of un-virtuous circumstances and that the adoption of the virtue has not been entirely successful. Neighbor love leads, Nietzsche thinks, to the abolition of danger and hence to the disappearance of fear. Without fear, the origin and foundation of neighbor love—there would no longer be any need for the morality of neighbor love. "Supposing that one could altogether abolish danger, the reason for fear, this morality would be abolished, too, *eo ipso*: it would no longer be needed, it would no longer consider itself necessary." (ibid.) If successful, the morality of neighbor love must gradually contradict itself as morality. It can neither start nor end as morality.

Morality as danger

Neighbor love is, according to Nietzsche, a way of avoiding the task of creating one's own life in a way superior to its present state. The danger inherent in the morality is this forgetfulness of oneself—often purposefully out of dislike and weakness of the will to create something better.

> I teach you not the neighbor, but the friend. The friend should be the festival of the earth to you and an anticipation of the overman. I teach you the friend and his overflowing heart. But one must learn to be a sponge if one wants to be loved by hearts that overflow. (Zar., PN 174)

Rather than avoiding one's own concerns by loving his neighbors, men should form friendships which result in reciprocity of assistance, furthering the development of both participants through each helping the other to help himself and each using the other's assistance to strive toward the goals that he has posited on the basis of his needs or at least to reach the stage at which his goals are based upon his own needs.

Morality as useful

The morality of neighbor love is, Nietzsche thinks, only useful to men of mediocre or average ability to command (and who would therefore be commanded by the stronger without the policy of neighbor love), those who are self-satisfied until someone of superior ability and achievement shows up their mediocrity by comparison. (Even this utility is limited by the contradictory nature of this morality, as Nietzsche showed previously.) The valuations derived from the principle of neighbor love are opposed to the accomplishments of these men who, by concerning themselves with their own betterment, rise above the average level of achievement. These values honor the weak, average man who, through laziness or an aversion to himself, turns his interest away from himself.

> The highest and strongest drives, when they break out passionately and drive the individual far above the average and the flats of the herd conscience, wreck the self-confidence of the community, its faith in itself, and it is as if its spine snapped. Hence just these drives are branded and slandered most. High and independent spirituality, the will to stand alone, even a powerful reason are experienced as dangers; everything that elevates an individual above the herd and intimidates the neighbor is henceforth called *evil*; and the fair, modest, submissive, conforming mentality, the mediocrity of desires attains moral designations and honors … the "lamb" even more than the "sheep," gains in respect. (BG&E 201)

Critique of Nietzsche's view of neighborly love

Nietzsche's attack on the morality of neighbor love is basically two-fold: because it has its origin in immorality and error, there is no *a priori* proof of its validity on the basis of a moral origin; and because it has certain consequences, it is an undesirable rule for at least some people. Nietzsche claims that the commandment to love one's neighbors was foisted upon society by the powerless people who feared the strength of their neighbors. However, the origin of the morality of neighbor love is open to another interpretation equally plausible but diametrically opposed to Nietzsche's: that the morality of neighbor love was instigated by the powerful to keep the deprived masses from rebelling and to make them identify with and help the powerful. This certainly seems to have been how Christian morality was used in Europe of the Dark Ages, in Spain during the Inquisition and in the American slave South, to mention just a few examples. Either account, however, would serve to destroy popular faith in the divine origin of the imperative

to love one's neighbors and would result in awakening people from a dogmatic acceptance of the truth of the statement that one ought to practice neighbor love. This would force them to question the validity of Christian morality in the absence of a belief in the God that originally justified that morality. It also raises the issue of what interests or values Christian morality supports, and thereby places that morality with any other principle for guiding human behavior.

The claim that love of one's neighbor is a hypocritical expression of self-hate is, as far as can be known, probably true in many cases. Since the motives of fictional characters can often be known with greater certainty than those of real people, the clearest substantiations of Nietzsche's analysis of neighbor love are found in literature. The narrator in Albert Camus' *The Fall*, Jean-Baptiste Clamence, provides a perfect example of a person who practices love of his neighbors as a way of self-glorification. His public acts of charity are clear instances of what Nietzsche calls inviting "a witness when you want to speak well of yourself." On the other hand, we must admit the possibility that many people do practice love of their neighbors in a way that Nietzsche would approve of—though these examples may be few compared to those who preach and practice love of their neighbors hypocritically.

Nietzsche's "proof" that the morality of neighbor love is contradictory because in a state of its complete fulfillment it would no longer be considered "morality" seems rather irrelevant even if true; it merely shows that the conscious recognition of that morality is necessary before achieving the goal of unselfconscious neighbor love

Nietzsche's substitution of friendship as a way of furthering one's own development rather than ignoring oneself to help others sounds like an excellent idea. Consider the saying, "Behind every great man there is a woman." While it may not be true in every case (e.g., in Nietzsche's), it is likely that the close companionship of a wife or mother or good friend has been of enormous assistance in the development and productivity of most great men, by giving the necessary encouragement or providing the pair of eyes in which the men wanted to look great, if nothing else.

The notion that morality is useful to the mediocre masses is derived from Nietzsche's analysis of the origins of Christian morality and is open to the same possible counterexamples. Was it really better for the slaves and peasants to be kept quiet and satisfied by the morality of neighbor love and the promises of a glorious after-life? Certainly not from the standpoint of Nietzsche's view that men should creatively develop their lives to meet their personal desires.

Nietzsche has raised the question of whether the principle of neighbor love is the best principle of social behavior by showing that it has no a priori justification and

he has suggested an anarchism of individualism augmented by close friendships. Because it is by no means clear that our civilization could exist under anarchism—although its impossibility is not proven either—it may well be that something similar to neighbor love or at least Kant's categorical imperative (to which Nietzsche objects equally strongly) must be accepted to avoid absolute dictatorship for all (but one) or utter annihilation of mankind. Somehow a compromise must be established between solitude and solidarity. Camus suggests that at least some people can reach this compromise through political rebellion or artistic creation rather than through a general moral principle.

Chapter II. The truth of the statement, "X is the cause of Y"

The view

Before Nietzsche, rationalist philosophers held that, for two events x and y, if x is the cause of y, then y happened because x somehow forced y to happen. Many if not all physical events were thought to be explainable by finding their causes. It was thought that by finding such a cause one discovered the reasons for the event and the mechanism by which it came about. Furthermore, if it is true that x is the cause of y, then no alternative interpretation of why y occurred is true.

Nietzsche had five major objections to this conception of causality: (1) The statement "x is the cause of y" contains only the information that y can be expected to follow x. There are no grounds for assuming that x mechanically forces y to occur. (2) The only valid inference from a long sequence of instances in which y follows x is that it is likely that y will continue to follow x. (3) Causality is a classification imposed on events by men and there is no reason to suppose that it says anything about the events themselves. (4) The causal interpretation arose out of human needs and fears, and not because of the nature of the events to be so interpreted or because men so structure their perceptions. (5) We must be careful not to place values in the causal view of the world because that would result in the feeling of a loss of value when we discard the causal interpretation.

For Nietzsche, the statement "x is the cause of y" may be a convenient expression in that it relates a particular instance of y following x to similar instances in a conventional language understandable to other people, but it does not explain *why* the event occurred or what the *purpose* of it was or *how* it was able to occur. Such a causal statement can communicate known information and point out relationships to previous experience, but it does not reveal new information about the world. Nor does the term "cause" imply that such things as causes really exist in themselves.

> It is we alone who have devised cause. Sequence, for-each-other, relativity, constraint, number, law, freedom, motive and purpose; and when we project and mix this symbol world into things as if it existed "in itself," we act once more as we have always acted—mythologically…. One should use "cause" and "effect" only as pure concepts, that is to say as conventional fictions for the purpose of designation and communication—not for explanation. (BG&E 21)

Cause as force

Nietzsche combats the belief that when x is the cause of y then x has forced y to occur by arguing that this belief is based on an analogy with the false assumption that the mind causes the limbs to move. Nietzsche thinks the underlying argument behind a belief in forceful causation runs as follows: a person decides to move his arm; then he feels his muscles working, tensing, overcoming resistance; finally, he sees the arm move. By illegitimately separating the action into that of the ego, the muscles and the arm, the inventor of causality sets the general purpose which determines what the action will be and gives it its value: there is a definite force which makes the action come about but is distinct from the causer and the caused, and there is the caused event. On this model, there are answers to the questions of why, how and for what the causation took place. Now, given a situation in which event x is followed by event y, one can say that there was a force exerted by x which caused y. Having labeled the sequence x, y with the title "causation," one can feel that he understands what has happened (y was "caused" by x) and how it has happened (by x "causing" y). New understanding has somehow been gained about the "nature" of the events under consideration merely by naming their temporal relation "causality" and taking this to mean the relation is like that between a person thinking of moving his arm and actually moving it when this is interpreted in the manner previously indicated.

In general, Nietzsche strongly objects to the imposing of terms of human significance onto inanimate objects, but that point will be saved for the end of this section. The objection we will now consider is that the analogy is based on a false analysis of the bodily causality. The tensing of the muscle is, Nietzsche claims, part of the movement of the arm and not the cause of it. Furthermore, we cannot separate the consciously thinking ego from the acting body as though they were two billiard balls, unconnected except by the force of our muscles. Nietzsche held that our ego is not a separate entity, but a mere technique adopted by our body as a useful way of understanding itself under the pressure of the need for communication (cf. JW 354). The body has a need to move; this need may be made conscious in the ego, but that is irrelevant; the body (arm and muscle) moves. Then the inventor of causality comes along and separates the organic whole into a teleological triad.

A criticism of the concept "cause."

> We have absolutely no experience concerning *cause*; viewed psychologically, we derive the whole concept from the subjective conviction that we ourselves are causes—that is to say, that the arm moves…. *But that is an error*. We distinguish ourselves, the agents, from the action, and everywhere we make use of this scheme—we try to

> discover an agent behind every phenomenon. What have we done? We have *misunderstood* a feeling of power, tension, resistance, a muscular feeling, which is already the beginning of the action, and posited it as a cause; or we have understood the will to do this or that, as a cause, because the action follows it. (WP 551)

When we see the collision of two billiard balls, there is a billiard ball collision (an event), not a ball (subject) which hits (action) another ball, as though the first ball were not part of the action but "caused" it, the hitting was something in itself and the other ball was affected as a result of the hitting. For Nietzsche, the separation of the event is nothing but the result of the structure of our language. The first ball did not cause the action—it was part of the action. To say that "I move" as though there were an I (ego) which caused my body to move, is to distort the event. There was simply a motion in my body. To avoid the error of causal interpretation, we must not be misled by the way in which we speak about events.

We must avoid

> our absurd habit of regarding a mere mnemonic sign or abbreviated formula as an independent being, and ultimately as a *cause*; as, for instance, when we say of lightening that "it flashes." Or even the little word "I." A sort of double-sight in seeing, which makes sight a *cause of seeing in itself*: this was the feat in the invention of the "subject" of the "ego." (WP 548)

Cause as inference

Hume showed that it does not follow from the fact that x has consistently been followed by y for a long sequence of repetitions, that x caused y in any sense of forcing y. Such a sequence may lead us to expect y to follow x in the future, but we may infer nothing more. Nietzsche accepts Hume's critique of the belief in causality as an inference from a long sequence of recurrences:

> In this respect Hume is quite right. Habit (but not only that of the individual) allows us to expect that a certain process, frequently observed, will follow upon another, but nothing more! (WP 530)

A causal statement can therefore summarize our predictive power, but it does not mean that we know why or how x causes y to happen. To say that rolling one ball at another along a collision course will cause the other to start moving in a predictable manner is only to say that y follows x, which we already know from our sequence of observations. The statement of causality is limited to the realm in

which the observations take place (i.e., to billiard balls, but not colliding people or atoms) and tells nothing further about the causal "force" than its effect on two billiard balls. The statement that x is the cause of y is now nothing more than a long sequence of occurrences under fixed conditions: x was always followed by y.

Cause as given

Nietzsche accepted the implications of Kant's "Copernican Revolution" for the understanding of causality. Kant's conclusion was that the view that two events are causally related is the result of the human way in which we structure our perceptions rather than the result of the structure of the un-interpreted world. Kant argues that our sense of spatiality, temporality and causality are not based on our lived experience. In the case of causality, for instance, Hume had shown that all that can be based on our experience of repeated causal sequences is the prediction that y will continue to follow x under certain conditions. Yet our "sense of causality" is not confined to this limit and includes the belief that x forced y to occur. Furthermore, the sense of causality between two events appears before we have observed a large number of repetitions of the events following each other. Kant wants to go so far as to say, even before we have any experience of the events at all (*a priori*). If, however, causality is an interpretation imposed by men on their perceptions, then the sense of causality can meet the demand that it precedes our perceptual experience.

> Hitherto it has been assumed that all our knowledge must conform to objects…. If intuition must conform to the constitution of objects, I do not see how we could know anything of the latter a priori; but if the object (as object of the senses) must conform to the faculty of our intuition, I have no difficulty in conceiving such a possibility…. I assume that the objects, or what is the same thing, that the experience in which alone, as given objects, they can be known, conform to the concepts. (Kant 22)

Causation is, then, for Nietzsche as well as Kant, a feature of the way in which men structure perception rather than a feature of the objects perceived. The question now is whether or not it is necessary that we structure our perceptions in terms of causal explanations and if it is not necessary then why people have so structured their experiences and whether men should continue to do so.

Cause as *a priori*

Kant included causality in "the list of all original pure concepts of the synthesis that the understanding contains within itself *a priori*" (Kant 113). Kant realized that these categories were not justifiable on the basis of any analytic truth but still believed that they were *a priori* true, that is, that their application was justifiable without appeal to lived experience. To express this conviction, Kant went to great pains to establish the concept of "synthetic *a priori*" truth, which he then ascribed to his system of categories. It is this claim to a synthetic *a priori* character for causality to which Nietzsche objects:

> Synthetic judgments *a priori* should not "be possible" at all; we have no right to them; in our mouths they are nothing but false judgments. Only of course the belief in their truth is necessary as a foreground belief and visual evidence belonging to the perspective optics of life. (BG&E 11)

Nietzsche claims that there is no *a priori* necessity to the interpretive category of causality; its value is determined solely by its usefulness to living. Human life may require a belief in its "truth" (in the Kantian or pre-Kantian sense) and it may to some extent be validated by the evidence of experience (life), but this, says Nietzsche, is no proof that it tells anything about the events which it categorizes or about the things-in-themselves which, Nietzsche claimed, Kant thought lie behind our experiences. In order to show that our "sense of causality" is not an instinctual "faculty," Nietzsche shows how it arose from our experiences.

By trying to show how the concept of causality as explanation arose, Nietzsche is adopting that very position in arguing that the cause of causality is such that causal explanation has no validity. Nietzsche claims that it is a fear of the unfamiliar or at least a dissatisfaction with events which are not explained in familiar terms that brought about the belief in causality.

> There is no such thing as a *sense of causality*, as Kant would have us believe. We are aghast, we feel insecure, we will have something familiar, which can be relied on…. The so-called instinct of causality is nothing more that the *fear of the unfamiliar*. (WP 549)

The construction of explanation in dreams provides a good analogy, Nietzsche thinks, to the kind of thought behind the use of causal explanation. Consider, for instance, what happens when a sleeper is disturbed from his dream by an external influence: the sleeper incorporates the noise into his dream by dreaming up a cause for it in the context of his dream. Thus, the dreamer first hears the noise and then "explains it from afterwards, so that he thinks he first experiences the condition responsible for the noise and then the noise." Nietzsche takes this as a paradigm case of causal thought: "As man still reasons in dreams, so he reasons when awake,

for many millennia. The first cause which entered his mid as explaining something which required explanation satisfied him and passed for the truth" (HAH 13).

When someone saw, e.g., two balls colliding and could not understand why they should act as they did, he turned in his need for explanation to the only example of something happening in which he had a sense of what was happening, the previously discussed example of moving one's arm. In analogy to our false analysis of how we cause our arm to move, we impute (on Nietzsche's analysis) the character of acting with purposes in mind (the character of an ego) to the "cause," the idea of force (as efficient cause) to the "causing," and the restriction of obedience to the "effect" (cf. WP 551).

> That which gives us such an extraordinarily firm faith in causality, is not the rough habit of observing the sequence of processes; but our inability to interpret a phenomenon otherwise than as the result of design. It is the belief in living and thinking things as the only agents of causation; it is the belief in will, in design—the belief that all phenomena are actions. And that all actions presuppose an agent; it is the belief in the "subject." …. In every judgment lies the whole faith in subject, attribute or cause and effect (in the form of an assumption that every effect is the result of activity, and that all activity presupposes an agent). (WP 550)

The use of causal thinking leads to its own repudiation when Nietzsche adopts it. In his analysis of the dreamer and the noise, Nietzsche shows how the causal interpretation assumed by the dreamer was caused by a causality exactly the opposite of what the dreamer thought. Here one view of the causation (the dreamer's) is repudiated by the "objective" view with which every wide-awake defender of causality would have to agree. In Nietzsche's view, ordinary causal thought had its origins in a process similar to the creation of the dream, in that both the dreamer and the causal thinker are willing to accept the first explanation that does away with the disturbance: in the one case the noise, in the other the feeling that an event is incomprehensible.

Cause as nihilism

Causal thinking of the kind that Nietzsche imputes to Kant and to which many non-philosophers still adhere is dangerous because it can lead to a deterministic and teleological view, which holds a false set of valuations. The danger inherent in using such concepts as obedience to laws, cause and purpose in discussing inanimate objects is that it leads to the belief that the view of the value of life is intimately related to the (anthropomorphic) view of the non-living world. This

belief ends in a feeling of complete lack of values, nihilism, when the teleological interpretation of causality is discarded. In an argument "to combat determinism and teleology," Nietzsche states:

> Owing to the very fact that we fancied existence of subjects, "*agents*" in things, the notion arose that all phenomena are the *consequence* of a *compulsory force* exercised over the subject—exercised by whom? Once more by an "agent." The concept "Cause and Effect" is a dangerous one, so long as people believe in something that causes, and a something that is caused. (WP 552)

Nietzsche thought that the danger inherent in the belief in a Kantian form of causality as the necessary way of viewing the world rather than as one possibly useful approach was an urgent problem. He saw, in the first glimmers of the view of scientific theories as merely models, the beginning of this loss of belief that the world works in terms of teleological values and, hence, the immediate likelihood of a psychological feeling of valuelessness. "It is perhaps just dawning on five or six minds that physics, too, is only an interpretation of the world (to suit us, if I may say so!) and not a world explanation" (BG&E 14).

The Kantian categories—notably causality and all the interpretations implied by a causal view of events—are, for Nietzsche, just as much a part of the "True World Error" as Plato's Ideals and the Christian after-life because they consist in a misplacing of values and the loss of their believability results in the nihilistic feeling of worthlessness.

> The feeling of worthlessness was realized when it was understood that neither the notion of "purpose," nor that of "Unity," nor that of "Truth," could be made to interpret the general character of existence…. In short, the categories "Purpose," "Unity," "Being," by means of which we have lent some worth to life, we have once more divorced from it—and the world now appears worthless to us. (WP 12)

Critique of Nietzsche's view of causality

Nietzsche's comments on causality sound very plausible, especially in view of current theories of physiology and matter. Nietzsche's claim that out "sense of causality" arose from our feeling of muscular movement seems true to the experience of that "sense." The interpretation of reflexes as phenomena in which a person's limbs move before his mind (ego) could command them to move and views of the body as an organic whole without any division into commanding mind

and obedient limbs are examples of current scientific notions which agree with Nietzsche in ruling out the ego/body distinction as explanation of bodily behavior.

Nietzsche's arguments on linguistic grounds—that certain interpretations result from taking ways of speaking as true descriptions of the world—seem at first valid; one cannot get something for nothing, new information by merely new ways of expressing old knowledge. However, Nietzsche seems to ignore two points: our loquations are usually derived from our views and the creation of an "agent" may be for explanatory reasons rather than through "our absurd habit of regarding a mere mnemonic sign … as an independent being." Thus, these linguistic arguments are not sufficient grounds for the rejection of causal statements.

Just because Nietzsche overlooks (perhaps) the explanatory role of causal ways of talking, does not prove that he was wrong in calling them interpretations and insisting that they were only "true" to the extent that they were useful and that they said no more about the world then the descriptive statements which they purport to explain. Both psychology and biology have had to abandon simple stimulus-response models to search for theories that better summarize the data. Although later theories still talk about "causes," the causes are merely the *reasons* for events far removed from the conception of "agents" which Nietzsche argued against. Furthermore, the criterion for the acceptance of explanations is clearly the explanations' utility in accounting for and predicting data, rather than any "self-evident" arguments.

Certainly, the most interesting variations on causal explanations are to be found in the two recent theories in physics, general relativity and quantum mechanics. In the quantum mechanical view of the world, most elementary events take place un-caused. For example, particle decay is described as an instantaneous event that happens after a random (sic) time interval (whose *statistical* half-life depends on the nature of the particle), is spontaneous and is not caused by anything. Relativity theory has often been thought to picture the universe as a static (so, of course non-causal) four-dimensional manifold in which nothing happens except when viewed from a limited and changing perspective. "First Minkowski, then Einstein, Weyl, Fantappis, Feynman, and many others have imagined space-time and its material contents spread out in four dimensions. For these authors, … relativity is a theory in which everything is 'written' and where change is only relative to the perceptual mode of living beings" (Beauregard 430).

The question of why the world follows the nice mathematical laws which science has discovered cannot be answered. The universe does not follow these laws, it does not obey commandments as though the universe were a human slave. The "laws" are merely concise ways of summarizing certain characteristics of the universe, characteristics partially based upon our perceptions of the world, but largely a result of our way of structuring these perceptions. The concept of time,

for instance, is (at least on the relativity theory) largely a result of our memory processes and is very difficult to apply to the universe without running into many problems; and the concept of cause and effect (so intimately related to the nature of time) is not much easier to apply to the inanimate world.

Perhaps Nietzsche's most useful insight as far as helping people on the personal level (but also his most grossly misunderstood advice) is his idea that the feeling of nihilistic despair is the result of a mis-valuation. Having gone through a period of pessimism like so many other people since Nietzsche, I have come to the feeling (independently of Nietzsche) that this pessimism was the result of a childhood indoctrination into the values and assumptions of Judeo-Christian morality and the distortions of out-of-date science and philosophy, which have filtered through the "cultural gap" into the living rooms and kindergartens of America, only to be contradicted in college. The discovery that morality does not have any divine sanction once the belief in God is gone results in a feeling of freedom because the value of life had been thought to be linked to divine purposes. Similarly, the realization that mathematics is just a game of definitions, which is sometimes useful but does not explain anything real frustrates many potential mathematicians. In just this way, an aspiring scientist who thought he was on the trail of the "will to truth," which would bring him to the "secret of the universe" has his hopes demolished when and if he finds that the causal interpretations of science are not explanations. I think Nietzsche is plausible in saying that if people want to do physics or mathematics or philosophy, they should realize that they are just playing; there are no values which they can lose in the game, yet they can still fulfill their desire to play the game.

Chapter III. The truth of the statement, "The world is composed of unities"

The view

Most people in the Western world have, since Socrates, adopted a view of the world as composed of fixed entities, "things-in-themselves," in order to be able to make sense of their perceptions and to feel more comfortable in a comprehensible environment. They invented a view of society as composed of independent "individuals" conscious of their "own" identity, their "ego." ("Verily, the individual in himself is still the most recent creation" Zar., PN 171.) Behind the perceptions of the world were supposed to be "things" with inherent properties and it was their properties that men perceived. This view, adopted because of its usefulness, was given the character of belief by calling it the "truth."

Nietzsche has several objections to this view of the world. He questions the usefulness of viewing the many aspects of a human personality as a unified whole. More importantly, he raises doubts as to the feasibility of considering an ego in isolation from other egos. But most importantly he criticizes the separation of an ego that "causes" what a person does from the person who does it. The same considerations apply to all "things" as to the "ego." Nietzsche points out that the positing of a "thing" behind a group of qualities is an illegitimate inference. He concludes that the view of the world as constituted of fixed unities is the lazy man's way out: "'The will to truth' as the weakness of the will to create."

The ego as divided

Men have adopted a belief in the existence of "unities" which compose the world. Nietzsche thinks that these unities or "things-in-themselves" are modeled on a view of the self, the human ego. Nietzsche argues that this view of the self is not the only possible view of the ego, that the ego could just as well be seen as composed of two or more parts.

> We are in need of "unities" in order to be able to reckon; but this is no reason for supposing that "unities" actually *exist*. We borrowed the concept "unity" from the concept "ego," … our very oldest article of faith (WP635).

The unity of the ego as a unique thing, a self, is by no means obvious. To have a unified self would mean to unify all the past and present experiences, needs and outlooks under a single description and as following a single purpose. But people have different "selves": the role of lover, student and worker may be pursued at different times by the same body. An "individual" might be a lover to satisfy his needs of close companionship and sexual fulfillment; pursue religious, scientific or philosophic studies to satisfy his "will to know" or his religious and intellectual needs; and work at a job to fulfill a need to be productive, a social need or his needs for clothing, food and shelter. A person's many needs necessitate the adoption of several selves for their fulfillment. The various selves are manifested on the basis of the relative strengths of the various needs. The present selves are embodiments of the needs, partially determined by the needs but also giving definite form and content to the needs as well as satisfying them partially or temporarily. (This analysis of the manifestation of needs relates back to the proof that the "ego" does not "cause" movement in limbs. Here the ego does not cause different selves but is nothing but these selves.) Such considerations as these led Nietzsche to the position that, "the assumption of a single subject is perhaps not necessary; it may be equally permissible to assume a plurality of subjects, whose interaction and struggle lie at the bottom of our thought and our consciousness in general" (WP 490). Thus, one can view the self as a unity because all its aspects relate to a single body. One can view the self as composed of two parts: the inherited part derived from the body, the past, society and the immediate situation *versus* the transcendent conscious realization of freedom in future possibility. One can consider "ego" the collective name for the various "selves" which a physical body adopts in attempting to satisfy its numerous needs. Or one may completely dispense with the "ego" as a misleading fiction. What one may not do is to claim that the ego is a unique "thing" which "causes" the body to adopt various poses.

The ego as related

Nietzsche believes that the "ego" cannot be considered as a "thing-in-itself" because it is by its very nature and origin inextricably related to other egos and things external to "itself." What is the ego? It is that "thing" that is conscious of a person's background, his present behavior, his feelings and his ideas. Why did consciousness develop? At first thought, consciousness seems to Nietzsche to be of little use. According to Nietzsche, "we could in fact think, feel, will and recollect, we could likewise 'act' in every sense of the term, and nevertheless nothing of it all need necessarily 'come into consciousness'" (JW 354). Nietzsche then asks, "*What* then is *the purpose* of consciousness when it is in the main *superfluous*?" and answers that:

> Consciousness generally has only been developed under the pressure of the necessity for communication…. Consciousness does not properly belong to the individual existence of man, but rather to the social and gregarious nature in him; … consequently each of us, in spite of this best intention of understanding himself as individually as possible, and of "knowing himself" will always just call into consciousness the non-individual in him. (*ibid*.)

Since its very beginnings, then, the ego as consciousness has not been a self-contained unity but rather "only a connecting network between man and man" (*ibid*.).

Things as related

Nietzsche thinks the Kantian view of the existence of things-in-themselves that have causal powers and inherent properties and objective inherent existence is a misleading one. In his argument against the view of "cause as force," Nietzsche states it is an invalid inference from the structure of our language that makes us posit things behind actions: lightening that flashes or an ego that thinks. Nietzsche also argues that the concept of a "thing" is derived from the qualities gained in perception and attributed to a unity as the "pole" of those qualities. On the later analysis as well as the former, the "thing" concept is shown to be an illegitimate inference from our experiences rather that an *a priori* or inherent property of either the human mind or the world.

> Ultimately, of course, "*the thing-in-itself*" also disappears; for at bottom it is the conception of a "subject-in-itself." But we have seen that the subject is an imaginary thing. The antithesis "thing-in-itself" and "appearance" is untenable; but in this way the concept "*appearance*" also disappears. (WP 552)

Starting from Kant's conclusion that we only know about objects that which we learn through perception, Nietzsche argues that "things" exist. All we know about a thing are its qualities, its effects directly upon us (color, shape, etc.) and upon other things or people from which we can learn about the results. A thing can appear red, but it is only red because it is so perceived by someone. By itself, it could not be said to be red. Size is only relative to other objects, which determine the scale of such terms as "large." From such consideration, Nietzsche makes the point that a "thing" has no properties in itself but only in relation to other "things."

> The qualities of a thing are its effects upon other "things." If one imagines other things to be non-existent, a thing has no qualities. That is

> to say, *there is nothing without other things*. That is to say: there is no "thing-in-itself." (WP 557)

Man invented the concept of a "thing" to create order, to define and comprehend, "to correlate that multitude of relations, qualities, and activities" (WP 558). The thing is once more invented by men to fill the linguistic position of subject (of a sentence), to answer the question, What is large? What is red? The "thing" concept was also invented in analogy with the human subject (ego), to answer the question, What is causing the movement? What is causing the noise? It is a difficulty in thinking about predicates without objects and effects without causes that led to the invention of the "thing."

> The thing-in-itself is nonsense. If I think all the "relations" away, all the "qualities" away, all the "activities" of a thing, away, the thing itself does not remain; for "thingness" was only invented fancifully by us to meet certain logical needs. (WP 558)

Since the concept of "thing" does meet certain human needs, Nietzsche does not want to discard the concept entirely, he merely insists that we recognize the nature of the concept and not take it to express more than it does, For Nietzsche, "a 'thing' is the sum of its effects, synthetically united by means of a concept, an image" (WP 551). Accordingly, all we can know of an object is a collection of appearances from various viewpoints. Men gave their perceptions meaning and intelligibility by forming syntheses of the parts into which they divide their perceptions. They give these parts names (sometimes) and the character of "thingness," and associate an essence or meaning to each "thing" in a continuing process of synthesizing the appearances into what have—on the basis of past (primarily infantile) experiences and influence from other people—already fixed as the meaning in their perceptual field. Because we have commerce with other people, we can also know what an object "is" for them. A "thing" can only be known in terms of its meaning for those other things which give it meaning.

> The answer to the question, "What is that?" is a process of fixing a meaning from a different standpoint. The "essence," the "essential factor," is something which is only seen as a whole in perspective, and which presupposes a basis which is multifarious. Fundamentally, the question is "What is that for me?" (for us, for everything that lives, etc., etc.). (WP556)

Nietzsche includes the "ego" among the "things" which philosophers have thought they knew in-themselves but which (Nietzsche claimed in his discussion of the ego as divided) are synthesized into one essence or another on the basis of reflective observation. Knowledge of the ego has no more certainty, immediacy, or completeness than objects of external perception. Because we give something a

name ("ego," "table") and fix it with a temporary meaning, we are allured by our language into believing that the character of the object is complete when it is only at a temporary pause in the incompleteable complet*ing* of its nature.

> That "immediate certainty," as well as "absolute knowledge" and the "thing-in-itself," involve a contradictio in *adjecto*, I shall repeat a hundred times; we really ought to free ourselves from the seduction of words! (BG&E 16)

Belief in things as a weakness of the will to power

Men have adopted the way of thinking in terms of static objects with eternal, inherent properties and determinate meanings. Nietzsche has already claimed that this way of thinking derives partially from a fear of the unfamiliar and unintelligible, to satisfy man's need for comforting and orderly surroundings. Nietzsche claims that this is the cowardly way of interpreting the world and that it results from laziness. Nietzsche favors a dynamic view of the world—no permanent constants, no objects, only change, only relations. In such a world, men can creatively structure their own interpretations, thereby skillfully satisfying their own needs, including the will to control and create.

> First proposition. The easier way of thinking always triumphs over the more difficult way…. Second proposition. The teaching of Being, of things and of all those constant entities, is *a hundred times more easy* that the teaching of *Becoming* and of evolution. (WP 538)
> Belief that the world that ought to be now is, that it actually exists, is a belief of the unproductive ones who do not wish to create a world as it ought to be. They presuppose it as present…. "The will to truth" as the weakness of the will to create. (Quoted in Jaspers 192)

Critique of Nietzsche's view of unities

I agree with the view that it may be more useful to view one's ego as composed of two parts than one, as Harry Haller (in *Steppenwolf* by Herman Hesse) and as many other people who feel at once part of and yet alienated from their society often do. Sartre, for instance, has claimed that the concept of a uniting ego is misleading and should not be used (cf. *Transcendence of the Ego* by Sartre).

There are many phenomena which suggest that it is hard to draw a line between two egos, even in a milieu so consciously individualistic as ours. Without considering ESP, mysticism or even Jung's theories, we can find a perfectly good example of consciousness overflowing the physical limits of an individual's body in the inter-personal communion experienced in love. In the act of "making love," i.e., establishing the maximum of communion (both physical and mental—of the ego), the egos of the two partners are, to a certain degree, merged so that the pleasure of one is experienced as pleasure by the other. In a close personal relationship, pain or joy "in" one person is accompanied by a similar, sympathetic feeling in the other—just as illness in one eye is often accompanied by a "sympathetic" pain in the person's other eye. Identification with an actor on stage or the hero of a novel is, perhaps, another case of the ego being conscious of the emotions received through "its" external perceivers and accepting them as its own—but here always with the felt knowledge of the unreality forming the experiential horizon of the perceptions.

Heidegger's position entails the view that the qualities of a thing are its effects on other things (for Heidegger, on *Dasein*). The conclusion that "things" are man-made syntheses of appearances was worked out in detail by Husserl (*Ideen I*). For an example of the human constitution of unities at a very elementary level, consider the example of the ladder lying on the ground. A nomad might very well perceive the ladder as a number of sticks lying in close proximity to one another and think that they would be useful for feeding several fires. An urban man would, however, perceive a unity, a single instrument. These two men have synthesized their perceptions to the categories, which they and their society have formulated on the basis of their lived historical experience.

Recent developments in theoretical physics support Nietzsche's position that "things" are merely an interpretation of a sum of effects. During the past century, physics has dissected matter further and further to show that it is just a system of fundamental particles of increasingly smaller size interrelated by mysterious forces. Now essentially nothing is known about the elementary particles except their effects on other particles. As far as physicists can say, these particles may have no spatial extension, no color, perhaps no mass (other than as a manifestation of their inter-actions). The concept of a "thing" seems to have been all but discarded in the field of particle physics. The intimate relation between the human observer and the description of a quantum mechanical event or the dependence of the entropy of a system (a description of its thermodynamic state) upon the human knowledge of that system casts serious doubt upon the validity of the view that physics describes inanimate things-in-themselves, independent of their interactions with men.

It is clear that science has had to overcome the idea of "things" to some extent in order creatively to formulate its recent theories. Similarly, great artists have had to reject previous methods of expression and create from the previous methods their own techniques. Perhaps Nietzsche is right that it is time for philosophers to stop discussing "things" which "objectively" exist, stop trying to discover the moral world order, and start creating their worlds or showing how such creation is accomplished, including the creation of systems of "morals" by which to lead one's life. Contemporary philosophy seems to accept Nietzsche's conclusion to a large extent because many philosophers now analyze the world and morality from the viewpoint of their origin in men. Phenomenologists following Husserl's lead analyze how men constitute the world for themselves, ordinary language philosophers beginning with Wittgenstein have tried to get at men's view of the world by looking at human expressions of that view and moral philosophers like John Rawles are often content to describe moral beliefs without attempting any proof that these beliefs are "true."

Chapter IV. Nietzsche's conception of truth

The view

It is usually thought that for any proposition, that proposition is either true or false. And it is supposed that men can, in principle, discover whether a statement is true by means of one discovery or another. Christians thought that they could prove that "Thou shalt love thy neighbor" by showing that it was a commandment of God. For Kant, the statement, "x is the cause of y," can be proven true by demonstrating that it is a result of the way men necessarily perceive the world. The truth of a particular statement was thought to be permanently fixed and objectively valid for all time, that is, not dependent upon the personal characteristics or preferences of the judges of the truth of that statement.

Nietzsche is strongly opposed to the belief that one system of non-experiential criteria for truth is the necessary one or even that it has an a priori presumption in its favor. He thinks that each statement must be subjected to experimentation to determine its practical utility in meeting the needs of its believer. Even once it has passed this test, however, it must not be accepted as the ultimate, fixed truth. The truths thus established must now provide the starting point for their own overcoming. For example, when a scientist has formulated a theory to accomplish some purpose, he must not stagnate by restricting his thought to this theory, but go on from this theory to further exploration; for it is the developing of theories rather than the developed theory that Nietzsche observed to be important to theoreticians. The developed theory is not a final goal, but a basis for further theorizing. Similarly, an artist who remains true to his artistic drive will not stop developing his technique even when he finds the method that he had been searching for to express himself. Nietzsche's own life provides a good example of the process of constancy and overcoming. He gave up philology in favor of philosophy as his life's work, but his philosophy drew heavily upon his previous work. Constantly searching for new means of expression and proof, Nietzsche used terminology and historical illustrations from his background in philology for his philosophical work.

To really understand Nietzsche's conception of truth, one should see how it derived from his critique of previous conceptions of truth.

Derivation

Nietzsche's first task is to show that the traditional methods of determining the truth are unjustified in their claim to a unique validity in deciding issues of truth. Christians claim there is only one moral force in the world, God, and that He declared that men should love their neighbors. Nietzsche's reply to this is that there is no reason to believe in God or that He proclaimed a morality of neighbor love other than that it might be useful to believe it. But then Nietzsche shows that it is not even useful to believe because it leads to undesired consequences, On the other hand, there are historical reasons to believe that neighbor love arose from a fear and hatred of neighbors, an origin which if anything gives a presumption against believing in neighbor hate as a consistent principle of living. Nietzsche showed that causality is not justifiable by inference from a sequence of repetitions because of Hume's proof. Neither could causality have a claim to truth because it was true of the things-in-themselves, as Kant showed. Finally, causality was not true synthetic a priori because our "sense of causality" is derived from our interpreted experiences. The causal interpretation must be judged on an equal basis with all other ways of interpreting our perceptions and actions in terms of its usefulness in fulfilling our various needs—for explanation in terms of the familiar, for predictability, and so forth.

By more general arguments, Nietzsche claimed that all three methods of determining truths—by an explanatory system, by philosophical argument and by human creation—are equally vulnerable and equally subject to change. One general argument for this (which is beyond the scope of this thesis to defend) is that the basic principles of explanatory and philosophic systems have their origin in their inventors' expression of personal needs and are therefore essentially derived from the same basis as created truths.

Much of Nietzsche's discussion is a "socio-psychological clarification of the circumstances under which things are taken to be true" (Jaspers 187). Through this study, Nietzsche is able to see what "truth" means, that is, he can formulate the goals which men sought in the "search for the truth." Then he can analyze the mistakes that have led to failure in the quest. After this, he is in a position to suggest modifications in specific goals and methods that may increase the chances of success and avoid the nihilistic despair that has so far resulted. Hence, before Nietzsche can propose the criteria for establishing the truth or falsity of a statement, he must decide what reasons have led to the search for truth, that is, he must determine the value of truth as a category before deciding what the criteria for membership in that category are.

> It might seem as though I had evaded the question concerning "certainty." The reverse is true: but while raising the question of

> certainty, I wished to discover the weights and measures with which men had weighed heretofore—and to show that the question concerning certainty is already in itself a dependent question, a question of the second rank. (WP 587)

The first question is then: What is the value of the kinds of truths men have been striving to discover? Christians hoped that widespread belief in the truth of the statement "Thou shalt love thy neighbor" would result in a society in which they would not have to fear their neighbors. Moral truths were supposed to provide the rules for a way of life which would be "good" or be valuable in the inventor's system of valuations The acceptance of the statement "x is the cause of y" as the true explanation of the sequence of events x, y was supposed to provide a familiarity to the inhuman events. Teleology was invented to ease man's bewilderment at the fearful acts of nature by providing anthropomorphic characterizations. Thinking about the world on the basis of a belief in the truth of the statement that "The world is composed of unities" is much easier than believing the opposite because this statement orders an otherwise chaotic world. Without constituting the world into "things," appearances make no sense and the whole universe is a mass of inter-relationships with nothing to be related. Men need to order the world.

Nietzsche thought he discovered that men sought "truth" in order to satisfy such human needs as the need for order, intelligibility, familiarity, meaning and the "good" life by eliminating fear, chaos and alien phenomena. Only after enunciating these values was Nietzsche able to criticize the various procedures for determining truth by showing that they did not, in one way or another (primarily because of their view of truth as fixed), adequately meet the needs for which they were established. The approach to the problem of truth through the question of value is the origin of Nietzsche's very important criterion of utility, which so mysteriously appears in his published works and results in his conception of truth-as-value rather than the traditional truth-as-certainty. On the basis of this value-based criterion of utility, Nietzsche is able to propose the necessary modifications for fitting the truth-producing procedures to the goal of producing valuable truths. Since he had reduced all the approaches to truth to the same original values, Nietzsche could combine them into one coherent method. Nietzsche's "attack" on the traditional methods of establishing truth is, in the end and despite his strong language, an improvement and uniting of those methods through a re-evaluation of them:

> There is no struggle for existence between ideas and observations, but only a struggle for supremacy—the vanquished idea is not annihilated, but only driven to the background or subordinated. There is no such thing as annihilation in intellectual spheres. (WP 588)

In the first three chapters, we saw how Nietzsche explores the limits and inherent dangers of representative statements, whose truths were established in the three ways he considers: those based upon inclusion in a system, those proven by a philosophic search for truth and proof, and those created by men which give satisfaction by meeting their needs. Confidence that any of these methods leads to eternal, determinate truths results, Nietzsche claims, in contradiction and the opposite of the original goal: love of neighbors leads to ignoring friends and oneself; belief in causality results in a disproving of itself through the analysis of the cause of that belief (on the dream analogy); the creation of "things" produces a dearth of creativity. Nietzsche further argued (although his arguments will not be considered here) that at the limits of abstraction, science is divorced from the physical world it sought to describe and explain; Christian morality leads to immorality and Christian hope leads to nihilistic despair; knowledge as knowledge of Platonic ideals entails Socratic ignorance as the highest attained wisdom; the "will to truth" concludes that "all is false," that all truths were invented by men and are not true in themselves; the outcome of the invention of truths on the basis of need has led to the impossibility of satisfying needs; and the creation of "true" values has resulted in a nihilism of values.

As a result of his analyses, Nietzsche is faced with the following problem: if all the previous means of establishing the truth of propositions have resulted in such disastrous consequences, how can anything be salvaged from the concept of truth? Despite Nietzsche's frequent use of absolute locutions ("All is false!" "We have abolished the apparent world!"), his criticisms (especially as seen in his unpublished personal notes of *The Will to Power*) of the different methods of establishing truth are quite specific. He is able to so modify the three traditional methods as to eliminate the sources of difficulty and synthesize the resultant methods into a mutually supportive system. The moral principle of love of one's neighbors is but one of many alternative rules for ordering one's life. The fact that this particular principle has unwanted consequences for some people (e.g., Nietzsche and an *Uebermensch*) merely means that these people should—and can—search for a different moral principle which does suit their personal felt needs. To carry on such a search and to establish new morals, Nietzsche details a method based on the use of the valid aspects of all three previous methods of establishing the truthfulness of statements, moral and otherwise. Let us first see what remains of these old methods under Nietzsche's critique and then see how they can supply Nietzsche with a new method.

The causal view of the world, according to Nietzsche, is merely one interpretation or one possible verbalization of human perception of the world; it is not legitimately a teleological explanation of that (or any other, "true," "in-itself") world. Nietzsche demanded of causal science that it forego the presumption of

explaining and restrict itself to describing and ordering the apparent world of our senses.

> Today we possess science precisely to the extent to which we have decided to *accept* the testimony of the senses…. The rest is miscarriage and not-yet-science. (Twil. III 3, PN 481)

The goal to which Nietzsche subordinates causal interpretation is that of establishing a humanly bearable order of the world and helping men to understand themselves.

> We have once more grown completely obscure to ourselves…. *Owing to the fact* that we find consistency in science alone, we must *order* our lives in accordance with it so that it may help us to *preserve it*. (WP 594)

But since Nietzsche so frequently says that causal interpretation does not provide explanation, how are we to understand his statement that science is "*not* a world-explanation; but insofar as it is based on the belief in the sense, it is regarded as more, and for a long time to come must be regarded as more—namely as an explanation." This could perhaps be explained by arguing that Nietzsche merely meant that people would go on believing in science as explanation because they are too stupid to see science's limitations as soon as they are discovered. Such an explanation would, however, leave unanswered the question of why, as a result of its relation to the senses, it "*must*" be believed. The answer can only be given in terms of what Nietzsche conceives to be truth.

In his analysis of philosophic truth, Nietzsche concluded that claims of synthetic *a priori* truth for statements like those of causal explanation are unjustifiable: "We have no right to use them; in our mouths they are nothing but false judgments. Only of course the belief in their truth is necessary" (BG&E 11). What does Nietzsche propose to do with such statements, which are not legitimately proven true but merely believed true? Clearly, he does not want to reject beliefs that may be necessary for life.

> The falseness of a judgment is for us not necessarily an objection to a judgment; in this respect our new language may sound strangest. The question is to what extent it is life-promoting, life-preserving, species-preserving, perhaps even species-cultivating. (BG&E 4)

Nietzsche proposes a rather complicated procedure of arriving at truth through the processes of establishing a level of constancy and then overcoming this level. Belief in eternal truth provides the level of constancy, which anticipates the creation of truth, provides the aspect of constancy at attainment, and furnishes the foundations from which it will be surpassed. Thus, just as many specific beliefs

are illegitimate but required, so the process of belief is itself illusory but necessary for truth to be attained.

> Man projects his drive to truth beyond himself in the form of a world that is already at hand. His need as a creator invents the very world on which he is working—he anticipates it. Such anticipation (such "belief" in the truth) provides his support. (Quoted in Jaspers 192)

The will to truth and belief in eternal truths are retained for their role in men's creative enterprise, and the belief in causal explanation is retained to provide order to the world of human perceptions.

Nietzsche led traditional philosophy to the position of having reduced the world of "causes" and "things" away and has left only men and their creations. It is now the job of men to create the world that they had taken in their "laziness" to be already "given." Where philosophy has come to the Husserlian position that what we know of things is nothing but a synthesis of their subjectively perceived appearances, men must take up the job of creating the world for themselves. In Nietzsche's words, "The belief, 'It is thus and thus,' must be altered into the will, 'Thus and thus shall it be'" (WP 593). Nietzsche's new philosophers will therefore have to be "commanders and legislators."

> With a creative hand they reach for the future, and all that is and has been becomes a means for them, an instrument, a hammer. Their "knowing" is *creating*, their creation is a legislation, their will to truth is—will to power. (BG&E 211)

Now men—at least those outstanding men, the Uebermenschen—use the belief in causes and things as tools or completely forego their use and, overcoming the laziness of the past, create their world to satisfy their own needs. Nietzsche calls the creative urge "will to power," but it can perhaps better be thought of as the will to fulfill our needs.

Now we see Nietzsche's fundamental difference with the proponents of previous views of truth, truth-as-certitude involves fixed beliefs, but men's needs cannot be satisfied with fixed solutions, they grow with their fulfillment and eternally recur. The kind of truth men need is truth-as-value, where

> The viewpoint of "value" is the viewpoint of the conditions of constancy and surpassing with a view to the complex structures of life which have a relative duration within the process of becoming. (WP 712, quoted in Heidegger 210, my translation)

"Moral" guidelines for living, causal explanations of the world and views of the human perceptions as deriving from unities in the world should not be considered

necessarily and eternally fixed, but should be judged on their usefulness to the fulfilling of the individual's needs and the achieving of his personal goals.

Critique of Nietzsche's view of truth

In his recent commentary on Nietzsche, Danto raises the obvious philosophic problem concerning Nietzsche: "Was his philosophy, too, a matter of mere convention, fiction, and Will-to-Power?" (Danto 230). He then claims that Nietzsche recognized this difficulty and quotes from him: "Supposing that this also is only interpretation? —and you will be eager enough to make this objection— well, so much the better" (BG&E 22). Danto falsely implies that Nietzsche is referring to his theory that all "truths" are just interpretations. We must distinguish between the two aspects of Nietzsche's philosophy, which Danto confuses in his discussion: the view of truth as interpretation and the view that the interpretation of "Becoming" is more useful to some people than the interpretation of "Being." In Nietzsche's quote, what he recognizes to be interpretation is the assertion that the world "has a 'necessary' and 'calculable' course, *not* because laws obtain in it, but because they are absolutely *lacking*, and every power draws its ultimate consequences at every moment" (*ibid*.). Nietzsche recognizes that his basic theory of will to power, preaching of "not the neighbor, but the friend" and his view of the world as formed of relations rather than things are but alternative interpretations which, he argues, are more useful that the traditional notions. The utility of Nietzsche's interpretation of the world must be decided on the basis of lived experience and does not form part of a philosophic consideration of Nietzsche's conception of truth.

We must, however, consider the problem of the truth status of Nietzsche's view of truth as interpretation, a problem Nietzsche did not have to face because of his unsystematic approach. Perhaps we can gain some insight into the solution of the problem—although by no means a satisfactory solution—by considering the lack of systematization in Nietzsche's work. Danto points out a characteristic of philosophy that is apparently valid in Nietzsche's case:

> The problems of philosophy are so interconnected that the philosopher cannot solve, or start to solve, one of them without implicitly committing himself to solutions for all the rest. In a genuine sense, every philosophical problem must be solved at once. He may work piecemeal at isolated problems only insofar as he accepts, if only tacitly, a system within which to conduct his inquiries. (Danto 24)

Nietzsche's early writings were composed of sketchy aphorisms and jumped from subject to subject, yet the various ideas and outlooks expressed in these aphorisms are all intimately related when viewed from the perspective of his final philosophy. Nietzsche must have started with an indefinite viewpoint and developed it little by little, pulling himself up by his bootstraps, until at the end he had a well-formulated philosophy capable of being systematized as in this thesis. In 1888 Nietzsche wrote in a letter that he was able "to see my entire conception from top to bottom, with the immense complex of problems lying, as it were, out beneath me, in clear outline and relief.… It all hangs together" (quoted in Danto 23).

The view that all outlooks are interpretations was part of the starting point for Nietzsche, perhaps derived from his background in philology. It was thus one of the assumptions that cannot be proven from within the system. Although one can say that his view is a useful interpretation, and remain consistent, one cannot easily say that all views are interpretations. The attempt to state in general that all views are interpretations runs up against what may be the kind of limit that Wittgenstein encountered (in his *Tractatus*), that is, what you want to say is self-excluding. Perhaps because "truth" is defined (as it truly is, because it is useful for Nietzsche to think of the meaning of words in terms of the fulfillment of needs for which the words were invented) as the system of useful interpretations, the concept of "truth" is inapplicable to such questions as, What is truth? Clearly the problem of the truth status of Nietzsche's basic claim that all truths are interpretations is the hardest puzzle to solve about his philosophy and apparently no one has given an adequate solution to it.

Conclusion

One way of summarizing the preceding analysis of Nietzsche's philosophy is to see how it stands up to Kaufmann's critique of Nietzsche. On page 180 of his commentary, Kaufmann says,

> The most obvious objection at this point is, no doubt, that it seems empirically untrue that our minds are so constituted that, when we consider phenomena and think as carefully and cogently as we can, we are driven to assume that the will to power is the basic principle of the universe. This criticism seems not only relevant, but, in the end, unanswerable.

The first point to note is that, according to the argument of this thesis, the view of the will to power as the basic principle of the universe, in the sense that the world is conceived of in dynamic and relational terms rather than as composed of static and self-contained unities or of "things," is proposed by Nietzsche as an alternative and possibly more useful view than the traditional belief in "Being," not as the view to which everyone is necessarily driven. The static view of reality "is interpretation, not text; and somebody might come along who with opposite intentions and modes of interpretation could read out of the same 'nature,' and with regard to the same phenomena, rather the tyrannically inconsiderate and relentless enforcement of claims of power—an interpreter who would picture the unexceptional and unconditional aspects of all 'will to power'" (BG&E 22). While Nietzsche may think he would admire the "somebody" who adopted a view of the universe in terms of will to power, he does not claim that everyone should or could do it and he does not claim that the world "really" follows the will to power in any sense other than that it can be interpreted by men as following it.

In the interpretation of will to power as the need to fulfill human needs, an interpretation proposed in this thesis, the views of the universe are seen as being derived from men's need for order, intelligibility, and so on. The universe is, in the sense that it is interpreted on the basis of our needs and these needs are the foundation of the will to power, an expression of will to power. It is in this way that we can make sense of the claim that will to power is the basic principle of the universe.

The question of which outlook to adopt—that of Being or Becoming—seems to be of particular relevance today, when the "technological mentality" has spread to the everyday lives of many people and resulted in what may be a great loss to those lives. The tendency in at least the United States is to think in terms of final results rather than the processes leading to the results as the important thing to attain. While there may be no reason to criticize this trend, it is certainly a move away from the traditional values and could well result in some form of sterility of life.

Examples of this tendency can be found in many phases of public and private life. Most people want the results of science (technology) rather than the experience of creatively pursuing science, which Nietzsche pointed out was the goal of scientists in his time. Contemporary philosophy is often a dry presentation of analytic results instead of a wonder-inspiring intellectual adventure, which Nietzsche's philosophy is. Many people want a suntan, but not because they enjoy the sensual pleasure of being baked in the sun, so they use lotions, etc. to get the result while by-passing the process, which used to be the main point of sunbathing. Even love has turned into a goal, which people seek as impersonal sex or marriage or being in love, rather that the process of "falling" in love, loving and being loved. Perhaps all of these examples are instances of positing a result as a goal and value, rather than valuing the process of living, of striving for the goal, not as an end but as something to give life a direction and to be overcome when reached by striving further. It could well be that many basic human needs cannot fully be met by the attainment of fixed goals but demand rather a continual process of fulfilling.

The last comment suggests a serious criticism of Nietzsche's writings. While it is certainly true that they provided the germ of much philosophizing in the decades since their publication and may well present ideas that have not yet been but could profitably be investigated, there is but little deep analysis of the ideas presented within Nietzsche's writings. The major exception to this is the belief that Christianity is unuseful, and this point is not too important to many people now. In the discussion of his conception of truth that we have just analyzed, Nietzsche claims that the world which we "know" is merely our own (or society's) interpretation of the world and that this interpretation is founded upon our needs. However, Nietzsche never indicated very clearly how much of our interpretation is created and how much corresponds to the world, which is the foundation for all interpretations. Nor does he give any analysis of human needs: what are some examples, what kind are there, where do they come from, how much of them do we create, can they be permanently fulfilled, how are they met, etc. Of course, there is an excellent reason why Nietzsche ignored such questions: they are too difficult to answer readily! Almost a century after Nietzsche's writings we are just beginning to find answers to these questions, and the answers seem to give Nietzsche's philosophy much support, although this could partly be attributable to Nietzsche's influence.

By considering the implications of Nietzsche's conception of truth and noting contemporary substantiations of his ideas, we have seen the importance of Nietzsche's work. But how successful was Nietzsche in overcoming the problem of the nihilism of values that confronted him? Despite the fact that many philosophers and other writers—for instance Albert Camus and Martin Heidegger—have considered Nietzsche to represent the ultimate in nihilistic thinking, the interpretation set out in this thesis shows that Nietzsche, perhaps more

than anyone before or since, presented and argued for an alternative to nihilism, By basing values on human needs through his conception of truth-as-value, Nietzsche makes human life the basis of valuations. Nietzsche has eliminated the feeling that life has on value by making life the root of all value, probably the only escape from nihilism acceptable to most people in our age.

Bibliography

Beauregard, O. Costa de (1966) "Time in relativity theory: A philosophy of Being." In J.T. Fraser (Ed.) *The voices of time*, New York: George Braziller.

Danto, Arthur (1965) *Nietzsche as philosopher*. New York: Macmillan.

Hayes, Donna (1966) *Heidegger's view of need*. B.S. thesis, humanities department, MIT.

Heidegger, Martin, (1963) *Holzwege*. 4th ed. Frankfurt: Klostermann.

Jaspers, Karl (1965) *Nietzsche: An introduction to the understanding of his philosophical activity*. Tr. Wallraff & Schmitz. Tucson: The University of Arizona Press.

Kant, Immanual (1965) *Critique of pure reason*, Tr, N. K. Smith. New York: St. Martin's Press.

Kaufmann, Walter (1956) *Nietzsche: Philosopher, psychologist, antichrist*. New York: Meridian Books.

Nietzsche, Friedrich W. (1966) *Beyond good and evil*. Tr. Kaufmann. New York: Random House.

____ (1956) *Genealogy of morals*. Tr. Golffing. New York: Doubleday.

____ (1964) *Human, all-too-human*. Tr. Ludovici. New York: Russell & Russell.

---- (1964) *Joyful wisdom*. Tr. Common. New York: Ungar.

---- (1964) *The will to power*. Vols. I and II. Tr. Ludovici. New York: Russell & Russell.

Kaufmann, Walter (Ed.) (1954) *The portable Nietzsche*. New York: Viking.

2. The Jargon of Authenticity: An Introduction to a Marxist Critique of Heidegger

The jargon of authenticity is a social disease and Adorno* has set out to exterminate it. "Authenticity," a characteristic term in the jargon that Heidegger shared with many politicians, theologians and conservative ideologues, abstracts from the social causes of discontent by giving contemporary feelings of meaninglessness an ahistorical formulation. Heidegger's writings, which try to conceal their promiscuous relation to reactionary, "merely ontical" forces, are infected with the ideological thrust of a vocabulary that thrives on ambiguity. Heidegger shirks responsibility for the claim inherent in the word "authenticity" to be presenting a positive doctrine of the good life when he insists that he is using the word as a value-free technical term, even while exploiting its fascination. That the alleged meaninglessness of life invalidates all principles of how to live serves in effect only to attract people to a certain way of life. Adorno's book analyzes this process whereby the concepts of the jargon manage to give the pretense of dealing radically with the crucial issues of life, society and philosophy, while they merely substitute the aura of connotation-laden words for the required content. Their false appearance has, according to Adorno, led to the surprising appeal of Heidegger's *Being and Time* and of the existentialism, which it encouraged.

Reading Adorno, on the contrary, it is easy to be initially unimpressed. His style aims precisely at avoiding such thoughtless adherence to thoughts. Yet, what Adorno has to say has the urgency that in Heidegger's writings tends to be illusory. Adorno's critique of Heidegger, which cuts away the cancerous jargon to save the concerns that have become self-defeating, is of particular relevance to the development of a contemporary, "post-modern" philosophy. The essay under review, oriented around Adorno's and Heidegger's respective sensitivities to language, stands as a prolegomenon to a confrontation between these intriguing twentieth-century philosophers.

The taste for Adorno must be acquired, and it is as a prelude to his headier works that *The Jargon of Authenticity* is especially useful. This, at least, has been my experience. While in Heidelberg several years ago to study the continental

philosophy of my times, that of Martin Heidegger, I ran across Adorno's slim blue volume and was immediately impressed: clearly, here was the most significant critique of Heidegger available. In fact, it was in a class all its own, for Heidegger's writings had been isolated from the possibility of serious consideration by the political contexts in which they were read as well as by textual obscurities. While numerous Heideggerians had pursued the task of uncritical exegesis, positivists had dismissed Heidegger as nonsensical, and Marxists had mistaken him for Sartre. Adorno manages to combine the intentions which had gone astray in the hands of other commentators. In a particularly fruitful, but critical, manner he takes Heidegger's thought seriously, but not on faith, and shows its philosophical innovations to be contradicted by the social consequences of their elaboration.

Moved to translate Adorno's critique for an American audience, I suggested its publication to Northwestern University Press. Having found the sophisticated German beyond my capabilities, I can well appreciate the skill with which the eventual translators managed to retain both the grace and the content of Adorno's prose. When I later returned to Germany, *Jargon* accompanied me. It was soon joined on my bookshelf by Adorno's other works as I became increasingly impressed by his philosophical reflection, cultural criticism and aesthetic sensibility. In my current attempt to understand and evaluate the alternative which Marx and Heidegger define in post-Hegelian German philosophy, Adorno's work continues to play a central role.

If *Jargon* has exerted a somewhat incidental influence on my intellectual development, its theme stands in an essential relation to Adorno's own life's work. Accordingly, rather than trying to paraphrase Adorno's book, thereby obscuring what is unique in it, I will here review the larger context of Adorno's relation to Heidegger, indicate the unconventional perspective which Adorno brings to bear throughout his critical activity, and suggest the centrality of Adorno's criticism.

I

The forty-odd years of Adorno's concern with phenomenology and Heidegger began in his student years, forming the basis for some of his first conversations with Horkheimer and Benjamin and culminating when he was twenty in a doctoral dissertation on Husserl (1924).[1] The critique of Husserlian phenomenology was later developed in more dialectical terms in *Zur Metakritik der Erkenntnistheorie* (1956),[2] which attacks the roots of many problems Adorno also pointed to in Husserl's student, Heidegger. Adorno's first book (1932),[3] turning to another major influence on Heidegger, presents a rebuttal to existentialist ontology oriented on Kierkegaard, source of Heidegger's existentialism; Schroyer's foreword to the translation of *Jargon* draws out this connection.

Perhaps most interesting of Adorno's early writings is a series of three essays composed shortly after the publication of Heidegger's *Being and Time*, but only recently made available in Adorno's posthumous collected works. The first, a programmatic inaugural address on "The Relevance of Philosophy"[4] delivered in 1931 when Adorno began teaching, reflects upon the contemporary situation of philosophy by evaluating the failings of the various schools of the day. This lecture is striking both in terms of the importance it attributes to Heidegger and the thoroughness with which it sees through his pretenses. Adorno deals here with three instances of the necessary failure of Heidegger's accomplishments to live up to the promises of his rhetoric: *Being and Time*'s pathos of a radical new beginning is rejected by placing its problematic firmly within the context of the impasses reached by Simmel, Rickert, Husserl and Scheler; Heidegger's ethos of anti-idealistic concreteness is shown to be betrayed by his systematic method and presentation in *Being and Time*; the flaunted escape from subject-object metaphysics is understood by Adorno as a reduction to pure subjectivity.

Adorno's paper on "The Idea of Natural-History" (1932),[5] delivered a year later, views Heidegger's concept of "historicity" -- one which instantly grates on Marxist nerves -- as a false reconciliation of nature and history, of eternal structures and contingent facts. For the ontological theory of history can only achieve an adequate interpretation of Being if it foregoes such orientation toward structures of possibility in favor of a radical exegesis of the actuality of beings in terms of their determinations within concrete social history.

Thirdly, Adorno's "Theses on the Language of the Philosopher" (1930s)[6] criticizes Heidegger's linguistic novelties in terms of reflections upon the historical conditions on philosophic prose. According to Adorno's analysis, Heidegger's terminological innovations flee from history without escaping it. Heidegger exploits a highly situated jargon as though it had ahistorical validity and absolutizes historical concepts within a destiny of Being which is unaffected by the social context. Consequently, despite his fondness for wordplays and etymologies, his praise of the poets and his worship of language as the historical medium of Being, Heidegger is accused by Adorno of lacking an aesthetic sensitivity to the social content of language, and this failing leaves him susceptible to the enticements of the jargon of authenticity and its unreflected provincialism. Anticipating the tack of *Jargon*, Adorno's essay on language concludes that "all deceptive ontology is to be exposed by a critique of language."

Dialectic of Enlightenment (1944),[7] written with Max Horkheimer during the war, exhibits significant parallels to Heidegger's writings, although it never refers to existentialism, ontology, or their prime spokesman. The project of tracing the concept of reason (scientific enlightenment, *Vernunft, ratio, logos*) from the pre-Socratics to the technological age in terms of literary and philosophical texts is as

central to Adorno's attempt to grasp the contemporary form of rationality, which had culminated in fascism, as to Heidegger's essays of the same period, which share that goal. This comparison suggests that the conflict expressed in *Jargon* is not a matter of disparate worldviews hurling insults, but that despite his polemical tone Adorno agrees with Heidegger on the present concerns of philosophy as well as on certain methodological issues. Yet there are crucial differences. The thesis which the *Dialectic of Enlightenment* substantiates, that since time immemorial the historic process of subject-formation has been accompanied by a de-subjectification through social forces and relations, is an implicit argument against ontology, whose concepts of man and Being cannot deal with the essential interpenetration in social history of that which these ontologized concepts leave abstract.

II

Adorno relates the development of rationality, the relationship of myth to enlightenment, and various other concerns that he shares with Heidegger to Marx's analysis of capitalist relations of production. In direct contrast, Heidegger maintains a strict primacy for the evolution of the ontological categories. This difference in intention suggests that Adorno was speaking for himself as well when he described Benjamin's attitude toward Heidegger. Noting Benjamin's and Heidegger's shared rejection of idealist abstractions and formal generality, Adorno emphasized, however, that "the decisive differences between philosophers have always consisted in nuances; what is most bitterly irreconcilable is that which is similar, but which thrives on different centers; and Benjamin's relation to today's accepted ideologies of the 'concrete' is no different. He [Benjamin] saw through them as the mere mask of conceptual thinking at its wit's end, just as he also rejected the existential-ontological concept of history as the mere distillate left after the substance of the historical dialectic had been boiled away."[8]

Adorno repeatedly seeks to uncover and highlight the "center" on which Heidegger's analyses and their popularity thrive, for this center gives form and significance to the configuration of Heidegger's insights. The comprehension of the relation of this center to society -- and not directly Heidegger's personal activity or class origins -- provides the basis for a political judgment of Heidegger's philosophy. This approach is characteristic of Adorno's critical practice. According to his aesthetic theory, for instance, it is not the correspondence of individual contents of a work of art to specific social influences, which accounts for the progressive or reactionary character of that work, but the way in which the work responds to prevailing social relations. Thus, in a letter to Walter Benjamin, Adorno writes, "I regard it as methodologically unfortunate to give conspicuous

individual features from the realm of the superstructure a 'materialistic' turn by relating them immediately and perhaps even causally to corresponding features of the infrastructure. Materialistic determination of cultural traits is only possible if it is mediated through the total social process "[9]

Adorno's philosophical interpretations proceed according to the same maxims. Heidegger's work is treated neither simplistically nor deterministically; it is neither rejected out of hand as mere bourgeois ideology nor uncritically accepted as autonomous contemplation. It is comprehended, rather, as an arena from which the forces at work throughout society are scarcely excluded and in which any truth that manages to make an appearance will necessarily be conditioned by these forces in one way or another.

Clearly, the penetration of social relations into Heidegger's system can only be revealed through a thorough grasp of the philosophical propositions, but these are not taken as ends in themselves: between the lines a social force-field must be reconstructed. In a tribute to his boyhood friend, Siegfried Kracauer, Adorno summarizes this approach to philosophical interpretation: "If I later, when reading the traditional philosophical texts, let myself be less impressed by their unity and systematic coherence, but rather concerned myself with the play of the forces which worked on one another under the surface of each closed doctrine and considered the codified philosophies as in each case force-fields, then it was certainly Kracauer who inspired me to it."[10] More than anything else, this oblique approach to philosophies -- especially apparent in *Jargon*, which relates Heidegger to society in terms of the medium of a politically loaded language-game -- makes Adorno's critique of Heidegger difficult to grasp.

III

For years Adorno avoided the frontal attack on Heidegger anticipated in the early essays. The systematic approach of *Dialectic of Enlightenment*, probably to be attributed to Horkheimer, was uncharacteristic of Adorno. He spent his most productive years composing focused essays. Numerous references to Heidegger are sprinkled throughout these studies; the important discussions of Kafka (1953)[11] and Beckett (1961),[12] for instance, interpret their subject matter as poetic critiques of Heidegger, in explicit renunciation of the popular existentialist readings. When, near the end of his life, Adorno did present his conception of philosophy systematically, Heidegger was there front and center. *Negative Dialectics* (1967),[13] the only extensive mature work completed (unless one counts the monograph on Alban Berg),[14] devotes the first of its three parts to Adorno's "relation to ontology," a critique of Heidegger which provides the starting point for Adorno's own "anti-system." Perhaps the most significant contrast of Heidegger and Adorno would be

one based on the latter's posthumously published *Aesthetische Theorie*. [15] Such a study would, however, have few explicit connections to draw upon. Informed by the philosophical debates, it would have to note the shared rejection of subjectivistic aesthetics and evaluate the relation of art to society in the respective theories. Short of this, *Negative Dialectics* and its offshoot, *The Jargon of Authenticity*, will have to be accepted as the definitive statements of Adorno's critique of Heidegger.

According to the introduction to *Negative Dialectics*, the task of philosophy in our times is the transformation of subjectivistic thinking by means of the subjective strength of the critical individual. The subsequent priority of substance over the knowing subject would imply a primary concern with the concrete, which has been distorted under the demands of a coercive social totality. Although method would then be determined by the subject matter, analysis could still not proceed without concepts. This linguistic requirement demands a critique of the philosophical tradition, that is, of German idealism and of the inept criticism of idealism by positivism, phenomenology and existentialism. While these goals may also capture much of Heidegger's stated intention, Heidegger, according to Adorno's account, like Husserl before him, has in fact failed to deal adequately with the complexities involved in grasping the concrete.

In *Negative Dialectics* Adorno suggests how the concrete is missed by Heidegger's simplistic scheme, which underlies and supports an elaborate obscurantism. The three poles of Heidegger's system -- beings, human existence and Being -- interpenetrate each other only formally, without taking into account their actual configuration, which defines their content. The concrete social history in which these poles, as dialectical, intertwine and develop according to Hegel and, in effect, Marx, disappears in Heidegger's presentation. Thereby their present forms are not clearly situated in history; as essential and eternal, they are, Adorno thinks, glorified and affirmed. The often-bemoaned quietism of Heidegger's later writings is thus revealed by Adorno to be non-accidental: it is a consequence of the very approach of the ontological project, one which excludes social content from the start.

This criticism is particularly interesting because Adorno has also been accused of praxis paralysis and because Heidegger can respond as Adorno has that his emphasis on contemplation is a reaction against a preponderance of thoughtless pragmatic activity in present society. The difference between the two philosophies is that receptivity becomes a dead-end in Heidegger's system, rather than a corrective moment which negates only the distortions and limitations of unreflected political action. The philosophical source of the difference is that Heidegger's approach reacts too simplistically to the dilemmas of post-Hegelian philosophy, attempting to skirt the problem of a non-idealistic mediation of subject

and object, of thought and society, of theory and practice. Where Adorno radicalizes Hegel's dialectic, redefining it in terms of the non-identity of word and object and articulating the mediations involved more thoroughly than even Hegel, Heidegger falls behind Hegel, hypostatizing language along with Being outside the influence of that reality which they characterize, leaving the flow of history outside the realm of possible human influence.

This theoretical point has practical consequences for Heidegger's philosophy in that he fails to reflect on the relation of his language to society. Heidegger's failure to deal adequately with the present social context of philosophy is perhaps Adorno's strongest indictment of him: Heidegger's ontology is an unfortunate response to social conditions in which men feel powerless. In the guise of a critique of subjectivistic will, it fetishizes the illusion of powerlessness and thereby serves those in power. Following a restorative thrust, Heidegger's formulation of a real felt need merely assumes a solution and thus serves to perpetuate the underlying problems. Strengthening conservative ideology, Heidegger's approach avoids those issues which point to the realm of society, an arena in which men could possibly exert some joint control.

The Jargon of Authenticity is more focused. Unlike *Negative Dialectics*, which addresses itself to the central *topoi* of Heidegger's thought as a whole, *Jargon* seems to limit itself to an area of questionable importance, although it brings an impressive array of considerations to bear. Dealing only peripherally with Heidegger's "question of Being," *Jargon* is preoccupied by the accompanying doctrine of man. Further, it zeroes in on terms and themes which Heidegger himself dropped after *Being and Time*. Thus, of the four sections of Adorno's essay (beginning on pages 3, 49, 92 and 130), the first reflects on the jargon in the hands of Heidegger's predecessors, colleagues and followers, barely mentioning Heidegger himself. The next section fits Heidegger into this picture, but notes that Heidegger protects himself against the imputation of the jargon's worst offenses even while exploiting its appeal. Another part is devoted to the concept of authenticity, which Heidegger never again used so freely after the reaction to his first book. In the final pages, the choice of the analysis of death as an illustration of Heidegger's procedure involves Adorno in the non-intuitive argument that men might overcome death in a future social arrangement. Even if this is possible -- and in *Jargon* it remains a rather empty possibility -- Heidegger has still articulated the importance of finitude as an essential feature of the human condition as we know it. Concentrating as he does on the social consequences of Heidegger's concepts of authenticity and death, Adorno seems to miss the role these play in Heidegger's ontology. For authentic Being-towards-death is less a moral stance in Heidegger's system than a condition of the possibility of valid ontological reflection.

Jargon thus seems open to the very criticism it levels against *Being and Time*, namely that the pragmatic impact on the reader is not justified by the propositional evidence. Just as the popularity of Heidegger's work was attributed by Adorno largely to moral connotations explicitly excluded from Heidegger's epistemological discourse, so it seems that Adorno's own essay gives the impression of utterly destroying Heidegger's philosophy when it merely picks at incidental themes without understanding their import.

Viewed from the perspective of *Negative Dialectics*, however, Heidegger's analysis of human existence is symptomatic of his later investigations of tool, artwork, thing and word, even of Being itself. Although the structure of man, thing and Being do include, on Heidegger's account, relations to each other, the concrete social history in terms of which they affect each other through these otherwise abstract relations is left out of consideration. This fault can be demonstrated just as meaningfully in terms of Heidegger's early *Daseinsanalytik* as with the later *Seinsfrage*, and the political implications that follow from both are most clearly drawn out of the former. In short, *Jargon*'s oblique social attack on the linguistic aspect of a supposedly moralistic part of Heidegger's early thought succeeds in making thoroughly problematic many central characteristics of Heidegger's general approach and system.

Most importantly, Adorno's social critique of Heidegger is not simply divorced from a philosophical one. Rather, it underscores the philosophical failure of Heidegger's thought: its lack of concern for the very social dimension in which it becomes self-defeating. This particular failure necessitates the confrontation between Heidegger's philosophy and Marxist critical theory of society. By determining the social limitations of Heidegger's thought, Adorno does not discard Heidegger, but attunes the strivings of Heidegger's philosophical concepts to their social content, measuring the distance between their claims and their achievements. Only thereby can Marxism interpret Heidegger's insights within the context of Marxism's own method and fruitfully comprehend both the progressive and the reactionary force of Heidegger's socially situated path of thought.

The recognition of the value and limits of the Marxist critique of Heidegger is a necessary step in critically appropriating the insights of Marx, Heidegger and Adorno into the timely problems involved in the interpretation of art, society and truth. If "post-modern" thought wishes to reject scientistic objectivism along with romantic subjectivism, it will find its cause already well advanced by these three authors. *The Jargon of Authenticity* clears the ground for a reconciliation of the advances of Heidegger with those of a non-dogmatic Marxist tradition, introducing the central issues in a sophisticated, but lively, discussion.

NOTES

* Theodor W. Adorno, *The Jargon of Authenticity*. Trans. Knut Tarnowski and Frederic Will. Evanston: Northwestern University Press, 1973.

1 "Die Transcendence des Dinglichen und Noematischen in Husserl's Phaenomenologie," *Gesammelte Schriften*, 1 (Frankfurt: Suhrkamp, 1970).

2 *Gesammelte Schriften*, 5 (Frankfurt: Suhrkamp, 1970).

3 *Kierkegaard. Konstruktion des Aesthetischen* (Frankfurt: Suhrkamp, 1962).

4 "Die Aktualitaet der Philosophie," *Gesammelte Schriften*, 1.

5 "Die Idee der Naturgeschichte," *Gesammelte Schriften*, 1.

6 "Thesen ueber die Sprache des Philosophen," *Gesammelte Schriften*, 1.

7 *Dialectic of Enlightenment*, with Max Horkheimer (New York: Seabury, 1972).

8 "A Portrait of Walter Beniamin" (1950), *Prisms*, (London: Neville Spearman, 1967), p.231.

9 A letter to Benjamin (November 10, 1938), *New Left Review*, 81 (October 1973), p.71.

10 "Der wunderliche Realist. Ueber Siegfried Kracauer" (1964), *Noten zur Literarur Ill*, (Frankfurt: Suhrkamp, 1965), p.84.

11 "Notes on Kafka" (1953), *Prisms*.

12 'Versuch, das Endspiel zu verstehen" *Noten zur Literarur II*, (Frankfurt: Suhrkamp, 1961).

13 *Negative Dialectics*, (New York: Seabury, 1973).

14 *Alban Berg* (New York: Viking, 1968), forthcoming.

15 *Aesthetische Theorie* (incomplete, 1969), *Gesammelte Schriften*, 7 (Frankfurt: Suhrkamp, 1970).

3. Attuned to Being: Heideggerian Music in Technological Society

The hopes and frustrations of technology are revealed in the most advanced works of art. This implication of the Heideggerian standpoint contradicts the popular notion that art steers clear of science.

These days, however, where art skirts the realm of industrial technique, it falls prey to the same commercial interests which rule there and which it may have hoped to slip by. Despite itself, the hapless work functions as a commodity to meet the demand for a holiday from commodities. Unfortunately, it necessarily fails to satisfy this real need for long.

The partial truth of conventional understanding is that twentieth century art, when it still packs a punch, registers a protest against the present character of technological society. Paradoxically, perhaps, the work of art must embody, no matter how subtly, the state of technology in order to criticize its contemporary social form.

I. Music and social Being

The art and philosophy of a culture capture more than just the most developed consciousness of a people. Particularly in their structural forms - as well as in their emphases, selection, and transformation of material - cultural artifacts reproduce essential elements of the social context, bringing out the prevailing suppositions and conditioning forces and displaying them prominently. According to Martin Heidegger, the work of art is characterized by its ability to present in an obtrusive fashion its own Being, which it shares with the less dramatic beings around it. Our world, which provides the material of art, is, quite clearly, technological, both in terms of its Heideggerian Being and its Marxian productive powers.

Because art is both dependent and autonomous, expressive of its world yet relieved of immediate practical restrictions, developments in creative realms can anticipate the possible future realization of social and technical potentials, which are today suppressed. However, no one can foresee concretely how altered forms of the

production process, which Karl Marx showed to be basic to our plight, would manifest themselves throughout society, transforming all interpersonal relations. It is only possible to indicate which repressive forces must be abolished. Artistic anticipation must, accordingly, take the form of critical negations of the past, thereby transcending the economic fetters on existing technology.

Heidegger looks to art and to philosophical reflections on art for glimpses of a new interpretation of reality. However, he does not recognize that the social change necessary to alter perceptions takes place primarily through reorganization of the forces of material production and social reproduction. His hopes for the future are laced with conservatism and formulated in messianic anachronisms, based as they are on receptivity to a New Word that must spontaneously call to us from deep within our linguistic institutions. He cannot, therefore, recognize the necessity of a social movement for economic restructuring as a precondition of essential change.

Although he has failed to take into account crucial political relations, Heidegger has broken much ground in the task of unearthing a philosophical alternative to forms of thought that correspond to capitalist production. It is therefore important to study as well as to criticize Heidegger's writings; to appropriate but also to transcend his position. Particularly necessary, considering Heidegger's central weakness, is a merging of his insights into art and interpretation with Marx's critical theory of capitalist society.[1]

A critical perspective on Heidegger's thought can be reached through an analysis of electronic music's questioning of aural Being as seen in relation to the social context. Electronic music, emerging primarily out of influences from the Schoenberg/Berg/Webern school in the 1950's, adopted a strikingly Heideggerian attitude toward sound. In this it contrasted sharply with classical and especially romantic music, to say nothing of pop. Thus, electronic music provides a particularly appropriate phenomenon for developing Heidegger's categories, which he himself had never applied to music. The relationship of art to technology will, of course, play a decisive role in the discussion of electronic music.

The correspondence between developments in electronic music and in existential philosophy is not accidental. The importance of the social setting against which both rebelled is, however, inadequately recognized by Heidegger's theory. His philosophy, carried to both sides of the front in World War II, has for years exerted a telling influence on the arts and social sciences, in theological circles, and among intellectuals generally; it revived interest in existentialism, hermeneutics, ontology, and speculative philosophy. Yet, despite the centrality of its abstract concepts of history and context, it fails to comprehend its own social, historical, and political posture.[2] Correspondingly, Heidegger's aesthetic theory is formulated

in ahistoric terms and applied to everything from a Greek temple to Paul Klee's watercolors.

Because it has to be concrete, an aesthetics of electronic music can provide a corrective to Heidegger's inadequate self-understanding and his lack of historical specificity. The formal elements and social function of electronic works are essentially conditioned by the struggle against the co-opting of the musician and the corresponding fetishizing of sounds. The specific workings of the commodity form of economic value (which accounts for co-optation and fetishism), not merely vague technological characteristics, penetrate to the core of each piece of music, of any philosophy, and of every being produced in our society.

Analysis of music is, of course, a risky business. In matters of music, discussion can no more substitute for attentive listening than Heidegger's books can replace the experience of Being. Words may only suggest what the ear must know and judge. Heidegger does, nevertheless, make room for prose. His own reflections on art are necessary in relating, for instance, van Gogh's painting to the ontological character of the shoe as dependable tool and to the revelatory nature of art as the setting-into-work of truth. Similarly, a philosophy of electronic music can conceptualize the new experience of sound and noise as well as explore the relationship of music to the culture industry and to advanced technology.

Theory is particularly important in the case of electronic music; accordingly, the leading composers are important theoreticians as well.[3] In this field there exists what Heidegger might call a "hermeneutic gap" between an advanced composition and its bewildered audience. Analytic writings are needed to fill the role of Hermes, god of interpretation, providing the orientation and concepts which facilitate understanding. Where no common tradition ties a work of art to its perceiver, as with a poem in a forgotten tongue or the ritual of a strange culture, the work cannot speak for itself. In the case of electronic music, the historical ties to familiar forms are part of few people's experiences. Prose must join the music in helping an audience bridge the chasm.

The difficulty electronic music presents to most ears requires a training for the future, rather than the retrieval of past traditions which Heideggerian themes stress. To be sure, electronic music wishes to recapture, for instance, the strivings of medieval music, which led to the major and minor keys, long since become second nature. It does this through a critique of the traditional system of pitches and scales. The liberation of sound and the new schemes developed to exploit it only make sense in reference to so-called classical music up to Arnold Schoenberg. However, the goal of this critical recapitulation is to move beyond both past and present by confronting them from a future-directed perspective.

The critical thrust of electronic music has a political form different from music commonly taken to be progressive social protest. The difference corresponds to the contrast between the aesthetic implications of Heidegger's meta-ontology, or history of Being, and those of an orthodoxy that traces its philosophical roots to liberalism or to Lenin. Where protest songs speak out against injustices within one musical tradition or another, electronic music seeks to transform the language of music itself. Carrying out its project through electronic means, this experimental music re-forms technological practice and re-thinks - in aesthetic, acoustic terms - the technological mentality that Heidegger considers so central. Electronic music aims at a new mode of auditory existence.

Where there has been a social movement against the status quo, its music has had an explicit political force. This is not only true for the marching songs of revolutionaries or the propagandistic lyrics, which follow upon the seizure of power. Recent American music, too, has a lively history of protest. The slave and his oppressed descendants sang out against their troubled lives in the rural blues. Jazz then incorporated the bustle of industrial life and the syncopated clank of machinery into a continuing series of improvisational styles, which relentlessly rejected accepted patterns of performance. In the 1960's, protest folk songs articulated an alternative politics in a native idiom. For teenagers, rock and roll came to symbolize their side of a generation gap; as they grew into the drug sub-culture, rock moved as far out as was still profitable.

If there is no alternative social base, straightforward methods of simple anarchism cannot succeed. Not the simple abolition of the present state, but its specific negation, its transformation into a qualitatively different organization, is required. In music as in politics one must start with what exists, criticize its faults, and set about eliminating the sources. The necessity of this procedure is due in part to our inability to imagine anything too different from what we already know. Our situatedness opens our possibilities by establishing their limits, although it is also true that we alter our situation, and hence its limitations, when we actualize what was latent.

A materialistic respect for the importance of situatedness unites Heidegger and Marx in opposition to the German Idealism out of which both developed as well as against most competing social thought. Where Marx concretized the given situation, which embodies the preconditions for change, in terms of the technology of production and its social organization, Heidegger, particularly in his early work, focuses on how people understandingly exist in the context of all contexts: the world.

II. Sound out of context

Heidegger's *Being and Time* is an extended reflection upon the consequence of the fact that human existence is a matter of being in a meaningful context. According to its theory of interpretation, "hermeneutics," raw reality cannot be experienced as such. Even perception requires a context of interpretation. Disavowing a limited perspective, whether in politics or in art, involves establishing a broader understanding, not rejecting all structure. It is not just human frailty, naive habit, or social conditioning which causes us to impose categories and to stress certain aspects above others. The nature of comprehension specifies its own requirements.

To be effective, the refusal to support all that the silent majority condones necessitates the avowal of a more sophisticated politics. Analogously, a musician who balks at the impositions of commercial interests must develop a new music - a more authentic music, to echo Heidegger's jargon. What is minimally called for is a context of one sort or another in which interpretation can take place with intersubjective validity. A deed must, that is, be perceived as situated within the political arena or it will remain politically meaningless, unperceived. In the auditory domain, the same holds true. Sounds are never heard indeterminately, but always with a more or less distinct character, as belonging within some category, however vaguely defined.

Heidegger puts it this way in *Being and Time:*

> What we "first" hear is never sounds or complexes of tones, but the creaking wagon, the motorcycle. One hears the column on the march, the north wind, the woodpecker tapping, the fire crackling. It requires a very artificial and complicated frame of mind to "hear" a "pure sound."[4]

Perception is always already interpretation. The sophisticated concertgoer hears certain played instruments, particular pitch intervals, or specific harmonic relationships. Outside the music hall sounds join images in giving meaningful content to our situatedness in the world. Sound which strikes the ear but is not perceived as the sound of something or as a definite kind of sound is noise. Noise is the refuse of existential understanding.

Music, which thrives on the sensuous character of sound, today rejects the objective references of sounds. It has become increasingly non-representational, abstract. Discarding traditional frameworks of meaning, electronic music borders on noise. This marks the culmination of an historical tendency. Music probably had its origins in mimesis, the imitation of natural sounds, in bodily rhythms, and in holy evocations. Early Western music exploited verbal texts, especially familiar Biblical verse, to facilitate perception, interpretation, and memory, for speech is the most immediately meaningful sound. Later, instrumental music relied upon

characteristic sounds of the instruments to facilitate comprehension. To a large extent, what are still perceived in instrumental music are the performer (in nuances of interpretation) and the composer (in structural and emotive intention).

Serious contemporary music has been forced to reject all props to listening. They have outlived their usefulness historically. The names of composers, conductors, and performers have become trademarks, which distract from whatever may be behind the names, inhibiting the auditory experience itself. Rebellion against the commercial context has raised the question of just what music is.

Those who wonder if the abstract works which result are still music should recall the many different roles music has historically filled. Music took part in religious ritual long before the ballad served purposes of communication and moral instruction. Folk songs, nursery rhymes, and popular ditties are often structurally related to instrumental dance music, though they serve other functions. Mood music and contemplative compositions meet still different needs. Electronic music introduces further variety and choice. It has, in fact, irrevocably broadened the definition of music. This requires that electronic music not be forced to conform to the old criteria.

Just because instrumental music was not as directly tied to the human body as singing did not mean that either one or the other was not music. Rather, the extended possibilities of the instrument probably highlighted for the first time the emotive power of the more personal vocal performance. Similarly, anyone who has been involved with electronic music will relate afterwards differently to instrumental and choral productions. More advanced technologies always put their forerunners in a new perspective.

The process of abstraction from structures imposed on music as a result of its social origins clarifies the essential elements of sound. No longer restricted to the pitch and interval ranges of the human voice, the rhythm and meter of dance, or the practicalities of live performance, the new music takes on qualities strange enough to present old sounds as strikingly fresh experiences - provided, of course, that the barriers to listening are overcome in the individual, the culture industry, and the composition in a way which does not reduce all to familiarity.

The clearest examples of abstract music have been in the realms of chance music and electronic music. Music composed with the use of probabilistic procedures, mathematical schemes, or computerized algorithms shows no trace of human intention. Sounds produced by electronic components rather than by conventional instruments can be kept connotation-free. The abstractness of this music, which carries no suggestion of subjects and objects that could have made such sounds, registers as undifferentiated noise in the ears of those who can't imagine how to relate to it. Such music must develop its own contexts, its own tradition.

Having suppressed the references of individual sounds to extra-acoustic objects, electronic music rejected the ties of musical styles to particular audiences: ages, classes, ethnic groups, and nations. This development corresponded historically to a repulsion against nationalism, particularly in Germany. The non-referential sound eliminated local color, except for purposes of commentary and critique. Abstract and international, electronic music found itself without an audience. In order to keep inwardness and intellectualization from exceeding healthy limits without foregoing the progress made to date, electronic musicians are forced to develop a broader audience by means of their music.

The difficulty at the heart of all contemporary art is particularly extreme here: isolated at elite schools and in scattered studios, the musician has no broad cultural tradition from which to draw material, no critical response to lend him direction, and no responsive audience with which to engage in dialogue. Where culture is annihilated under the pressure of the commodity motive, even those select few who manage to survive find themselves homeless. Paul KIee remarked, when he was part of the Bauhaus movement, that without a social base modern art lacked ultimate power: *"Uns traegt kein Volk"* (1924).

Although Marx disavowed any direct relation between economics and epochs of great art, he could well have pointed out art's social a priori. Even if art no longer can be founded on a general cultural base as in pre-industrial times, community remains essential. Schoenberg's Vienna, Stravinsky's Paris, and Stockhausen's Darmstadt Summer Institute formed preconditions for the music that emerged from these centers. Especially if the romantic ideology of individualism is to be rejected and art is to reveal social Being, intense interaction is necessary, both among artists and with an audience. In our day, the economics of commodity relations systematically destroys community, making art impossible yet all the more urgent.

Audiences must discover their way through the strange terrain of electronic music; they need to learn to hear whatever is at work in structures of abstract, unsituated sound. Fortunately, there is an historical continuity, however tenuous, between instrumental and electronic music so that it is partly a matter of time for the so-called cultural gap to be crossed. However, the existence of qualitative differences requires that the new music be perceived in terms which it alone can teach. Heidegger's theory of understanding suggests an approach to this task, for hermeneutics becomes significant in cases of problematized understanding, of disrupted contexts.

III. The situation of understanding

The circularity in having to hear how to hear is an instance of the paradoxical character of all understanding. This "hermeneutic circle" need not be a vicious one according to Heidegger. He resolves it through an analysis of the moment of anticipation that belongs to interpretation:

> Whenever something is interpreted as something, the interpretation will be founded essentially upon pro-jecting, fore-sight and pre-conception. An interpretation is never a presuppositionless apprehending of something presented to us. (*BT*, 191-92)

In perceiving a sound, we perceive it *as* something, as the sound of a certain object, instrument, or process, or as a certain kind of sound. To do this, we must have already intended to perceive such a sound, we must be open to the possibility of such a sound, and we must have the concepts for distinguishing such a sound. Of course, our anticipations need not be exact. It suffices that we be open to a range of possibilities which includes the actual sound.

To perceive the surprising, it seems, we must await it; to discover the unknown, we must know what we seek; to comprehend the innovative, we must subsume it under already available categories. Plato's recognition of such circularity led him to the theory that all learning must be remembrance, that we literally did know everything that could be known, although most of us have forgotten almost all of it. Subsequent variations on this theory of knowing attribute preknowledge to racial memory, the subconscious, or world-spirit. The Kantian conclusion, still exerting its influence through Structuralism, is that we are forever limited to knowing that which we are genetically equipped to know. Such consequences are deeply conservative. They imply that human existence which includes social structures - can never change essentially.

Heidegger recognizes the hermeneutic circle and its full implications without falling victim to it. In fact, his entire career can be viewed as a struggle to break free of the circle by spiraling around it incessantly. Heidegger neither mythologizes the fact that knowledge has its prerequisites, nor does he absolutize it. Either approach would abolish history, especially the history of meanings. Rather, he locates a social and historical base of preunderstanding.

However, Heidegger never analyzes the historical or social character of this base in his early discussions. At this point, the ambiguity of Heidegger's work is particularly clear. While brilliantly uncovering crucial relationships, Heidegger consistently refrains from exploring the all-important specifics for fear of lacking profundity. He exposes the ontological cover-up by which Being has successively

been obscured since Plato, but he fails to finger the culprit, to point to social forces that carried out the deed and political interests which oppose its reversal.

The attempt to uncover forgotten Being ends in political impotence. Similarly, in the theory of understanding, insight into the possibility of transcending the given is over-powered by respect for the role of tradition. The progressive potential is ignored in the context of the conservatism of Heidegger's personal associates, his self-understanding, and his social background. None of this is, however, necessary, as the application of the basic principles in the concrete, socially situated realm of electronic music should show.

Heidegger grasps the hermeneutic paradox by means of an analysis of socially given everyday understanding. The anticipatory projection, foresight, and preconception that we usually bring to understanding are those which "one" generally holds. Understanding is normally based on conventional wisdom. Such common preunderstanding may get us through the daily routine, but it has its limitations, as Heidegger points out at length.

In *Being and Time* understanding according to what "one" already knows proves insufficient for allowing me to comprehend my own death and thus to deal knowingly with the possibilities corresponding to my own finite temporality. Later essays of Heidegger underline the inadequacy of technological rationality to respond properly to the dangers faced by an epoch that is pervaded by this calculative mentality. Heidegger strives throughout to transcend these restrictions.

The problem with conventional wisdom is that it obscures so very much in the act of making superficial understanding possible. The half-truth character of knowledge gained through the socially prevalent categories and attitudes applies to the appreciation of music as much as to political acuity and existential self-reflection. Without going into the role of the mass media, art, and folk traditions in molding the languages in which we interpret - and hence perceive - sights and sounds, our institutions, and ourselves, Heidegger makes the general point:

> Within the totality of its complexly interrelated meanings, the spoken language preserves a certain understanding of the disclosed world and simultaneously an understanding of the being-there-together of other people and an understanding of one's own contextuality. The understanding already deposited in the spoken language concerns the disclosedness of beings which has at any time been achieved and passed down as much as it concerns the understanding of Being then and the available possibilities and horizons for fresh interpretation and conceptual articulation. (*BT*, 211)

Common understanding provides the starting point for any possible transcendence of its limited perspective. No exterior vantage point of superior knowledge is possible: the walls of convention must be crashed from within when they oppress.

If the established word discloses, it also closes. The phenomenon, frozen in speech, loses its substance even as one gains a handle on it. In second-hand knowledge, one may be caught up in interpreting verbal symbols and fail to understand that which is supposedly communicated. In fact, one scarcely knows how much one has experienced of the reality behind the words. Hearing words becomes believing already interpreted facts. The disk jockey approves of a hit; the press analyzes a politician's speech; advertising proclaims eternal youth. It is impossible for me to be critical of more than an insignificant fraction of what floods into my ears. Worse yet, my personal experience does not go untouched by all this. Even listening to music, even seeing a politician's actions, even reflecting on myself, the available categories and approaches have all come handed down to me.

Conventional wisdom rules with an authority and reach that puts the most unquestioned monarch to shame. In politics it makes a farce of democracy, in lifestyles it insures conformity. The popular in music is not simply a statistical tendency among autonomous personal tastes, but a self-perpetuating system of interpretation. As long as "one" recognizes melodies in harmonic keys but finds dissonances incomprehensible, popular music will either limit itself to the well established or find that no one "likes" it. Within the domain of art, the requirement of familiarity stands in obvious opposition to the creativity that is also expected. This contradiction is sharpened by the fact that the artist's own understanding must begin with traditional conceptions and manners of perceiving, although he longs to open eyes and ears.

For Heidegger, public understanding, the system of commonly held meaning-structures, is simply a given. To comprehend interests manipulating or exploiting the public requires social theory. Heidegger's phenomenology of the individual cannot analyze powerful social forces, even though it breaks with the Cartesian tradition by viewing the individual in terms of his physical and social context. Thus, *Being and Time,* published in 1927, explains the obedience of the individual to the public subjectivistically, in terms of the individual's *Angst:* I fear for my own existence.

To escape my *Angst,* I turn to the public realm that, according to Heidegger, is divorced from my ownmost, personal existence. Here the concern is exclusively with things in the world or with how one - everyone - feels, thinks, and acts. I can forget my fearful, mortal sense by becoming caught up in a world in which self-reflection is quite impossible. A revised version of *Being and Time* could today refer to the child who lives on Sesame Street, the housewife whose concerns stem

from the soap opera, or the sports fan who can only think of the next game. With television one's public world has become clearly visual and aural.

It is characteristic of Heidegger's short-coming that he set out to analyze the structure of human existence without noting that modern life is structured around wage earning, that temporality has been redefined in terms of labor time, that relations to objects are determined by property relations, that needs are met through social production, and that existence is now characterized by alienation. Even in his analysis of society - of being-together and of the public realm - Heidegger fails to see that the commodity form of economic value defines the social Being of working people, of exchanged products, and of cultural artifacts in a society long based on capital investment and accumulation.

In the mid-1930's, when the power of supra-personal forces could scarcely be ignored in Germany, Heidegger carried out a reversal of emphasis, situating the origin of preunderstanding in a movement of autonomous Being, rather than in the individual fearful human being. This movement takes place within linguistic - or prelinguistic - media, whose developments are not to be comprehended in social, let alone psychological terms.

The determination of the way in which all beings are perceived, Being, is given to us historically and preserved within language, broadly understood. Especially in Heidegger's late writings, "Being" refers to the most general level of the form of presence of all beings: as creations of God in medieval times or as calculable material for manipulation in our technological era, for instance. Again, with no theory of society, Heidegger has no categories for comprehending the historical changes in Being. He can at most catalogue the various forms of Being and, perhaps, discover hints of a possible future form.

Nevertheless, the history of Being suggested by Heidegger may aid in understanding the situation of music. For Heidegger, the development of Western thought has meant the progressive obfuscation of Being. This is the story behind the present dictatorship of the public, which hides the essence of human Being. In a sense, the nature of sound has also become successively obscured since the Greeks, as the perception of it has become increasingly indirect.

The origin of music in experiential time and bodily rhythms was first neglected in the numerological interpretation developed by the pre-Socratic school of Pythagoras, which then proved determinant of Plato's thinking about music. The classical period in music developed extraordinary mastery over sound, controlling it for such intellectual purposes as the elaboration of conceptual relationships as embodied, for example, in counterpoint technique and thematic variation. Romantic music adapted this skill over its object to the subjectivistic task of titillating human emotions and "painting" beautiful pictures.

Auditory experience became subservient to visual or emotive ends and thereby lost its original character. Recent commercial music combines the least aural aspects of folk, classical, and romantic styles. Sound as such has long since been forgotten in the scurry to control and exploit it. This is certainly one component of what Heidegger conceives as the pervasive oblivion of Being. Following its own historical course, but not accidentally, music, too, adheres to the general tendency.

The historical and social context of music in our century, particularly since World War II, poses a dilemma for composer, performer, and music-lover. In order for music to be intersubjectively comprehensible, it must be expressed in a language which veils sound under layers of extra-musical meaning. Music which rebelliously thrusts unknown realms of sound at its audience inevitably meets with resistance, fear, and incomprehension.

The dilemma has widened the gap between popular and serious music, whose separation originally had a class base but is now even more fundamental. Not that either extreme can escape the contradiction. Even easy-listening music must inhabit the auditory realm with some semblance of creativity, and that means at least rattling the bars of convention. At the other end of the continuum, the most relentlessly avant-garde composers still need enough of a foothold on familiar ground to communicate among themselves and with an audience, however homogeneous and emancipated. Between the extremes, performances of rock and jazz take their considered stands at various points, and classical pieces are buffeted about according to the understandings of their arrangers, conductors, sponsors, and audiences.

IV. Ontological interrogations of technological sound

Heidegger recommends a way of living within the contradictions and tensions that correspond to the forgetfulness of Being. Even in *Being and Time,* where the circularity of understanding is not historically comprehended, a way out is indicated:

> In the circle is hidden a positive possibility of the most primordial kind of knowing. To be sure, we genuinely take hold of this possibility only when, in our interpretation, we have understood that our first, last and constant task is never to allow our pro-ject, fore-sight and pre-conception to be presented to us by fancies and popular conceptions, but rather to make the scientific theme secure by working out these pre-liminary structures in terms of the things themselves. (*BT*, 195)

The battle cry of Husserlian phenomenology, "To the things themselves," takes on a broader significance, proclaiming a method for everyday knowledge as well as philosophy.

In later reflections on the question of uncovering buried Being, Heidegger proposes to "let Being be" and to remain "open to Being." The obscuring of Being is found to be a consequence of man's drive for control, the preponderance of subjective will. Rather than imposing our wishes upon the objects being interpreted - perceived or created - we should garner the categories of understanding from the material itself.

The general historical development of will has its exact counterpart in music. Wagnerian opera, which represents a pinnacle of subjectivism not so different from the will-full politics of its fascist admirers, strove to induce definite responses with each thematic stimulus. The listener revels in his responses more than he listens.

The complete rejection of such will in music would be an arrangement in which sounds existed which had no relation to human intentions. The ideal would be an auditory environment in which composer, performer, and audience would no longer perform their traditional functions, but would all be "tourists," in John Cage's provocative metaphor. Traveling together through strange sonic terrain, they would have to comprehend the foreign language without a guide's assistance.

This straightforward approach, largely adopted by an American school of experimental composers inspired by Cage, corresponds to certain pronouncements of late Heidegger. The difficulty with the acoustic processes and events which they let happen is that the sounds which result are too likely to be understood with the chauvinism of a condescending tourist, by whose standards the natives are dirty and dull. Visits to such irrelevant auditory experience may provide occasional larks, but they scarcely transform the normal routine. For a "happening," whether of sounds or of Being, to be appropriately perceived, the proper attitude is already required. Anticipation is, however, originally and usually based on common understanding, as Heidegger early showed.

Electronic music, a European movement in which Karlheinz Stockhausen, lannis Xenaxis, and Pierre Boulez can be singled out as important composers and theoreticians, incorporates the proposals of early as well as late Heidegger into the project of opening ears to aural Being. In fact, each of these three representatives has referred to his music as a new form of Being-in-the-world, implicitly citing the outlook of *Being and Time.* A more profound, if less conscious, relation to Heidegger can be seen in their practice of getting at the sounds themselves through critical transformation of the prevailing categories which all too often silence the sounds.

During the last two decades, electronic music has come into its own out of developments in classical music up to Schoenberg, Stravinsky, Webern, and Varese. From the most sophisticated perspective of Western music, electronic composers have systematically criticized the categories that define their heritage. These recent composers accept the challenges that Cage also enunciated, but they relate them to an historical context of interpretation. Their understanding of the tradition that Cage simply rejects allows them to go beyond its limitations through reflection. Reflection is here not exclusively intellectual, but primarily musical and historical, although it has its conscious moment. Electronic technology transforms sound and provides the material precondition for a music that is contemporary in the strict sense of the term.

The electronic transformation of everyday sounds, common musical elements, and background tonal webs has an educative effect. It reawakens the ear from an overly literal, visual world. It e-ducates by leading-out what was implicit but went unnoticed.

Electronic music has an experimental *élan* about it, not just because we are in a transitional period and electronics defines a new medium, but because these works lead the listener on an exploratory path through the universe of sound around him. Intimations of warfare, space-age movement, and motoric rhythm in electronic pieces are only the most obvious instances of this. Electronic technology gives us our world, particularly its noisy acoustic dimension; Stockhausen, always one to draw the radical conclusion, stresses that electronic music should sound electronic.

Two reasons for electronic music's experimental quality can be given in terms of its social context. Recent composers reject the props to listening exploited by commercial music, arrangements of romantic music, movie soundtracks, television backgrounds, and advertising jingles. They are thereby forced to search for new approaches less manipulative of their material and their audience. Techniques suggested by the electronic instruments are tried out, judged by the ear, varied, explored. Encouragement of the unanticipated becomes the paradoxical goal. The listener, too, must remain open to the unknown, struggle with a work's meaning, and draw conclusions.

Secondly, the use of generalized technical equipment for synthesizing sound structures creates its own world of possibilities, circumscribed by the use of one or more loudspeakers. This largely unexplored realm calls for new emphases and for divergences from practices appropriate to instrumental music. Traditional instruments were developed with the triadic chord in mind and expressive interpretation as a primary goal. Now, with synthesis by means of scientifically standardized circuits, the elements into which the technician can analyze all acoustic phenomena assume a major role.

Theory of sound emerges in the practice of electronic music with thematic prominence. Because everything must be built up from scratch from abstract temporal orderings, that is certain effects unrealizable with an orchestra can be achieved more easily than can simple harmonies. Previously unimaginable sonorities and the whole range of temporal intervals are readily available. Through careful splicing of tape or with the aid of electronic control, the most intricate rhythms can be produced.

One useful formal approach to an electronic composition is to select a potential of the medium and to explore it systematically, cycling through the various possibilities under a series of conditions, much as Husserl used to vary the thing-itself in imagination. The parameters of permutation can, as in several works by Stockhausen, mediate between polar extremes of some compositional factor such as interpretational determinacy or timbral complexity. The piece produced by such a more or less autonomous system could be considered an experiment or investigation. Both the formal structure and the sensuous experience resulting are derived from the acoustic material and the choice of system for articulating it. The ring of objectivity is likely to be present, for emotional manipulation has been fairly thoroughly excluded.

The compositional form which results from such an investigatory approach, assuming no traditional form is inadvertently imposed, is that of interrogation or "dialogue," a favorite term in Heidegger's vocabulary. From this orientation, the history of electronic music appears as a series of question-and-answer interchanges between the human ear and physical sound, where both participants essentially belong to the technological age. The work as magnum opus dissolves into an event within a continuing social process. This change in artistic form agrees with developments in social production and political relations: individual objects, machines, personalities, and institutions merge into all-encompassing processes.

V. Revelation's musical form

The processual character of the larger compositional form reflects back on the elements in terms of an emphasis on acoustic patterns. Aspects formerly taken for granted or left to the composer's instinct and intuition are now subjected to systematic inquiry. Melody is frequently eliminated in order to focus attention on the background: general feel, rhythmic support, textural richness, the incidental or the accidental, silence and noise. The technical frame on which melody was formerly draped is now unveiled.

Such shifts in focus imply an altered relation to musical form, not just new forms. Whereas classical concerns with form had to be translated into techniques,

technical interests now tend to determine form. The unity of an electronic work and its mode of elaboration must meet dual criteria: they must be appropriate to the technical equipment and procedures while also resulting in a musically aesthetic piece. Form follows.

In his day Bach was admired as a craftsman. The contrapuntal intricacies that now earn him an exalted position as compositional genius were then primarily means for producing lively, graceful, coherent music. Subsequently, a stage of self-reflection transformed music; the craft became an art; supporting structure assumed thematic priority. The past was thereby subjected to reinterpretation.

Now electronic music takes a further step, exploring the universe within a single note rather than always stressing relationships between notes, as in previous harmonic construction. The atom of traditional music is split. This is a move beyond modernity. It departs from the mechanical *niveau* of form and function.

The new openness to aural Being establishes a context in which every category of music is reinterpreted along with the central notion of form. The new unity that coherently relates the categories redefines, for instance, the relation of form to content, process to event, composition to performance, work to perceiver. That the individual sound is now built up a parameter at a time, carefully put together, literally com-posed, means not only that the momentary event and the process in which it occurs must each be interesting in its own right. It also means that together they must be so intimately related that the process is nothing but the formation or de-construction of the individual sound, the event but a moment in the working of the work.

Criteria and means of performance must be redefined. The complexities of intonation that come naturally to the skilled performer cannot be duplicated electronically, nor is the spontaneity or inspiration of a live performance likely to be matched in the more conceptual new medium. Conversely, acoustic automata could spare the instrumentalist repetitive motions and rote procedures where they no longer serve a creative function. Particularly serialized compositions in the Schoenberg style (where a system of values for each parameter of a note is defined and the values are realized in turn) or stochastic works (in which values are selected by strictly random procedures) are often most sensibly accomplished electronically or with the aid of a computer. The concept underlying a piece, its form of expression, and the manner of its performance are intimately related.

For form to follow the music's experimental character implies experimenting with forms, for here more than elsewhere form and content must be one. To demand that all works adhere to one pattern would be to imitate the mass media, rendering rebellion harmless by freezing one potential into law and advertising it as the avant-garde, which all who wish to be timely must obey. An avant-garde that

measures up to its promise is united only in its rejection of the commercially codified; it seeks alternatives everywhere. Each of Stockhausen's pieces, for instance, pursues a different idea: rhythmic permutation, timbral variety, spatial movement, changing essential parameters: total system, human improvisation, pure chance, degrees of determination; vocal, orchestral, electronic, mixed sources. Each idea could become a school, but he prefers to use each as a base for further innovation.

As a work of art, each composition must be able to stand on its own, although some may be inherently more significant, and others will appeal more to certain tastes. Differing directions within the avant-garde are interrelated primarily by mutual recognition throughout the art world. They do not fall behind the discoveries of one another. Each successful piece responds to the historical state of the musical materials. Its lesson for future composing is fundamentally critical, not dogmatic.

The work of art plays an integral role in society by participating in the questioning of Being. The experimental work provides a locus for the revelation of truth. This is, in fact, the sole reason for Heidegger's interest in art. As Heidegger puts it, the origin of the work of art is the setting-into-work of the truth of Being. The character of our world in this age of automated production, computerized information processing, and mass-media communications is, indeed, screamed at us by the finest electronic compositions, wrestling the nature of technology out of the silence of its concealment behind scientistic and technocratic ideologies.

Less creative attempts, which manipulate or ignore musical technology according to commodity considerations, only conceal their own basis of existence. Heidegger fails to see the essential antagonisms of modern art toward such forms of entertainment. He consistently trivializes the political implications operative in artistic critiques of commercial culture and the commercialized tradition.

To obscure Being is, however, a politically reactionary act. The impetus behind subjectively imposing structures on given materials despite their inherent characteristics has always been the drive for control: over the environment, oneself, and one's neighbors. The manipulative techniques of pop music serve to maintain existing power relations throughout society. Their removal would clear the way for democratic alternatives in the production, distribution, and consumption of culture.

VI. Composed noise as ideology critique

The labeling of forbidden sounds as "noise" is one mechanism whereby the boundaries of the acceptable are reinforced. Noise is sound which cannot be comprehended either because it is too complex, too unusual, or too fearful. It

extends beyond our limits of tolerance. To say that these limits are maintained in order to ward off existential *Angst* is to simplify the mechanisms, which are more essentially social than individual: they serve the interest of social stability, at whatever cost to the individual.

The incomprehensibility that defines noise is peculiar to the auditory domain. Through linguistic training, we expect sound to be meaningful. But language is conventional, compared to visual and tactile objects, thus requiring more strain at interpretation. Accordingly, there are differences between the experiences of non-representation in visual and in musical art, between the corresponding senses of artistic illusion, and between the respective possibilities of mediating representational with non-representational images and sounds. Listening to electronic music is the best way to observe these contrasts.

Contrary to Heidegger's view, electronic music teaches that meaning in sounds - including speech - is not so spontaneously "given" as in sights and touches. Language is a product of social, i.e., human, traditions, not of autonomous self-appropriation. In the visual or tactile dimension things may appear somewhat differently. Common sense philosophers who beat their breasts and stub their toes to prove the existence of the real world suggest that the materiality of what is seen and felt is not the result of subjective convention. However, even here the form and significance of, for instance, this printed page comes from a complex system of social institutions: its message has its place in cultural production, and its physical manifestation was produced by wage-labor to be sold. The Being of this particular being is scarcely independent of the actions and relations of humans.

The new music reveals the conventional character of traditional sounds and compositional devices; it calls for a more creative, less certain approach to aural understanding. Electronic music, which hopes to re-educate our ears on the basis of what they already recognize, deals extensively with noise. The ability to mediate between tonal purity and noise is as important to today's composer as doing the same with sound and silence.

Stockhausen sees the limitations as technical difficulties. He credits Anton Webern, who is famed for thoroughly integrating silence into his works to stress individual sounds, with going as far as instrumental music can in organizing the parameters of sound. However, the exclusion of noise from music has its historical and social as well as technical sources. The continued resistance of popular music and its public to anything approaching noise, even the dissonances of twelve-tone works, confirms this.

Chaos in sound is disturbing; we must either struggle to discover meaning or flip off the switch. The Renaissance craft of ordering tonal compositions has sufficiently refined itself and educated us to the point where we can enjoy a

complex orchestral symphony without a twitch. The techniques of control over the organization of sound, originally promoted by the royalty, long preserved in the conservatory, and now categorized but scarcely comprehended, are, unfortunately, today used by rote - for non-musical motives.

Laziness reigns over producer and consumer, who are, after all, only out to make and spend money. Maintaining the status quo requires that only select reflexes be trained, that nothing demanding be ventured, that the unknown be kept out of knowledge's reach. With all else hidden, order, balance, and clarity appear to reign naturally in the kingdom of sound, as on earth.

Mastery over the musical material has been transformed into the pretense that there is no noise. The vulnerability of such an illusion in a world of machinery, advertising, chatter, and television makes the gullible victim that much more defensive when ruling dissonance out of the definition of music. Only those who intuitively rebel against sweet commercialism, consciously break the bonds of convention, and forcefully overcome the dominant alchemy of sound can move freely between harmony and noise, demonstrating that freedom from the fear of noise is possible on the basis of a new and renewed approach to aural Being. Electronic music makes a science of the struggle to come to terms with noise.

Rebellion against accepted forms took place throughout musical history, often leaving shocked, indignant, offended audiences behind. In America, blues, jazz, rock, and avant-garde music have known this tendency. The history of American music appreciation could, no doubt, be written in terms of the taming of criticism through the popularizing of its spokesmen.

Co-optation works through such strong mechanisms that no individual can withstand them. The contrast of the popular hits of any rebellious performer or group to their most original works reveals this enormous power. The paradoxes that confront the musician who strives to be both critical and popular leave unintelligible most of what he has to offer. The price he must pay to offer anything is to have his music systematically misunderstood. Electronic music is, of course, likewise threatened.

If our culture permitted us to pronounce only vowels, insisting that consonants offended the ear, were irritating and unnatural, then it would be necessary to overthrow convention for the sake of communication. Such a situation would be more than just vaguely analogous to commercial music's relation to noise. The soothing vowel sounds of sweet melody may be capable of expressing in stereotypical manner certain non-disruptive emotions, but they scarcely encourage thoughtful creativity, let alone justifiable rebellion.

It is no more accidental that we are taught in school and church to sing with the vowel-dominated syllables do, re, mi than that the gruff curses of the working-

class are suppressed in favor of the tones of romance so dear to aristocracies and their supporting institutions. Curt four-letter words, culminating in hard consonants, articulate too much of the anger which stems from exploitation - both material and spiritual. Popular music today continues the teaching of harmony and restraint, at most permitting a cathartic release of violent feelings.

While it may be that the ever-popular love song has always spoken more of the nightingale's melodic warbling than of crude physical urges, it is also true that the recent mass character of culture has ultimately failed to change this. The spread of culture from the leisure class to the leisure time of all has scarcely democratized the values and interests incorporated. They have only been further imposed on those who have less to gain from the social arrangement which mass culture buttresses. Abhorrence of noise, an anachronism in industrial society, remains with us as a social phobia indicative of our subservience to economic shackles.

In a technical sense, noise is pure sound. White noise consists of the whole spectrum of possible pitches simultaneously sounding, and that excludes all melodic or harmonic relations. Scientifically speaking, noise is unorganized sound, that is, strictly random changes in air pressure. Consonants, dissonant chords, and over-loaded timbres approach this in their relative lack of sustained acoustical structure. They are primarily recognized by the shifts and changing patterns of emphasis, pitch, and overtones.

VII. Controlled receptivity

Noise is sound so complex that auditory understanding cannot handle it. Accordingly, compositional control over noise must be more sophisticated than that over pure pitches, clear melodies, and harmonic chords. Electronic music, which is determined to eliminate the subjective willfulness inherent in the suppression of all noise, requires increased control over its materials. The mastery of noise through control grants electronic music the critical distance lacking in the earlier " noise music" of the Italian Futurists, who ended up glorifying precisely those social phenomena which must be criticized.

Theodor W. Adorno, an agile dialectician, examined the contradiction in which extreme control is necessary for the Heideggerian goal of letting sound "be." Writing at almost the same time as Heidegger, Adorno, who taught philosophy and sociology at Frankfurt, reinterpreted many of Heidegger's insights within the context of a non-orthodox Marxist social theory. A leading musicologist who had studied in Schoenberg's school, Adorno brought the philosophical issues to bear on music at the time that electronic music was being born.

Although Adorno's social critique of pop music opened a dimension scarcely suggested by Heidegger, his discussion of control in the following passage reveals strong affinities to Heidegger's position:

> If art truly wishes to renounce the domination of nature, if it stands for a time in which men no longer exert domination by means of spirit, then it can only achieve this through the power of the domination of nature. Only a music which is master of itself would also be master of the freedom from every constraint, even from its own. This follows the analogy that only in a rationally organized society would the necessity of oppression by organization disappear along with want. . .. But the domination of material, as a reflection of the composer's ear, must advance itself self-critically, until it no longer finds itself confronted with heterogeneous material. It must evolve into the form of reaction of the sort of compositional ear which at the same time passively appropriates the tendency of the material. The consequence of artistic technique as truthful domination is always simultaneously also its opposite, the development of the subjective sensibility into a receptivity toward the impulse of that which is not itself subject.[5]

In numerous analyses, which are historically concrete in ways which Heidegger's are not at all, Adorno focuses on the interplay between the historically- and socially situated composer and his material, which is historically- and socially-given. For Adorno, sound is not to be analyzed into simplistic elements, as an ahistorical science of acoustics would do. If sound can be manipulated in terms of amplitude and frequency or duration and spatial location, that is itself partially a result of our scientific age. Further, it is a consequence of the history of Western music, including, not least of all, developments within electronic music and its precursor, serialized music.

Through the evolution of musical traditions, knowledge of sound increased. More and more pitches became intelligible: the octave, fifth, fourth, the eight-note tonal scale, Schoenberg's twelve tones, unpitched abstract sounds. Simple repetition gave way to increasingly complex rhythms, syncopation, and polyrhythm. From natural and vocal sources, mechanical instruments were developed, and then were transformed electronically. The production of sound has always adapted general productive techniques to its own uses; composers have responded to technology by seeking out its unknown resources.

With the advent of the electronic construction of sound, a radically new stage in the relation of music to technology has been reached. The historical dialectic now comes under the kind of conscious, creative control that Marx envisioned for the relation of productive forces to social relations, but which Heidegger judged impossible for the ontological difference between Being and beings. In music, at

least, the composer can determine the character of the materials of his utopia to whatever degree of precision he desires.

Available acoustic material has varied with each age. For Adorno, musical material must be conceived as that with which a composer works. This is, however, nothing but the objectified and critically reflected level of the technical means of production that the composer finds at his disposal. The language in which composers expressed themselves was scarcely something over which they could freely dispense. Classical forms like the sonata were, in their day, more givens than freely elected modes of presentation.

If the traditional forms have been rejected as too confining by electronic composers, then new categories must be developed. The articulation of sounds by creator and by perceiver requires this. The new material, on the other hand, calls for categories appropriate to it. Since, however, the material is not static, but, as evolved, still open-ended, it will itself be transformed through the compositional and interpretational process. Truth to material implies more than just the skillful manipulation of already available materials.

The secret of composition, says Adorno, is the power to transform the material in the process of progressive adequation. Where it achieves this, electronic music provides a model of an openness to Being which forswears the imposition of will in favor of an appropriation which lets Being be what it historically could be. Here, more than in any of Heidegger's own writings, it becomes clear how much fine-tuning attunement requires.

The example of electronic music also demonstrates the possibility of an active process of bringing about a new epoch of Being. Although Heidegger insists that we must wait for destiny to descend mystically, his own theory of interpretation, with its potential for transforming common understanding, provides a foundation for a more active approach.

Adorno develops that foundation through a dialectical mediation of passivity and activism, openness and domination. A difficult unity of control and receptivity is required. Understanding, which must start within limits, can be led beyond them - by the lure of what is to be understood and by means of what is already understood. History, which conditions both interpretation and that which is interpreted, provides a medium for bringing about change on the basis of those past changes which have given us the present.

It is part of electronic music's dialectical character that it transcends fear of noise through human control and dispenses with subjective control through fearlessness; that it surpasses subjectivism with mathematical means and returns thereby to human perception; that it replaces the performer with technology in order to free humanity from the machine. If Greek music symbolized an urgent and progressive

mastery over the elements, electronic music demonstrates that such control is no longer an issue. The domination still at work in popular music is that over large segments of society, not over an alien cosmos. Electronic music shows that a new, unexploitative relationship to sound is now technically feasible, indicating that the artificial preservation of a monopoly by the old attitudes of control only serves socially repressive ends.

The kind of control that fosters receptivity is an historical product of technological progress, that is, of the development of willful control to its logical conclusion. Heidegger believes that technology must play itself out and reach its end, which is co-terminus with the elaboration of its origin; before a new epoch of Being can begin. Less idealistically, Marx interprets the Hegelian doctrine in terms of the bourgeois industrial revolution providing the technical precondition for truly socialized production.

Marx is not being sarcastic when he calls the wage-laborer "free"; the emancipation from traditional feudal social positions is a necessary stage in the elimination of domination even if it involves subjugation to the dictates of capital. Marx lauds the bourgeois era for its systematic universalizing of human powers and of productive processes. With the liquidation of feudal relations, society is potentially flexible enough to allocate its resources where needs arise. The only problem now is that production is used to maximize capital rather than to respond to need. Electronic music actualizes the potential within the realm of sound, producing universally without the natural limitations of traditional instruments or the social restrictions to accepted styles.

To the extent that electronic music points the way for everyday, productive life, it is implicitly revolutionary. The confrontation of instrumental with electronic music redefines the realm of the distinctively human for the present age. It thereby argues for relieving human activity of all that has become inhumanly repetitive. Harnessing the technology of automation to the requirements of control, electronic music suggests possibilities for the realm of labor, the manipulation of nature par excellence. The automation of controlled processes could establish a new form of harmony between worker, work, product, and consumer. Technology in such a context would bear little resemblance to the nineteenth-century factory. Alienation is not a result of technology per se; this is the message of technological music. It is not for naught that electronic music so frequently sounds like a protest against alienation in technological society.

Technology's concrete, capitalist "form of appearance" (Marx) or ontological "form of presence" (Heidegger) must be transformed. Within the categories that define the social fabric, the creatively human must be effectively distinguished from the repetitively mechanical. Ideally, a new structure could thereby coalesce in which people are no longer mere adjuncts to machinery or receptacles for

commodities. New economic ties would be a first prerequisite for such different relations among beings. In its contrast to industrial applications, the thoughtful and appropriate adaptation of electronics to musical endeavors, free of over-powering profit constraints, suggests that technology elsewhere can also foster Marx's goal of a humanized nature and a naturalized humanity or Heidegger's vision of a unity of the mortal and the holy, nature and the heavens.

However, art can never effect social change by itself. Those art forms that could instill revolutionary consciousness cannot, by their nature, become widely accepted until material transformations are at least well under way. But to those few individuals who have both the intellectual energy and the economic autonomy necessary, works of art can speak as witnesses of objective potential.

The problem of reaching a wide enough audience has yet to be solved. All that has been shown is that neither pandering to the habits of the public nor ignoring them, neither accepting given techniques nor ignoring half-concealed potentials, can succeed. Art must relate to the historical context of its desired audience and appropriately interpret the truth of its own medium.

VIII. Hymns for tomorrow

Within the tradition of rock music, Jimi Hendrix's rendition of "The Star-Spangled Banner,"[6] performed at the Woodstock concert, goes a long way toward this goal. Unlike most protest songs, this piece does not rely on lyrics; no imported rhetoric, revolutionary slogans, or faddish symbols were necessary. The explosion of notes into the screams of napalm spiraling downward toward its victims forced social and musical questions upon the listeners in subculture America of 1969: What are we doing in Vietnam? Where has our beloved national anthem gone? How can a man with a skinny guitar produce such complex, sliding, noisy, vibrating sounds? You call that music?

The interpretation's critical style establishes a distance, which is carried over to political allegiances. By simply exploring the anthem with its historical connotations, Hendrix's guitar makes it clear that American involvement in Vietnam was no accident. The reasons are already present in the song as part of America's heritage. Hendrix is merely the mediator, interpreting an historical text in a manner suited to a contemporary audience.

The interpretation is appropriate musically as well as politically. In translating from piano to electric guitar, Hendrix does not press the simple, most ordinary elements into the handy mold of established guitar techniques and ignore what was originally unique and significant, the way much adaptation and improvisation

proceeds. He uses the occasion to explore the qualities peculiar to his own instrument. He constantly moves from the clear, melodic notes of the piano original to the distortion, vibration, noise, and feed-back characteristic of the electric guitar. Rather than suppressing these effects, he encourages them to develop to the point at which they completely annihilate the pitched tones. Yet they are never uncontrolled. They unfold in precise patterns of rhythmic complexity and tonal variety.

The most traditional music is here transformed into a vibrant electronic composition. The rhythm and intensity which often serve an ideological function in hard rock, making thought impossible under the guise of excluding parents and other outsiders, functions critically instead. The violence which melody struggles to confine and conceal is now released. The listener, grasped through his familiar childhood music and shaken by elements of adolescent rock, is confronted with the difficult reality of maturity.

Hendrix was not an electronic music composer, although he experimented extensively with electronic modifications of his guitar and succeeded in creating powerful sonorities in his music. His strength was in his interpretational skill; his fingers had absorbed something from every socially critical tradition. Recent releases of early recordings show that he was musically more advanced than his popular recordings indicate; the worst contradictions of commercial music caught him in a grip in which he could not survive. Yet, he revealed a dynamic in rock which is still being both discovered and co-opted a tendency toward what is at work in the electronic music tradition, with the difference that it would have to be more spontaneously expressive and would seek to attract a larger following. Hendrix may have proven the incompatibility of these strivings in our world.

Stockhausen's *Hymnen*[7] shows how an electronic composer has dealt with the same material as Hendrix chose for Woodstock. In this piece, Stockhausen composes sounds with varying degrees of disorder and noise. The requirements of intelligibility thereby assert themselves forcefully and freshly, rather than being imposed in their traditional, petrified form of harmonic, melodic, rhythmic laws.

Over a period of two hours, *Hymnen* moves from the static of short-wave radio distortion and a jumble of international broadcasts to a utopian world-wide cultural peace by means of electronic control and transformation. The work uses splicing and synthesizing techniques to handle and imitate national music, characteristic sounds, and various noises from around the world. Not only are the musical qualities of familiar national anthems presented with unaccustomed force, but the flavor of their local performance is also clearly articulated. References to "The Star-Spangled Banner" conjure up the exaggerated pomp and pompous chauvinism of American sports events, political rallies, and elementary school assemblies.

Within the symphonic structure of the whole, snatches of immediately recognizable anthems function in place of melodic theme, while they shift register, intensity, and timbre from point to point. Pitch sequences are taken from original scores and used to determine relative amplitudes or durations instead. Purely electronic passages, found material, poetic vocal structures, silences, and the controlled noise of wind, waves, crowds, and breathing are interwoven in a manner reminiscent of Webern's instrumental compositions.

Perhaps most intriguing in Stockhausen's transformation of "The Star-Spangled Banner" is his use of well-known music as raw material for electronic creation. Rather than selecting pure sinewaves at given frequencies, adding overtone structures, and arranging them in temporal sequences, Stockhausen works from complex but more or less recognizable acoustic sources, adjusting their pitch and volume according to need.

The manipulation of familiar material seems to provide a natural way of appealing to a broad audience and introducing a twentieth-century sensibility. Unfortunately, electronic compositions, following the lead of Schoenberg and Webern, tend to use German and French verse or to cite musical sources which are esoteric by American standards. They suggest, however, analogous compositional procedures which would analyze idiomatic language and popular tunes, appealing to those excluded from the elite of consumers and re-presenting to the senses the flavor of our aural life. Further, the reflection of conventional sounds in an electronic context audibly demonstrates the awesome power of technological media to restructure perception for their own purposes.

Here, as in general, the electronic means of production permit totally new ways of working with sound, different conceptions of music, and a fresh perspective on tradition. Inhabiting the auditory realm, electronic music has broad implications. It encourages an origin-al way of creatively dwelling in the world, of existentially understanding contemporary Being, and of receptively anticipating a new epoch. When perceived as situated in industrial society, electronic music, like Heideggerian philosophy, evokes a radically different form of technology without enunciating its necessarily post-capitalist character or proposing a strategy for realizing the appropriate material context.

Endnotes

1 I have argued for the relevance of this task in "The Jargon of Authenticity: An Introduction to a Marxist Critique of Heidegger," *Boundary 2,* 3 (Winter 19751). The general problematic, which is pursued in the present article in terms of a specific phenomenon, was discussed with reference to the original texts of

Marx and Heidegger in my Ph.D. dissertation, *Marxian Hermeneutics and Heideggerian Social Theory: Interpreting and Transforming Our World*, Department of Philosophy, Northwestern University, 1975.

2 Explicit social analyses of Heidegger and of music lead too far afield for this essay. I rely largely on the work of Theodor W. Adorno. His reflections on Heidegger's position can be found in *The Jargon of Authenticity* (Evanston: Northwestern University Press, 1973) and in *Negative Dialectics* (New York: Seabury, 1973). Adorno's critique of American popular music is most accessible in "The Culture Industry: Enlightenment as Mass Deception," *Dialectic of Enlightenment* (New York: Seabury, 1972) and "Perennial Fashion - Jazz," *Prisms* (London: Spearman, 1967).

3 Examples of rigorous theoretical considerations abound in Stockhausen's *Texte* (in German), Xenaxis' *Formalized Music*, Boulez' *Boulez on Music Today*, and the articles by Stockhausen and others in issues of *Die Reihe* (in English) and *Perspectives of New Music*. Naturally, each of these composers stresses his own concerns, and views history through them. An objective, unsituated, empirical study of the movement I label electronic music would be far less interesting than these engaged intellectual struggles with the musical material, even if such a study were feasible. My own analysis is consciously informed by Heideggerian and Marxian conceptualizations and is directed toward the present American situation. It hopes to carry social force precisely by being a personal statement. While aimed at expressing my perception of actual electronic works, it makes no claim to being an empirical survey limited to what has already been realized. I take such an "unscientific" approach to be consonant with hermeneutic and materialistic principles.

4 Martin Heidegger, *Being and Time,* trans. John Macquarrie and Edward Robinson (New York: Harper & Row, 1962), p. 207. The quoted discussions all take place in the chapter on "Being-in as such." Further references will be incorporated in the text in parentheses as: *BT*. I take *Being and Time* as definitive of Heidegger's early (1927) position; his 1935 lecture on "The Origin of the Work of Art," translated in *Philosophies of Art and Beauty*, ed. Hofstadter and Kuhns (New York: Modern Library, 1964), as his basic statement on aesthetic themes; and the 1962 lecture, "Time and Being," in *On Time and Being* (New York: Harper & Row, 1972), as his final summary.

5 Theodor W. Adorno, "Vers une musique informelle" in *Ouasi una Fantasia* (Frankfurt: Suhrkamp, 1963), p. 432. This article and another in the same volume, "Musik und neue Musik," demonstrate that Adorno was far more open to electronic music than is generally thought. It now seems that the rigor of Adorno's aesthetic arguments and his personal contact with Stockhausen and Boulez stimulated progress in electronic music more than it was stunted by Adorno's

controversial criticism of composers who leaped upon the Schoenberg or Webern bandwagon without retaining the creative sophistication of the masters.

6 For some reason this song was never promoted. It was released on the expensive *Woodstock* concert album and gained a certain popularity then. It was quietly rereleased in 1973 on a two-record album of *Soundtrack Recordings from the Film Jimi Hendrix* (Reprise Records). A different rendition of *The Star-Spangled Banner* was recorded five months before Woodstock for the movie *Rainbow Bridge* and released in 1971 as part of the soundtrack to that movie (again by Reprise).

7 *Hymnen* is available as a two-record album import on the prestigious Deutsche Grammophon Gesellschaft label with Stockhausen's liner notes in three languages. Some people take all this as a sign of class character; the extent to which it is a result of the present record industry rather than of the music itself must, however, be questioned. Other works by Stockhausen, such as *Stimmung* (vocally produced music, whose title could be translated as "attunement") and *Mantra* (electronically modified piano music based on a twelve-tone series with an Indian influence) are more popular in America and may provide a less frustrating introduction to Stockhausen. It should be remembered that as sound his compositions are far more intricate than the theories that inspire them. For clear examples of electronic manipulation of given sounds, listen to *Gesang der Junglinge* and *Beethoven Opus 1970,* which transform human voices and well-known passages from Beethoven, respectively. These works are all on the DGG label, but can often be found in university and public library record collections.

4. Sound and Society: An Essay on Electronic Music

I

A first response to the playing of Jimi Hendrix's Woodstock rendition of *The Star-Spangled Banner* in a Philosophy course came from a man of conviction, who later admitted that he tended to talk first and think later. His reaction to the noise he had just suffered through was to denounce it as the dissonant sacrilege it was intended to be. When the piece was replayed at semester's end, he felt himself differently affected. Although still opposed to the unpatriotic thrust of Hendrix's biting interpretation, he now conceded that everyone was entitled to hold and express his own opinions. The threatening consciousness of Hendrix's iconoclastic stance toward music and fatherland was thereby more subtly rendered harmless by a subjectivism not so different from the enthusiastic spirit of the Woodstock generation: if it feels good, do it.

In the pop music world, both artist and audience are assumed to be free. Criteria are forbidden. Either I dig Hendrix and buy his hits, or I don’t, and he must return to normal productive life, safe from destruction at the hands of a public which demands more of what it has been trained to "like." The musician's freedom from the demands of his medium is defended in the name of personal taste, as though this were not the result of a long socialization process, systematically restricted exposure and a real need for passive relaxation. The standards of composition developed in classical music are deemed inappropriate where the task is no longer to provide an aesthetic experience but to entertain without involving, stimulate by distracting, provide a dance beat or disguise silence.

Hendrix's piece resists such attempts to limit its significance to arbitrary preferences. When notes explode into the screams of napalm spiraling downward toward its victims and the shudder of the earth under bombardment by heavy artillery, social and musical questions necessarily complicate the act of listening: What is America doing in Vietnam? How can a man with a skinny guitar produce such complex, sliding, noisy, vibrating sounds? Where has our beloved national anthem gone? You call that music?

Hendrix's offering is no sedative to rest weary minds for the next day's routine; nor can you dance to it. It provides an occasion for reflection and compels the development of new perspectives. It states truth. This capacity of music is clearly

demonstrated by the closing scene of the Woodstock movie. The camera surveys the littered remains of an historical moment already passed and Hendrix's guitar accentuates the desolation. Nothing remains but the music. If any truth is to be preserved, it will have to be within the medium around which a generation rallied: music that rebels against its social confines.

The notion that music comments on society, let alone procures truth, is, however, stubbornly resisted. Conventional wisdom, which attributes the forming of propositions to people, can at most view works of art as messages which transmit opinions from the musician to his audience. As long as the political content of music is reduced to an expression of the musician's personal belief, music is equated with propaganda, and its form, once the essence, becomes a pragmatic vehicle for presenting what everyone already knows. Even should the message be articulated in musical terms, as when Hendrix dispenses with words and bends the inspirational tones of patriotism into the noisy clamor of war, the realm of arbitrary opinion is not permitted to transcend itself in the direction of binding truth. What was once praised as the universality of music is restricted to being just one man's opinion after all, in a typical case of self-fulfilling Philistinism.

But conventional wisdom is only half-truth. Functioning as the contemporary ideology, it fits the definition of socially necessary illusion: the power of its insights serves only to obscure. Skepticism, learned too late from pop tunes that inculcate accepted values with seeming innocence, turns against creative works which would raise questions. Only that which reinforces the stereotypes used to hide the failures of capitalist society is acceptable; all else is banned from consciousness.

In fact, Hendrix's piece exercises an autonomy from its creator's personal opinions in a way that few pop songs do. Precisely therefore it inspires fear. Hendrix threatens because he actually says something in an arena where most products are devoid of truth-content, and he thereby challenges an empty but comfortable status-quo. The standard tune selects its verse structure, harmonic relations, instrumentation, beat and style from a body of trustworthy clichés. Even the deviations, almost always eventually resolved in favor of normality, are standardized. Themes are chosen to make the humdrum seem exciting and eternal Only the shadow of innovation is left in this preserve supposedly set aside for creativity by our social division of labor into specialties. The resultant music is so harmless that one can scarcely object, and boredom allows the very shallowest musical forms, not so different from advertising jingles, to settle among our most inconspicuous habits. This life of our cultural subconscious provides Hendrix's target.

Our musical reflexes correspond to a political faith. *The Star-Spangled Banner* was one of the first songs most of us learned. We sang it in our elementary school

classrooms, eyes focused on the flag. Later, we were lectured on the drama behind the music's creation and how it represented the courage and victory of our nation in an era when God, truth and justice were unquestionably on our side.

It is scarcely coincidental that Hendrix chose this tune to interpret for his audience at Woodstock. No imported rhetoric, revolutionary slogans or faddish symbols are necessary. By simply exploring this anthem with its historical implications, Hendrix's guitar makes it clear that Vietnam was no accident. This message does not originate in Jimi's brain, but is already present in the song as part of America's heritage. Hendrix is merely the mediator, interpreting an historical text in a manner suited to a contemporary audience.

The interpretation is appropriate musically as well as historically. In translating from piano to electric guitar, Hendrix does not press the simple, most ordinary elements into the handy mold of established guitar techniques and ignore what was originally unique and significant, the way much adaptation and improvisation proceeds. He uses the occasion to explore the qualities peculiar to his own instrument. He constantly moves from the clear, melodic notes of the piano original to the distortion, vibration, noise and feedback characteristic of the electric guitar. Rather than suppressing these effects, he encourages them to develop to the point at which they completely annihilate the pitched tones. Yet they are never uncontrolled. They unfold in precise patterns of rhythmic complexity and coloristic variety.

The most traditional music is here transformed into a vibrant electronic composition. The rhythm and intensity which often serve an ideological function in hard rock, making thought impossible under the guise of excluding parents and other outsiders, functions critically instead. The violence which melody struggles to confine and conceal is now released.

The listener is grasped through his familiar childhood music, shaken by elements of adolescent rock and confronted with the difficult reality of maturity Paralleling this, the patriotic citizen faced with the draft and Vietnam gradually begins to recognize American imperialism. It is not easy to part with long-standing, widely shared and cherished rationalizations. Harder still to deal with what remains.

II

Hendrix's *Star-Spangled Banner* attempts to make the transition from traditional, through rock to electronic music. This music, performed on a souped-up electric guitar, does not quite meet the definition of electronic music. Nor is Hendrix part of the group of composers referred to by this category. Rather, Hendrix's accomplishments represent a drive within popular music, which already

incorporates non-acoustic means of production, to move further in the direction of electronic music.

Whereas most instruments produce their sounds through direct mechanical vibration of strings, surfaces and air columns, electrified instruments like Hendrix's introduce a technical intermediary step into the process. A microphone built into the instrument transforms the mechanical vibrations initiated by the performer into electrical impulses, which are in the end converted to sound waves by a loudspeaker.

Truly electronic music, by definition, explores this technical mediation of music that has become all-pervasive. It eliminates the initial, mechanical stage altogether. Electronic components controlled by levers, dials and switches generate the electrical impulses directly. Sound only exists as such at the very end. Tapes can be made, records pressed, radio programs prepared without any sound occurring until the speakers in your living room vibrate.

The advantage of producing music electronically is complete freedom from the restrictions of conventional instruments, or so it seemed to Edgar Varese and others who first envisioned the possibility. Because essentially all music today, including singing, travels down speaker wires, it must be possible to describe it in terms of electronic operations. The know-how for this, once acquired, would also enable a composer to create sounds and acoustic patterns unlike anything previously heard.

This potential seemed to answer the aspirations of composers who felt hemmed in by the limited tonal and coloristic palette of conventional instruments and by restrictions imposed by the need for human performers After all, the average composer or music student cannot always engage an orchestra willing to struggle with innovative techniques; and even if he could, performers are hardly able to follow scores which call for speeds and rhythmic complexities at the periphery of human aural perception.

Electronic music was a response to the situation of the composer of instrumental works at a time when the electronic media -- records, radio, tapes -- were just appearing. Some composers chose to remain in the orchestral realm, yet developed techniques first suggested by electronic works. Although it is risky to single out representatives because contemporary music explores so many directions, drawing upon the most varied traditions and opening new possibilities in every conceivable way, Karlheinz Stockhausen is widely recognized as a leading composer of electronic works while Iannis Xenaxis can be taken as a defender of the continued use of the orchestra. It is interesting that Xenaxis' composing techniques even surpass Stockhausen's in use of mathematical theory, computerized calculation and non-determinacy of individual sounds, although the results are annotated and performed in the usual manner.

In his theoretical statements, as in his own compositional practice, Stockhausen stresses the unity encompassing today's alternative:

> The language of new instrumental music and that of electronic music are the same (so far, but it will be difficult to prevent electronic music from becoming vulgarized in the long run). When visitors come to the Cologne studio to hear electronic music, they quickly get over the first shock caused by the unusual sounds; and they ask why there is no rhythm (perhaps they mean regular meters of 3/4 and 4/4), why no melody, no repetitions, etc. Thus, the discussion is usually not at all about electronic music as such, but about the way in which it is composed, about language. We then play recordings of works by Anton Webern, written, for example, in 1910. Then we play newer instrumental compositions by Edgar Varese, John Cage, Pierre Boulez, Henri Pousseur.
>
> In some instrumental works which I had written shortly before beginning to compose electronic music, I attempted to integrate all the characteristics of the material in one uniform musical organization -- instrumental timbres excepted. l had to accept these timbres as given, and it was not possible to set up a relationship or even a continuum between the sound of a clarinet and the sound of a piano.

To suggest why Stockhausen wanted to organize timbres and how electronics made that possible, requires mention of Arnold Schoenberg and some familiarity with acoustic science, A comprehension of the historical developments which took place in twentieth-century music and their relation to technical progress is necessary for a social analysis of electronic music. It can provide insight into the language which, in Heidegger's image, provides a dwelling place for contemporary Being. Only once we have entered the new home knowingly will the prison house of popular music's uncritical adaptation of traditional musical forms appear to us as that which it "is."

Schoenberg found it necessary to reject the tyranny of the major and minor keys in determining which tones could be selected for a given composition from the twelve tones into which an octave is divided in Western music. In abolishing key signatures, Schoenberg felt obliged to ensure that each of the twelve tones be given exactly equal weight in a piece. Then accidental appeals to the unwanted patterns of pitch preferences would not occur. This uniform balance was achieved, in his most influential works, by a complex system of constructing and manipulating a series of the twelve tones in such a manner that each tone would sound once before any repeated.

Schoenberg's serial organization, through which the whole range is scanned without stressing any one value as primary or any group of values as natural, was later extended to other parameters of sound. Intensity, for instance, can vary from

silence to maximum volume, assuming several relatively well-defined values in between. Duration, too, can be organized and annotated (in terms of sixteenth and whole notes, tied and dotted notes, metronome markings and rests). Each aspect of sound can be taken as a continuum, divided into intervals, and systematically structured within a composition. This is not so easy with the timbral component of sound, as Stockhausen realized.

The timbre of a sound is characteristic of the instrument that produced it. A flute sounds purer than cymbals. A violin cannot be mistaken for a trumpet. The physical characteristics of an instrument determine the overtones that accompany any fundamental pitch played, adding color and richness. By jumping from string section to brass, from percussion to woodwind, or from one instrument to the next, one could juggle a number of distinct timbres. This would, however, be far from segmenting a continuity between timbral simplicity and utter chaos into equally spaced values. Because instruments cannot alter their timbres as they can their pitch, the composer is limited to a small number of fixed values.

The ability to mediate between tonal purity and noise is as important as doing the same with sound and silence. Stockhausen sees the limitation as a technical problem. He credits Anton Webern, who is famed for thoroughly integrating silence into his works as a means of stressing individual sounds, with going as far as instrumental music can in organizing the parameters of sound. However, the exclusion of noise from music has its historical and social as well as technical sources. The continued resistance of popular music and its public to anything approaching noise, even the dissonances of twelve-tone works, confirms this.

Chaos in sound is disturbing; we must either struggle to discover meaning or flip off the switch. Fortunately, the Renaissance craft of ordering tonal compositions has sufficiently refined itself and educated us to the point where we can enjoy a complex orchestral symphony without a twitch. The techniques of control over the organization of sound, originally promoted by the royalty, long preserved in the conservatory and now categorized but scarcely comprehended, are, unfortunately, today used by rote.

Laziness reigns over producer and consumer, who are, after all, only out to make and spend money. Comfort requires that only the easiest reflexes be trained, that nothing demanding be ventured, that the unknown be kept out of knowledge's reach. Order, balance and clarity appear to reign naturally in the kingdom of sound, as on earth.

Mastery over the musical material has been transformed into the pretense that there is no noise. The vulnerability of such an illusion in a world of machinery, advertising, radio and tv makes the gullible victim that much more defensive when ruling dissonance out of the definition of music. Only those who intuitively rebel

against sweet commercialism, consciously break the bonds of convention and forcefully overcome the dominant alchemy of sound can move freely between harmony and noise, demonstrating that freedom from the fear of noise is possible on the basis of a new and renewed approach to aural Being. Electronic music makes a science of this struggle to come to terms with noise

Rebellion against accepted forms took place throughout musical history, often leaving shocked, indignant, offended audiences behind. In America the blues, jazz, rock and avant garde music -- all of which figure among Hendrix's roots -- have shown this tendency. The history of American music appreciation could, no doubt, be written in terms of the taming of criticism through the popularizing of its spokesmen. Co-optation works through such strong mechanisms that no individual can withstand them. The contrast of the popular hits of any rebellious performer or group to their most original works reveals this enormous power. The paradoxes that confront the musician who strives to be both critical and popular strangled much of what Hendrix had to offer. The price he had to pay to offer us anything was to have his music systematically misunderstood. Electronic music is likewise seriously threatened.

If our culture permitted us to pronounce only vowels, insisting that consonants offended the ear, were irritating and unnatural, then it would be necessary to overthrow convention for the sake of communication. Such a situation would be more than just vaguely analogous to commercial music's relation to noise. The soothing vowel sounds of sweet melody may be capable of expressing in stereotypical manner certain non-disruptive emotions, but they scarcely encourage thoughtful creativity, let alone justifiable rebellion,

It is no more accidental that we are taught to sing with the vowel-dominated syllables do, re, mi than that the gruff curses of the working class are suppressed in favor of the romance tones so dear to aristocracies. Curt four-letter words, culminating in hard consonants, articulate too much of the anger which stems from exploitation -- both material and spiritual. Popular music today teaches harmony and restraint, at most permitting a cathartic release of violent feelings.

While it may be that the ever-popular love song has always spoken more of the nightingale's melodic warbling than of crude physical urges, it is also true that the recent mass character of culture has ultimately failed to change this. The spread of culture from the leisure class to the leisure time of all has scarcely democratized the values and interests incorporated. They have only been further imposed on those who have less to gain from the social arrangement which mass culture buttresses. Abhorrence of noise, an anachronism in industrial society, remains with us as a social phobia indicative of our subservience to economic shackles.

In a technical sense, pure sound is pure noise. White noise consists of the whole spectrum of possible pitches simultaneously sounding, and that excludes all melodic or harmonic relations. Scientifically speaking, noise is unorganized sound, that is, strictly random changes in air pressure. Consonants, dissonant chords and over-loaded timbres approach this in their relative lack of sustained acoustical structure. They are primarily recognized by shifts, and changing patterns of emphasis, pitch and overtones.

The simplest tone, next to the motionlessness of silence, is the steady, single-frequency pitch, graphed (air pressure with respect to time) as a sine wave smoothly altering between the two limits whose difference defines loudness or amplitude. Such clear pitches are the easiest sounds for people to distinguish among and to note relationships between.

It turns out, furthermore, that the simpler the mathematical ratio between their frequencies the easier the relationships between successive pitches are to hear. The standard -- over-used -- chord in Western music, the triad, consists of virtually any three notes whose frequencies stand in the ratio 4:5:6 The simple relation of the high to low note here (4:6 = 2:3) is that of a perfect fifth. The octave, our basic interval defined by the fraction 1:2, is so clearly perceived that the two widely separated notes sound almost identical.

The need to fathom the parameters of sound and to follow the mathematics of harmony led musicians to study acoustical physics, which meant greatly expanding the primitive theories available. Timbre could then be analyzed in terms of wave functions and harmonics. The overtones of a clarinet, for example, tend to have frequencies in the ratio 1:3:5:7:9 with relative intensities decreasing in the same proportion. A violin sound might have its third overtone rise more quickly than the fundamental at first but then diminish, while the first overtone predominates during a middle stage and the fourth becomes significant only somewhat later

Once such analyses had been made, it was possible to synthesize comparable sounds by combining electronically generated sine waves of controlled frequencies. Laborious though this procedure may be, it enabled the composer and his technicians to realize any timbral structure. Through the careful design of new equipment, it became possible to control the various parameters of sound at will, either continuously along their entire continuum or in discreet intervals.

Thus, the analysis of instrumental sounds facilitated the synthesis or composing of new tonal structures. Schoenberg's use of the entire twelve-tone scale was followed by the construction of new scales and even the elimination of fixed pitches. The nature of the individual note, the atom of traditional music, was explored and transformed. Sliding (glissandi) pitches came into their own in opposition to stasis. Intensities altered continuously and the techniques of amplitude and frequency

modulation, familiar from AM/FM radio electronics, were enlisted to produce qualitatively new harmonics and timbres The individual note, all but inaudible in the cheap grandeur of easy-listening music, was demystified in line with modern statistical mechanics and replaced by groups of pitches randomly scattered about an average frequency creating walls of sound in place of pinpoints and gossamer.

Through the influence of concrete music (compositions of tape-recorded everyday sounds) and the experiments of Edgar Varese with percussive effects, noise was introduced into electronic music, filtered into defined frequency bands and mixed in controlled proportions with other sounds. Human speech, too, was acoustically analyzed, manipulated, synthesized and composed in unity with electronic constructs.

With the rejection of traditional forms, the definition of music was broadened to the abstraction: structured sound. This notion logically entails its negation, unordered or random noise. Chance music and indeterminate processes begin to incorporate this excluded realm musically. When noise itself is integrated into the compositional process, the significance of structure in sound is made explicit and audible.

In a piece which moves through varying degrees of disorder, the requirements of intelligibility can assert themselves forcefully and freshly, rather than being imposed in their traditional, petrified form of harmonic, melodic, rhythmic laws. The composer would then be free -- or even compelled -- to create structures appropriate to twentieth-century ears and to the new means of technical production. Ordering of sound could be done on the basis of knowledge and sensibility, rather than fear of the unknown and reliance on convention.

Stockhausen's *Hymnen* for instance, moves from the noise of short-wave radio distortion and a jumble of international broadcasts to a utopian peace by means of electronic control and transformation. The work uses splicing and synthesizing techniques to handle and imitate national music, characteristic sounds and various noises from around the world. Not only are the musical qualities of familiar national anthems presented with unaccustomed force, but the flavor of their local performances is also clearly articulated. References to *The Star-Spangled Banner* conjure up the exaggerated pomp and pompous chauvinism of American sports events, political rallies and elementary school assemblies.

Within the symphonic structure of the whole, snatches of immediately recognizable anthems function in place of melodic theme, shifting register, intensity and timbre from point to point. Pitch sequences may be taken from the original score and used to determine relative amplitudes or durations instead. Purely electronic passages found material, poetic vocal structures, silences and the

controlled noise of wind, waves, crowds and peaceful breathing are interwoven in a manner reminiscent of Webern's instrumental compositions.

Perhaps most intriguing in Stockhausen's transformation of *The Star-Spangled Banner* is his use of well-known music as raw material for electronic creation. Rather than selecting pure sinewaves at given frequencies, adding overtone structures and arranging them in temporal sequences, Stockhausen works from complex but easily recognizable acoustic sources, adjusting their pitch and volume according to need.

This manipulation of familiar material, not so different from Hendrix's approach, seems to provide a natural way of appealing to a broad audience and introducing a twentieth-century sensibility. Further, it demonstrates the power of the media technologies to restructure perception. Here, as in general, the electronic means of production encourage radically new ways of working with sound, different conceptions of music and a broader perspective on the tradition.

III

In his day Bach was admired as a craftsman. The contrapuntal intricacies that now earn him an exalted position as compositional genius were then primarily means for producing lively, graceful, coherent music. Subsequently, a stage of self-reflection transformed music; the craft became an art; supporting structure assumed thematic priority. The past was thereby subjected to reinterpretation.

Now electronic music takes a further step, exploring the universe within a single note, rather than stressing relationships between notes as much as in traditional harmonic analysis. This is a move beyond modernity. It departs from the mechanical or industrial niveau of form and function.

In addition to the internal construction of individual sounds, other aspects formerly taken for granted or left to the composer's instinct and intuition have been subjected to systematic inquiry. Melody is now frequently eliminated in order to focus attention on the background: gradual shifts of feel, rhythmic support, relatively unarticulated textural richness, the incidental or the accidental, silence and noise. The technical frame on which melody was formerly draped is now unveiled.

Such shifts in focus imply an altered relation to musical form, not just new forms. Whereas classical concerns with form had to be translated into techniques, technical interests now tend to determine form. The unity of an electronic work and its mode of elaboration must meet dual criteria: they must be appropriate to the technical equipment and procedures, while also resulting in a musically aesthetic piece. Form follows.

The complexities of intonation that come naturally to the skilled performer cannot be duplicated electronically, nor is the spontaneity or inspiration of a live performance likely to be matched in the more conceptual new medium. Conversely, acoustic automata could spare the instrumentalist repetitive motions and rote procedures where they no longer serve a creative function. Particularly serialized compositions in the Schoenberg style (where a system of values for each parameter of a note is defined and the values are realized in turn) or stochastic works (in which values are selected by strictly random procedures) are often most sensibly accomplished electronically or with the aid of a computer. The concept underlying a piece, its form of expression and the manner of its performance are intimately related.

Those who wonder if electronic works are still music should recall the many different roles music has historically filled. Music may have originated in religious ritual long before the ballad served purposes of communication and moral instruction. Folk songs, nursery rhymes and popular ditties are often structurally related to instrumental dance music. Mood music and contemplative compositions meet different needs. Electronic music should be seen as the introduction of further variety and choice. This requires that electronic music not be forced to conform to the same criteria as other music.

Just because instrumental music was not as directly tied to the human body as singing did not mean that either one or the other was not music. Rather, the extended possibilities of the instrument probably high-lighted the emotive power of the more personal performance. Similarly, anyone who has been involved with electronic music will relate differently to instrumental and vocal productions than before. More advanced technologies always provide a broader perspective on their forerunners.

The confrontation of instrumental with electronic music redefines the realm of the distinctively human for the present age and argues for relieving human activity of all that has become inhumanly repetitive. Ideally, the separation of the human from the technical may coalesce in a new unity in which people are no longer mere adjuncts to machinery. In polar opposition to industrial application, the thoughtful and appropriate adaptation of electronics to musical endeavors, free of profit restrictions, might suggest how technology can foster Marx's goal of a humanized nature and a naturalized humanity or Heidegger's vision of a unity of the mortal and the holy, nature and the heavens.

At the same time that music draws social consequences, it becomes freed of subservience to human needs. The process of abstraction from structures imposed on music as a result of its social origins clarifies the essential elements of sound. No longer restricted to the pitch and interval ranges of the human voice, the rhythm and meter of dance or the practicalities of live performance, the new music takes

on qualities strange enough to present old sounds as strikingly fresh experiences -- provided, of course, that the barriers to listening are overcome in the individual, the culture industry and the composition in a way which does not reduce all to familiarity.

The electronic transformation of everyday sounds, common musical elements and background tonal webs has an educative effect. It reawakens the ear from an overly literal, visual world. Electronic music has an experimental élan about it, not just because we are in a transitional period and electronics is a new medium, but because these works lead the listener on an exploratory path through the universe of sound around him. Intimations of warfare, space-age movement and motoric rhythm in electronic pieces are only the most obvious Instances of this. Stockhausen stresses that electronic music should sound electronic, and it is largely electronic technology that gives us our world, particularly its noisy acoustic dimension.

Two reasons for electronic music's experimental quality can be given in terms of the social context. Recent composers reject the props to listening exploited by commercial music, arrangements of romantic music, movie soundtracks, television backgrounds and advertising jingles. They are thereby forced to search for new approaches, less manipulative of their material and their audience, Techniques suggested by the medium are tried out, judged by the ear, varied, explored. Encouragement of the unanticipated becomes the paradoxical goal. The listener, too, must remain open to the unknown, struggle with a work's meaning and draw conclusions.

Secondly, the use of generalized technical equipment for synthesizing sound structures creates its own world of possibilities, circumscribed by the use of one or more loudspeakers. This largely unexplored realm calls for new emphases and for divergences from practices appropriate to instrumental music. Traditional instruments were developed with the triadic chord in mind and expressive interpretation as a primary goal. Now, with synthesis by means of scientifically standardized circuits, the elements into which the technician can analyze all acoustic phenomena assume major significance.

Theory of sound emerges in the practice of electronic music with thematic prominence. Because everything must be built up from scratch -- from abstract temporal orderings, that is -- certain effects unrealizable with an orchestra can be achieved more easily than can simple harmonies. Previously unimaginable sonorities and the whole range of temporal intervals are readily available. Through careful splicing of tape or with the aid of electronic control, the most intricate rhythms can be produced.

One possible formal approach to an electronic composition is to select a potential of the medium and to explore it systematically, cycling through the various possibilities under a series of conditions. The varying parameters can, as in several works by Stockhausen, mediate between polar extremes of some compositional factor like interpretational determinacy or timbral complexity. The piece produced by such a more or less autonomous system could be considered an experiment or investigation. Both the formal structure and the sensuous experience resulting would derive from the acoustic material and the choice of system for articulating it. The ring of objectivity would most likely be present, for emotional manipulation would have been fairly thoroughly excluded.

The compositional form that results from such an investigatory approach, assuming no traditional form were imposed, would be that of interrogation or dialogue. From this orientation, the history of electronic music appears as a series of question-and-answer interchanges between the human ear and physical sound, where both participants essentially belong to the technological age. The work as magnum opus dissolves into a halting step within a continuing social process. This change in artistic form agrees with changes in social production and political relations: individual objects, machines, personalities and institutions merge into all-encompassing processes. This processual character of the larger compositional form reflects back on the elements in terms of an emphasis on acoustic patterns as distinguished from atomistic notes.

The particular form suggested for an electronic piece is only meant to be illustrative. To demand that all works adhere to one pattern would be to imitate the mass media, rendering rebellion harmless by freezing potential into law and advertising it as the avant garde, which all who wish to be timely must obey. But the true avant garde is united only in its rejection of the commercially codified; it seeks alternatives everywhere. Each of Stockhausen's pieces, for instance, pursues a different idea: rhythmic permutation, timbral variety, spatial movement, changing essential parameters, total system, human improvisation, pure chance, degrees of determination, vocal, orchestral, electronic, mixed sources. Each idea could become a school, but he prefers to use each as a base for further innovation.

Differing directions within the avant garde are related primarily by mutual recognition throughout the art world. They do not ignore or fall behind the insights of one another. Musically, each can stand on its own, although some may be inherently more interesting, and others will appeal more to certain tastes. Their historical significance for future composing and listening is fundamentally critical, not dogmatic. As long as the avant garde is seen as demanding that all music henceforth be just so, it only serves to create fashion trends which reinforce the exclusion of alternatives. The point is not that all music after Schoenberg must be based on his twelve-tone system, but that it can no longer be like before without

sounding false and anachronistic, without taking the side of reaction and bowing to commercial interests.

Schoenberg and Stockhausen preserved purely musical qualities of the tradition -- aural delight, expressivity, mood, serenity, excitement, contemplation, sensuality -- by rejecting schemes which had lost their value. Certainly, these innovators must have opened potentials whose consequences they could not themselves draw. Their work requires that future composers explore where they left off, rather than imitating recently devised systems. Perhaps it is not as important to create electronic music as to create something with it. This could possibly entail transforming it from a plaything of the privileged into a model source of creativity, enlightenment, liberation and joy for all, preferably not just on the weekends. In the present situation this may be the appropriate interpretation of art's imperative: Be absolutely modern!

-- Written as a handout for a course on “Introduction to Philosophy,” using Adorno’s *Prisms*, Northwestern University, 1974.

5. Utopian Optics: Theodor W. Adorno's Prisms: Cultural Criticism and Society

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The English-reading world has recently been offered the alpha and omega of Adorno's systematic works. The following of Adorno's books are now available in English:

- Adorno, T. W., Horkheimer, M. (1944/1973) Dialectic of *Enlightenment*. Seabury.
- Adorno, T. W. (1948/1973). *Philosophy of Modern Music*. Seabury.
- Adorno, T. W., et al. (1950). *The Authoritarian Personality*. Norton.
- Adorno, T. W. (1953). *Prisms*. Neville Spearman.
- Adorno, T. W. (1964). *Jargon of Authenticity*. Northwestern University Press.
- Adorno, T. W. (1967/ 1973). *Negative Dialectics*. Seabury.

Page references in the following are to Prisms.

Not only do *Dialectic of Enlightenment* and *Negative Dialectics* present Adorno's original programmatic evocation and his final methodological summary respectively, but the *Jargon of Authenticity* and *Philosophy of New Music* footnote these with lengthy statements on two favorite leit-motifs: the polemic against Heidegger and the praise of Schoenberg. Yet, one suspects this is all too good to be true; it couldn't happen in America. Paradoxically, it seems, the very culture industry Adorno accused of fostering the uncritical attitude is now dispensing the systematic essence of the most advanced critical theory of society.

But *Negative Dialectics* does not present the core of yet another philosophical edifice, adequately expressed in a systematic summary. Rather, it represents the thorough rejection of such monstrosities, in the end uncritical affirmations of an evil social totality. The methodology of *Negative Dialectics*' "anti-system" is fundamentally a referral back to those concrete analyses it purports to summarize. Taken in isolation from Adorno's prior investigations, *Negative Dialectics*—meant to formulate the self-consciousness of those instances of critical thought and

to establish their priority over the retrospective methodology—is alienated from its object and open to summary rejection as an example of precisely that mode of deranged consciousness it unceasingly battles.

How then is one to bring Adorno's thought into focus without distorting it, without obscuring what is unique and critical in it? The choice of his most systematic works for translation was not the author's. Adorno himself selected an assortment of essays as his gift of gratitude to England and America for housing him during the Nazi era. Perhaps these essays on social science, literature and music contained in *Prisms*—a volume which has for some years been available in polished English without creating much notice—provide a clearer introduction to Adorno's approach than the explicit theses of his later exposition. It is the claim of the following presentation that *Prisms*—and especially its lead essay—reveals Adorno's "system" *in nuce*, derives its premises from the nature of its material, and demonstrates the theoretical primacy of its content in the form of its practice.

The first essay in *Prisms*, which gives the book its subtitle: "Cultural Criticism and Society", is especially programmatic. Characteristically, its formulation of Adorno's procedure is at once an example of the critical method at work and a derivation of that method through a process of critique, proceeding from a devastating attack on the existing profession of cultural critic in order to develop an alternative conception. As the essay's title anticipates, attention centers upon the social relationships that impinge on art and criticism. This pivotal point, as the motor force of Adorno's presentation, is itself mobile—both historically and within the essay.

Taking a preliminary overview, we can follow the movement of Adorno's presentation through three stages: A) The profession of cultural critic is attacked for being unaware of its dependence upon society. Not only does the profession necessarily affirm culture as a whole in criticizing specifics—with unrecognized but undeniable social consequences—but in doing so it isolates culture as a realm divorced from material society, distorting culture and depriving it of its truth. B) Culture today, in the form of mass culture, is attacked for its ideological role in society. To preserve its true value, art must respond to contemporary society with a complex interpenetration of autonomy and dependence, avoiding the ideological pitfalls at both extremes: art for art's sake and socialist realism. C) Correspondingly, the simple alternatives for criticism, the immanent and the transcendent approaches, are rejected: the formalist's absolutizing of culture is not overcome by a sociology of knowledge which relativizes culture just as absolutely. Modern art's actual balance of autonomy and dependence within the context of contemporary society dictates a more intricate role to the cultural critics: seeing the artist as critical theorist, as artist-philosopher-sociologist.

A. The culture critic

Cultural criticism is a contradictory business, says Adorno. In criticizing cultural products, the traditional critic must presume that he is himself cultured; in rejecting specifics, the evaluator assumes in general a fixed cultural edifice as his standard. Abrogating for himself a position above the masses, the cultural critic confers upon culture an autonomy from the work-a-day world of society, an absolute divorce allowing of no interaction. The attempt to establish a playground for art and critic is, however, a deception, for the critic is no less situated within the marketplace than the products of the culture industry that he evaluates. With its historical roots in the role of reporting on cultural goods, the profession of critic entails pricing—when not blatantly advertising—the cultural wares. Differentiating into low, middle and hi-brow, questioning a work's authenticity, referring to cultural "values": these are bargaining techniques, which make room for both exorbitant price tags and mass sales. The critic's autonomous objectivity thus stands in the service neither of art nor of audience, but of the dominant economic interests. Criticism's paradox signals its failure. Attempting to judge culture's finest achievements from above, the critic ends up peddling kitsch; claiming autonomy from society for himself and art, he enslaves both to the economy.

The critic's *hubris* ends tragically, not merely for himself and his profession—art, too, comes crashing down from the pedestal on which the critic enthroned it, shattering like the rigidified idol it has become. Just as intellectual freedom has been forced down a narrow path of self-destruction within the confines of bourgeois society, artistic autonomy has seen its very purpose contradicted by its development, thanks partially to the efforts of cultural criticism. The critic's pronouncement that the dissolution of feudalism and the rise of democracy had freed the mind and art from external coercion may have annihilated the consciousness of regimentation, but did not eliminate the fact. Instead, argues Adorno, "this regimentation, the result of the progressive societalization of all human relations, did not simply confront the mind from without; it immigrated into its immanent consistency." (*Prisms*, page 21) Precisely now, when the illusion of freedom is prevalent and critical thought should be assisting art in uncovering the unfreedoms which the artist must resist if he is to create, now the critic assumes that utopia has been achieved, that art is as free as he. Helping to weave the veil that obfuscates contemporary unfreedom, the critic unwittingly reduces art to that very ideology which liquidates art. The "culture as such" of the critics, unrelated to society, is neatly incorporated—without protest into a social totality which in fact allows less and less for critical perspective. Further, the freezing of culture into eternal values distorts the critic's judgments of urgent social matters. Contrasting his simplistic notion of culture to material concerns and rational thought, he cannot distinguish between the existing unequal distribution of wealth

and the potential to abolish hunger, between the repressive irrationality which today parades as enlightenment and true rationality. No isolated anachronism, the illusion fostered by cultural criticism represents an unfortunate response to the struggle of art in that same social context which conditioned this response and defines its tragedy.

B. Art and ideology

The present social niveau is characterized by an invisible but pervasive form of ideology, and modern culture has had to define itself in this context: pro or con. Previously, men fought and died for ideologies, today they live one; society was once to be transformed in accordance with one ideology or another, now it has become one. Ideology no longer takes the form of a rationalizing theory, but, according to Adorno, presents itself in the everyday praxis of society: "There are no more ideologies in the authentic sense of false consciousness, only advertisements for the world through its duplication and the provocative lie which does not seek belief but commands silence" (34).

The complementarity of the liberal and fascist techniques of control—the stultifying plugging of the status quo which suffocates any transcending image and the arrogant assertion of power which casts off all pretext to rationality—becomes transparent in times of crisis. Even *Time Magazine* (Nov. 5, 1973) revealed something of the affirmative character of mass culture as diversion: From his out-of-town retreat, "Nixon watched the Washington Redskins defeat the St. Louis Cardinals on television and telephoned his congratulations to Coach George Allen. If he had listened closely, Nixon could have heard automobile horns honking outside the White House in response to the signs of protesters: Honk for impeachment."

Professional sports are ideological—not so much for any message they may indoctrinate, but precisely because of their intellectual insignificance, because they fill the TV screen with exciting emptiness and the viewer's mind with information of no personal relevance. Subtle ideological biases of movie producers have consequently become insignificant, dwarfed by the role of the gossip Hollywood fabricates for the nation. Working under the demands of mass culture—that the product be entertaining but non-demanding, distracting but not stimulating, ever novel yet always familiar—the industry has so distorted culture that even the enclaves of tradition which have been preserved are meaningless. In the new context art must change to maintain its traditional intent. The stance demanded by our age of ideology for any art which hopes to retain its autonomy is one of protest against the latest "opium of the people"—the commodity—which, after the death of God, enthrones the individualized consumer upon the vacated seat of

glorification to secure his adjustment while obscuring his subservience to the economy. To maintain creative independence, art must recognize its social dependence; to retain social relevance, it must exercise aesthetic autonomy. According to Adorno's analysts, successful modern art distinguishes itself from kitsch—the subservience of art to its manipulated reception—through negation: unintelligibility.

Adorno's posthumously published aesthetics, which transforms philosophy into aesthetic theory, preserving the mandates of his philosophy while appropriating the experiential content of contemporary art, offers an abstract characterization of art's dialectical relationship to society: "Art negates the determinations categorically impressed upon the empirical and shelters, nevertheless, empirical beings in its own substance. . .. Even the most sublime artwork takes a specific stance towards empirical reality by removing itself from its influence—not once and for all, but always concretely, unconsciously polemical against reality's stance towards the historical hour…. The unresolved antagonisms of reality recur in the art works as the inherent problems of their form. That, not the inclusion of objective moments, defines the relation of art to society" (*Aesthetische Theorie*, p. 15f). Roughly speaking, art finds the content of its concerns in society, rejects, however, the form socially imposed upon these contents and re-forms them aesthetically, autonomously. Secondarily, of course, the choice of contents is aesthetically motivated, while, on the other hand, the character of the autonomous rejection and re-formation depends upon the historically specific social context of both the contents appropriated and the artist at work. That which confronts the artist, society as a coercive system of falsity, reappears in the work of art, sublimated in the aesthetic form that the artist created within and against his social confines.

Adorno's formalism is, however, not crudely opposed to expressionism when considered in the context of his social theory. To claim that a work is the expression of its creator's personal outlook is to ignore the fact that an artist's mode of perception is formed by his reactions as a child, student and sensitive individual to the pressures and conditions of society. If Adorno repeatedly argues that autonomous individuality has long since succumbed to pervasive societalization processes, then this is no less applicable to producers in the cultural realm, whether accepted professionals, struggling iconoclasts or hacks. The artist's worldview, displayed in the formal aspects of his work, in the way in which his work organizes its material for perception by solving the technical problems involved, is thus not a merely subjective matter, but is related to objective contents: prevailing social relationships. This is perhaps the most profound way in which the commodity relations that characterize capitalist society mediate modern art.

The artist's attempt to form aesthetically what has been repressed and misshapen socially inevitably involves a struggle with the distortions and conflicts of existing reality. This struggle, crucial to the emancipation of man from a social system that exerts an ideological stranglehold on all aspects of life, may today be confined to the workshops of those artists who actively resist the temptations of the culture industry. The work of art there becomes an image in which the character of society can be viewed as nowhere else: with an eye toward the possible reconciliation of repressive social contradictions. Often necessarily disharmonious by traditional standards, the aesthetic harmony created by modern art anticipates the order of the good society, one that would reject the contemporary principles of social organization.

C. Dialectical criticism today

Philosophy, midwife to truth according to Socrates, responds to the needs of the day by becoming cultural criticism, not in order to evaluate art, but to help bring its truth into the world. Not that philosophy is reduced to mere *belles lettres*. Rather, it takes into account the developments in society, in ideology, in culture, and redefines itself accordingly. In his time, Marx transformed philosophy into a social theory centered on the critique of political economy because he saw an historically developing increase in the importance of the economy for all aspects of life. Adorno, writing more recently, insists that because of changes in the nature of ideology, social theory now "must absorb cultural criticism, the truth of which consists in bringing untruth to consciousness of itself." (28) To assist art in giving birth to truth, philosophy that concerns itself with culture must, of course, avoid the shortcomings Adorno has accused cultural criticism of commonly incorporating. Philosophical or "dialectical" criticism represents the *Aufhebung*, or synthesis, of traditional immanent cultural criticism and orthodox transcendent critique, retaining the former's respect for the unique work, but transcending it with the latter’s concern with the social context, while negating the restrictive dogmatism of each. This form of criticism must incessantly cross the boundaries of the academic division of labor: "Dialectics cannot, therefore, permit any insistence on logical neatness to encroach on its right to go from one genus to another, to shed light on an object in itself hermetic by casting a glance at society, to present society with the bill which the object does not redeem" (33). The untruth which philosophy is to reflect upon is that of culture devoid of artistic transcendence or that of a world which falls far short of the potentials revealed in the artist's pregnant utopian images.

Traditional cultural criticism has either accepted culture in totality and worshipped it as a higher intellectual achievement divorced from menial material production

or else the realm of mind has been held in contempt as the battleground for interests based in the economy. However, to ignore the ties to society or culture and its criticism is not only to exclude their potential for importance while ignoring actual distortions, but it is also to reduce thought to ideology unawares. A dogmatic or absolute reduction of culture to social origins or political interests fares no better. Here the possibility that art—or criticism—could reveal anything is denied from the outset. Ideology itself has incorporated this relativizing of knowledge and blunted the critical edge of its accusations. The reduction of everything to the service of pre-defined functions and the characterization of all in the corresponding universal categories is, far from liberating, a trick of the ideological totality. Adorno notes that Marx' critical conception of the dependence of superstructure on base, having been absolutized by Mannheim's sociology of knowledge, has since been fused into the very ideology it was designed to attack: "No notion dares to be conceived anymore which does not cheerfully include, in all camps, explicit instructions as to who its beneficiaries are—exactly what the polemics once sought to expose. But the unideological thought is that which does not permit itself to be reduced to 'operational terms' and instead strives solely to help the things themselves to that articulation from which they are otherwise cut off by the prevailing language" (29). The epithets, "autonomous creation of genius" and "mere bourgeois ideology", opposed as they may appear, serve identically to prohibit the articulation of that which art, operating in the languages of its media, may have managed to experience.

What art expresses in the problems of its forms corresponds, according to Adorno's analysis, to contradictions within the structure of society. Philosophy as cultural criticism becomes social physiognomy, analyzing the society in their own terms by following out the logic of that which confronts and confines the artist. Never absolutely rejecting cultural phenomena for their weaknesses, Adorno scours the uniqueness of their failings for a clue to understanding the society that deprives them of strength. Not naively assuming that the utopian images of art have already been attained on earth, he insists on measuring the distance between those ideals and reality, using the divergence as a standard for evaluating the latter. The task Adorno proposes—and repeatedly carries out—requires the talents of a trained artist, a dialectical thinker and a social analyst. But above all it demands the ability to resist all temptations to ignore the unique or to universalize results without regard for history, society or subject matter. Consequently, each essay in *Prisms* is unique in approach, style and goal. The only repetition is that of the term "hypostatization" being hurled at those weaker souls (Mannheim, Spengler, Veblen, Huxley) who give in to absolutizing concepts or viewpoints—but just as this threatens to bore the reader, Adorno switches to his heroes (Schoenberg, Benjamin, Kafka), who overcome that tendency in their art.

D. Jazz as music

Until now the discussion has remained almost as abstract as those publications criticized on this count at the start. It is the virtue of *Prisms* that it does not end with its introductory essay, but goes on to analyze various cultural products in ways that amplify Adorno's methodological considerations: illustrate, expand and justify them. Particularly convenient for concretizing Adorno's approach is the trilogy of essays on music. The reflections on jazz, Bach and Schoenberg are subtle and the following remarks can only hope to use them to shed some light on the preceding consideration of art and society.

The first analysis of music defines the enemy: popular music, the result of eager adaptation to the requirements of commercialization. "Perennial Fashion—Jazz" begins by rejecting the standard claims for jazz's uniqueness on musical grounds, proceeds to illustrate the irrationality of social controls with the example of pop music and concludes with a social analysis of how this music works to cause its listeners to adjust to existing conditions. Predigested and already comprehended, the stock of techniques used in commercialized jazz is no longer an expressive language capable of innovation, but an instrument for the manipulation of emotional responses on a mass scale, hence no longer an art medium in which one could transcend the given circumstances or even struggle against them. The basic structure of popular music is completely standardized and only the melody is varied, a stimulus calculated to achieve fixed psychological results. The paradoxical twist in the essay's title refers to the demands of familiarity and novelty placed on entertainment as well as to the illusory appearance of society as incorporating continual quantitative progress along with eternal social structures. Jazz stands as a model for a stagnant society. Flattening the universe of possibility to the fact of actuality, it helps those who turn to it for something different—even rebellious—to adjust to sameness by discouraging critical thought about music or society. “Jazz is the false liquidation of art—instead of utopia becoming reality it disappears from the picture" (132).

"Bach Defended against his Devotees" presents the other, positive side of music, understood not as a cultural monument, but precisely in polemical opposition to those who enthrone Bach without learning from him. The conservative interpretation of Bach claims that he was attempting to conserve what had already become outdated. This simplistic notion fails, Adorno argues, to preserve what is of value in Bach's music. Not that Bach merely retained something of eternal value, “rather, what was becomes a means of forcing what is towards a future of its own making” (142). Briefly, "what was" was a concern for the essential structure of the musical score in contrast to the performed music's sensual appearance. Already rejecting the subjectivistic emphasis on the surface appearance, which became respectable in the Romantic era and disastrous in pop music, Bach reached the

heights of polyphonic composition precisely by continuing to stress the structure while rationalizing the techniques. The process of rationalization—which occurred in manufacturing as the division of labor and the analysis of production into elementary tasks—can be seen in Bach's use of developing variation, which treats the melody as a series of manipulable components. Because Bach's technical virtuosity remained informed by traditional concerns, it not only contrasts with those modern artists who make technique itself into the goal; Bach's achievement also stands as a condemnation of capitalism. For in the sphere of material production, the process of rationalization has been allowed to contradict the needs of the producers. The harmoniously composed society would, accordingly, be one which resulted from the subjugation of industrial efficiency to the repressed criteria of social use-value.

Arnold Schoenberg's is "music as the protest of nature against myth" (172). Its best-known characteristics, his twelve-tone system and his technique of developing variation, are not to be explained by Schoenberg's personal inclinations and only partially as a logical consequence of developments in avant-garde serious music. Rather, according to the third essay on music, they represent a necessary reaction against the products of the culture industry. Having reduced musical structure from the beast's essence to a fossilized skeleton on which to hang alluring sounds, the pop music of AM radio trains its victims not to look more than skin deep.

If a composer today hoped to communicate by means of what had always been the essential structure in music, he would have to eliminate the distracting appearances and forcefully confront the audience with that which music-lovers had once sought out. Where Schoenberg's twelve-tone system effectively annihilated the familiar facade—abolishing traditional melody with the harmonic key signatures—developing variation filled out the essential structure without introducing inessentials. The initial shock of Schoenberg's music, its seeming renouncement of intelligibility, resulted from his rejection of those crutches of easy listening which, having become second nature to the public's ears, obscured the very nature of music as something more than a cover for the silence of contemporary isolation.

Adorno's musical judgments, especially his critique of jazz, seem counter-intuitive to many readers today. However, just as social developments have made the traditional conception of ideology obsolete without thereby improving the clarity of social self-consciousness, so certain jazz-rock groups since the early 1950's (when Adorno wrote the essays in *Prisms*) may, for instance, escape the letter of Adorno's objections to swing without warranting his praise. The Beatles' style certainly incorporated an element of life lacking in previous pop music and the protest songs had undeniable political content, yet the speed with which their melodies were systematically adapted to productivity-increasing background hums

indicates that they had failed to make an aesthetic transformation in the structure of the music itself comparable to Schoenberg's. This may partially explain their end result. More effectively than the blatantly inane earlier pop music, subculture rock organized the discontented into a collective, standardizing their disaffection and thereby reintegrating them into a controllable sector of precisely that mass culture that was to be rejected. If it is nevertheless true that certain avant-garde jazz artists or psychedelic rock groups have broken free of the standardized routines that have come to define their media and that they force their audience to struggle with a creative art form, then perhaps they have achieved something of that potential which Adorno pointed out being systematically repressed by the culture industry. A final evaluation of these musicians would have to deal with their relation to the state of the art in serious music, their stress on interpretive style and expressionistic coloration over compositional technique and the effects of commodity relations on their art, issues on which Adorno's thought remains largely unsurpassed. Such an attempt to problematize Adorno's judgment of pop music by critical reflection under modified cultural and social conditions would, far from constituting a rejection of Adorno, be to adopt his restless spirit.

E. A kaleidoscope of critique

Prisms is the practice which *Dialectic of Enlightenment* called for and *Negative Dialectics* reflected upon. But *Prisms* is itself self-motivating and self-reflective; its essays reveal a correspondence of form to content, an interaction of analysis and object. Its arguments are not open to glib objections, for they are inextricable from the material that they articulate. By contrast, *Negative Dialectics* will undoubtedly be dismissed off-hand as based on presuppositions, try as it may on each of its several hundred tortuous pages to argue that dialectics brings no standpoint of its own to its battles, no standards or ideals. But look at the analyses in *Prisms.* The standards for evaluation and the ideals are culled from the material, in the contradiction between an autonomous development in art and the stunted growth of its social parallel, for instance, or in the effects that the subject matter shows of external repressions. Adorno's ideal consists of a condition in which these contradictions and repressions, today forced upon men by a specific arrangement of society, will disappear along with hunger and distress. No utopian construction in the pejorative sense, Adorno's outlook, rooted in the present, contrasts as sharply with those like Huxley's which stand the problems on their head: "Full of fictitious concern for the calamity that a realized utopia could inflict on mankind, Huxley refuses to take note of the real and far more urgent calamity that prevents utopia from being realized. It is idle to bemoan what will become of men when hunger and distress have disappeared from the world" (116).

Nor does Adorno impose an external problematic. The controversial points have already been raised by a tradition of cultural criticism, which is then subjected to Adorno's critical eye in terms both of the phenomena themselves and of the social context of the criticism. Adorno thus treats modern art the way Marx dealt with capitalist production: where Marx's critique of political economy founded itself in a critical appropriation of the theories of Adam Smith and David Ricardo, Adorno starts out by taking the culture critics to task. This is the only approach consonant with the insight that consciousness is a social product, i.e., that the way in which a society reflects upon itself, and its creations is itself a social symptom requiring analysis.

Consciously situated within the dynamics of social history, Adorno's analyses make no claim to completeness or infallibility, as the form of his presentation shows. An essay is neither a deduction nor a definitive report, but a speculation on some topic which those who insist on certainty would have to ignore. It raises issues, develops aspects, suggests approaches and then leaves the matter partially open. According to his own theory, Adorno can never rest, for not only are the phenomena to be treated as processes of infinite mediation—never exhaustively analyzed if only because they are inextricable from the social totality—but they are historical, changing from decade to decade, if not with the seasons.

The style of Adorno's prose and the structure of his presentations, inevitably as alienating on first encounter as his iconoclastic insights, represent responses to the nature of the subject matter. The clear and distinct notions that form the traditional ideal for philosophical discourse fail to capture the object in its relationships, with its conditional restrictions, and as the result of an historical formative process. For Adorno, materialism implies that the object determines the concepts for its comprehension: "The thesis of the primacy of being over consciousness includes the methodological imperative to express the dynamic tendencies of reality in the formation and movement of concepts instead of forming and verifying concepts in accordance with the demand that they have pragmatic and expedient features" (43).

Further, given the social context which conditions the reading public the same way it determines art's audience, an essay written in a commonsensical style will be casually read like a newspaper, either ignoring the deeper issues or uncritically accepting the prevalent interpretation of them, while a work with several levels of meaning will be grasped only at its most superficial. Like a work of modern art, Adorno's writings attempt to escape the socially imposed “systematic distortion" associated with the expectation of immediate comprehension and the phenomenon of intellectual fads through the technique of "methodical alienation". Convoluted syntax and esoteric vocabulary are only the most obvious features. Suppression of logical connectives forces the reader to reconstruct the arguments, making him pause to reflect and reach his own conclusions. Technical terminology is also

lacking, so that the things themselves can appear out of the configuration of descriptions, unhampered by rigidifying concepts, which would be open to endless and irrelevant debate. The theory which structures the material is implicitly present between the lines of description, as inseparable from details in the presentation as it originally was from the aspects of its object. In this way, Adorno tries to escape the threat which hangs over all prose: "No theory, not even that which is true, is safe from perversion into delusion once it has renounced a spontaneous relation to the object" (33). Critical of the unnecessary shortcomings of society and of philosophies that justify them, Adorno does not turn to mere polemic, but radically transforms philosophy's form in response to its context.

Recognizing the necessarily tentative and incomplete character of his analyses, Adorno has never closed a topic, but incessantly returns to the same themes from different angles, in varying configurations. If the essays reviewed here are prisms, each displaying a unique rainbow of ideas from the spectrum of concerns in Adorno's thought, then his life's work is a kaleidoscope, blinding at first sight, but enlightening thereafter. Its importance lies in the utopian tint captured in its perceptions of existing reality.

Chicago, May 1974.

Appendix

The following is a translation of a selection from Adorno's discussion of "The relationship of art to society" in his Aesthetische Theorie (Suhrkamp Verlag, Frankfurt/M, 1970). Including the excerpts quoted above, the selection appears on pages 14 to 16 of the German.

Art and artworks are superfluous because they are not just art, but also something foreign, opposed to it, dependent not merely as heteronom, but right into the structure of their autonomy, ratified by the social positing of labor-dividing and shattered spirit. Its own concept is imbued with the ferment which nihilates it. — The aesthetic breaking remains irrevocably that which is broken; the imagination, that which it imagines. That is especially true for the inherent goal-orientation. In the relation to empirical reality, art sublimates the principle of *sense conservare* (self-preservation), which reigns there, to the ideal of the self-sufficiency of its creations; one paints, according to Schoenberg's statement, a picture, not what it represents. On its own, each artwork wants the identity with itself, which is violently forced upon all objects in the empirical reality as the identity with the subject—and thereby lost. Aesthetic identity is supposed to assist the non-identical, which is repressed by the compulsion to identity in reality. The artwork

can only become being to the second power thanks to the separation from the empirical reality, which permits art to mold the relation of whole and part according to its own needs. Artworks are representations of the empirical living in so far as they allow them to receive what is refused them outside and thereby free them from that to which their thingly-external experience directs them. Although the line of demarcation between art and *empirie* must not be eliminated by making the artist a hero, the artworks nevertheless have life *sui generis* (self-created). It is not merely their external fate. The important ones continually bring forth new levels, age, chill, die. That they, as artifacts, human products, do not directly live like men, is a tautology. But the emphasis on the artifact aspect in art relates less to their having been produced than to their own constitution, regardless of how they came to be. They are alive in speaking, in a way forbidden the natural objects and the subjects, who made them. They speak thanks to the communication of everything individual in them. Thereby, they form a contrast to the dispersion of the merely existent. Precisely as artifacts, however, products of social labor, they also communicate with the empirical, which they dismiss, and they cull their contents from there. Art negates the determinations categorically impressed upon the empirical and shelters, nevertheless, empirical beings in its own substance. If it may oppose itself to the empirical through the moment of form—and the mediation of form and content cannot be grasped without distinguishing them—the mediation is nonetheless with a certain generality to be sought in the fact that aesthetic form is sedimented content. The apparently purest forms, the traditional musical ones, date back in all their idiomatic detail to contents, such as dance. Ornaments were frequently once cultic symbols. A tracing of aesthetic forms back to contents, as the school of the Warburg Institute did with the specific object of the ancient after-life, should be carried out more extensively. The communication of artworks with the external, however, with the world against which it closes itself off as holy or unholy, takes place through non-communication; precisely thereby they show themselves to be broken. It is easy to imagine that their autonomous region has nothing more in common with the external world than borrowed elements, which then appear in a completely transformed context. Despite this, the triviality in the history of ideas, that the development of the artistic methods, usually gathered together in the concept of style, corresponds to the social development, is undeniable. Even the most sublime artwork takes a specific stance towards empirical reality by removing itself from its influence—not once and for all, but always concretely, unconsciously polemical against reality's stance towards the historical hour. That the artworks, as windowless monads, "imagine" that which they themselves are not, can scarcely be grasped other than by assuming that their own dynamic, their immanent historicity as a dialectic of nature and the mastery of nature, not only has the same essence as the external, but in itself resembles that other one, without imitating it. The aesthetic productive force is the same as that of useful labor and has in itself the same teleology; and what might

be called the aesthetic relations of production, everything in which the productive force finds itself embedded and upon which it works, are sediments or fingerprints of the social ones. The double character of art as autonomous and as *fait social* (social fact) incessantly infects the zone of its autonomy. In such relations to the empirical, they save, neutralized, what men once experienced literally and undividedly upon their existence and what drove spirit out from there. They participate in enlightenment because they don't lie; the literalness of that which speaks out of them does not deceive. They are, however, real as answers to the question-complex of that which comes to them from without. Their own tension is valid in relation to that outside. The fundamental levels of experience, which motivate art, are related to the objective world, from which they recoil. The unresolved antagonisms of reality recur in the artworks as the inherent problems of their form. That, not the inclusion of objective moments, defines the relation of art to society. The relations of tension in the artworks crystallize themselves purely therein and reach the real essence through their emancipation from the existing facade of the external. Art, *choris* (separated) from the empirically existent, gains a stance to it in accordance with Hegel's argument against Kant, that as soon as one sets a restriction, one already oversteps it in the setting and takes within itself that which was to be forbidden. This alone, no moralizing, is the critique of the principle of *l'art-pour l'art* (art for art's sake), which makes the *chorismos* (separation) of art to its one and all through abstract negation. The freedom of artworks, about which their self-consciousness boasts and without which they would not be, is the cunning of their own reason. They tie all their elements to that whose transcending constitutes their joy and back into which they threaten at any moment to sink.

Translated by Gerry Stahl, University of Frankfurt, May 1973.

6. A Modern Voice for Marx

Capital, volume one, by Karl Marx translated by Ben Fowkes as part of New Left Review's "Marx Library", Vintage Books, 1979, $7.95.

Much has happened since *Das Kapital* was first translated into *Capital*. Some skeptics would say that events—both in society and in our theoretical comprehension of reality—have overtaken that book. But this would be too superficial a rejection for a work presenting such a fundamental analysis of the capitalist system. The relation of Marx's publication to subsequent history should be seen in its dialectical complexity.

Economic science, political theory and critical philosophy have been transformed by Marx's approach as by no other set of ideas. Revolutions and social movements on every continent have proclaimed their goals in terms of one or another interpretation of Marxism. Such pervasive historical influences necessarily react back upon the original text and its vocabulary. Any reading of *Capital* today is bound to be filtered through the lenses of recent history.

Clearing away the jargon

This is not to bemoan the fact that we read *Capital* from the perspective of our own situation. Rather, it is a mark of the text's greatness that, like an important work of art, it responds with renewed meaning to the present context. What is unfortunate is that many of the terms that Marx innocently used have since been codified into a dogmatic jargon. They conjure up images and interconnections that limit their significance and distort their relevance to a non-violent democratic socialist movement within corporate America. Jargon muffles the text's ability to speak to us.

The recovery of Marx 's contributions from their orthodox fetishism is a political as well as intellectual act. For the transformation of critical thought into dogma serves the interests of established powers, not just well-intentioned popularizers. It has therefore been a priority of those who reject entrenched Party authority—e.g., such outsiders as the American new left, the Frankfurt School, the Yugoslav philosophers—to stress Marx's early works against economistic construals of *Capital*. More recently, rigorous academic studies have been carried out to combat

the distortions of Marx's later theories. (Harrington' s *Twilight of Capitalism* rehearses much of this work.) The setting has thus been prepared for a modern appreciation of Marx's mature masterpiece.

A voice appropriate to the times

Happily, we now have a truly fresh rendering into English of volume one of *Capital*, a fitting response to the theoretical needs and intellectual potentials of today. The clarity of the new translation allows anyone concerned with changing the present world to follow the argument of Marx's fully developed theory, unencumbered by archaic formulations and cliched phrases. The original translation took certain liberties in adapting a work aimed at German intellectuals to the English proletarian movement; the recent one aims with great success at capturing literal accuracy in modern English usage.

To-the-point footnotes have been added to clarify Marx's now obscure historical, political and literary references, while the original German of philosophically controversial concepts are supplied parenthetically to permit fully informed interpretation. The traditional text of Marx's volume is preceded by a lucid introduction and overview by Ernest Mandel and followed by the never-before-translated chapter, "Results of the immediate process of production," which Marx once wrote as a concluding summary to volume one. Together, these additions aid the reader in discovering the work's contemporary significance.

A handle on today's problems

Now the serious student of society needs only concentration and perseverance to follow Marx's presentations on such timely themes as:

- What is capitalism? Why its appeal? Whence its shortcomings?
- How does capitalism engender materialistic values and obfuscatory conceptualizations?
- Why must we work for wages from bosses?
- Does capitalism require substantial unemployment?
- What are the structural implications of a shorter workweek?
- Is modern technology molded by capitalist relations?

- Can investment policies respond to social needs?
- Do growth limitations in markets and resources pose a fatal threat to capitalism?

Questions like these may ultimately lead beyond *Capital* to theories of international relations, monopoly power, state intervention and political consciousness. The re-translation of *Capital* facilitates, at least, getting a handle on some keys to the answers. For, under favorable reading conditions, *Das Kapital* remains unsurpassed as a model of critical social theory and still provides the necessary basis for any attempt to go further. Having just read *Capital* in its modern English form, I am convinced more than ever of its importance to people working for socialist change.

7. The Theory and Practice of Democratic Socialism

The theory of democratic socialism begins with Karl Marx. There were anticipations of his orientation and ideas throughout history and there were social movements heading in this direction already around before Marx published anything. However, it can scarcely be disputed that Karl Marx carried out the definitive analysis of capitalist society in a way that lay the basis for a theory of a post-capitalist (or a socialist) society.

Marx made two central points that I would like to talk about here: (1) Capitalist society is not ideally harmonious; rather, it is fundamentally contradictory. (2) Capitalist society is ideological; that is, it hides its true (contradictory) nature. These two characteristics of our society make the topic of theory and practice very complicated. The practice whose goal is democratic socialism aims at overcoming the contradictory nature of capitalism, retaining its progressive features while eliminating such features as inequality, poverty and racism. This practical task requires the aid of a theory because capitalism hides its own nature in such a way that it is not clear what changes must be made or how they are possible. Conversely, the theory that is required is also complicated because it cannot just summarize the way things appear to be in capitalist society. The theory must uncover what has been hidden. This can only be done from the perspective of a practice that wants to change the way things are.

Another source of complexity in our topic is the torturous history of socialist practice and Marxist theory since Marx: in Russia and China, in the welfare states, in America under McCarthyism, etc. I would like to ignore all these distorted versions of Marx's theory for a few minutes and ask you to forget all you've heard about Marx and socialism elsewhere. Then, after I am able to outline my interpretation of Marx's theory it will be important for us to come back and discuss informally these other interpretations. But it doesn't make sense to raise too many issues before I lay out some ideas that can provide a common basis for discussion.

I'll try to simplify my job further, without ignoring the topic’s inherent complexity, by focusing on one moment of socialist theory, namely Chapter I of Marx's *Das Kapital* and one moment of socialist practice, namely that required by America at the present.

Marx' theory

Now, Marx' book is entitled *Capital* (that's the English translation for the German, *Das Kapital*), not *Socialism*. The theory it develops is an analysis of capitalist society. Yet, it is far and away the most important statement of socialist theory and is, in fact, avoided like the work of Satan by true capitalist believers. This confusing situation is due to the fact that for Marx social theory is the critical self-awareness of the members of a society. Marx's theoretical masterpiece is therefore simply an analysis of existing capitalist society, but from a perspective that uncovers the shortcomings of that society. By showing how the real achievements of capitalism (the overcoming of feudalism, the industrial revolution and political democracy) could be carried much further than they have been, *Das Kapital* presented the theoretical foundation for a post-capitalist society—that is, a socialist society.

In the hundred years since *Das Kapital* appeared, capitalist society has gone through many changes. This has not, I would argue, altered its most basic structures; rather, it has obscured them more. The vastly increased state intervention into the economy has softened the effects of exploitation with public welfare and shifted the forms of corporate power. Meanwhile, monopolies have all but eliminated family-scale business from the realms of manufacture. At the same time, popular culture spread through the mass media has transformed the ways people view their lives and their society. Socialist theory has not kept pace with these changes. In America, in the welfare states of Western Europe and in the bureaucratic states of Eastern Europe, theory has become simplistic, dogmatic and narrow-mindedly pragmatic. It is all but useless and it has failed to inspire real progress toward democratic socialism.

More than ever, socialist practice now calls for the development of serious capitalist analysis. Whatever changes the capitalist system has undergone from free enterprise to multinational corporations—and we can only fully appreciate the extent of these changes on the basis of a theory of capitalism—it seems to me that one key concept of a contemporary theory must be the "commodity," as Marx analyzed it in Chapter I of *Das Kapital*. So, I am recommending that—as a necessary part of our own socialist practice—we return to at least sections of *Das Kapital*. But, of course, we must do this theoretical work from the perspective of our practical position as members of advanced industrial society and as people struggling against the many oppressive features of our society. As a first step in developing a theory for today, let us follow Marx's analysis of the basic social relation of capitalist society: the commodity relation.

The commodity relation

A capitalist society is an exchange society, a market society. In all previous societies, exchange took place on the periphery of social life. The market occupied a secondary role in the prevailing economy. Previous societies were predominantly agricultural and the family, clan, tribe or whatever grew and built for itself most of what it needed without ever having to specialize and exchange. Gradually, during the feudal period in Europe, certain things like spices from the Orient and products of the guild crafts were traded for surplus food. Once begun, trade grew more and more important until today exchange predominates throughout our society. When things are produced for exchange, we call them "commodities."

The predominance of exchange should be taken quite literally: all aspects of our social life are dominated by the consequences of commodity exchange. Karl Marx arrived at the conclusion that this fact is the essential starting point for any analysis of the logic of capitalism after years of intense and brilliant research. He therefore began his systematic presentation of capitalist society with a rigorous analysis of exchange in the opening chapter of *Das Kapital*. I would like to summarize that analysis now. To lay my cards on the table first, I'll state the conclusion I'm aiming at, namely that Marx's analysis of exchange yields the two central characteristics of capitalism: (1) production is socialized, it takes on a universal quality, while ownership is not socialized, but remains private, and (2) social relations are hidden, or "fetishized", they appear in a form which distorts their nature.

Let us return with Marx for a moment to the imaginary or logical origins of capitalism. Suppose you and I are private farmers in a pre-capitalist society. We are each self-sufficient, but in addition during the winter months I make some extra coats and you produce several hats, and we agree beforehand to exchange one coat for two hats. Then the value of my coat to me would be two of your hats: "l coat is worth 2 hats." Now, there are two senses of "worth" or "value" at work here. The coat's value is in giving warmth; the hat's is in protecting its wearer from rain, sun and wind. This we can call their "use value." When I decide what to grow and make for myself, I set my priorities in accordance with the use values of the various possible products.

When I make my own coat, my goal is that coat's use value. But, when I make a coat to sell to you for two hats, my goal is the use value of your two hats. In this second case, the value of my coat is determined relative to your hats. This value, which is realized through the process of exchanging the coat for the hats, we can call the "exchange value" of the coat.

In producing a coat for exchange rather than for my own use, something peculiar has taken place. The value of my coat is no longer its own use value, but the use

value of your two hats. Conversely, from your vantage point, the value of the hats you produced is given by the use value of my coat, not by their own use value. Thus, we have: “1 coat is worth 2 hats” and “2 hats are worth 1 coat.” Of course, I can trade my surplus coats for anything that someone else has available for trade. Thus, in a market situation, we have such equations as: "1 coat is worth a pair of shoes," "l coat is worth 3 chickens," "1 coat is worth an ounce of gold," etc.

Just as the first equation was reversed, yielding "2 hats are worth 1 coat”, so can all these new equations be taken in the reverse order. Thereby, the values of shoes, chickens, gold, etc. can all be represented by the use value of coats. The coat would then be the universal medium of value. Shoes, chickens, gold and all other commodities that can possibly be exchanged on the market are equated to each other through their relationship to coats. The equations of exchange equate all commodities as embodiments of abstract exchange value. In our society, money plays the universal role that coats did in my little story. All commodities have an exchange value that can be stated in dollars and cents. They are all equated to each other in various quantitative proportions. Their various natural qualities, which were so important for their use value, are unimportant for commodities considered as abstract exchange values.

Capitalist society

The model of exchange I have just outlined has several layers of significance. It reflects the general historical development of the international commodity market. It sets the stage for a critique of the ideology of free enterprise. And it provides a starting point for the conceptual analysis of the logic of the capitalist economic and social system in terms of use value and exchange value. In Marx's approach these three levels are intimately related.

We can already see what I stated as the two central characteristics of capitalism emerging as consequences of the analysis of exchange: production becomes universalized and social relations become hidden. In the process of exchange all commodities—no matter how different in physical qualities and use values—are made universally equivalent by having their value determined by the same thing: money (or coats). This universal equivalence of all possible products of human labor, which may at this point seem to you to be merely a debater's trick, corresponds in fact to the division of labor in society.

Because all production has become equivalent, I need not produce a little of everything I need, but I can specialize in producing coats and exchange them for everything I personally need. Of, course, the "choice" to specialize was rarely a

matter of personal preference historically. When the feudal serfs were thrown off their land, they had little choice but to go into the cities and get specialized jobs. Through a whole series of developments and at a rate varying from country to country, a transformation took place from self-sufficient economic units (family, tribe, clan, estate) to specialized producers who were dependent upon exchange. By today, the division of labor has made production so interdependent and universal that my very technical work at the office enables me on my break to drink coffee grown in South America out of a European cup set on a place mat woven in Asia.

The division of labor based on exchange means that production is socialized. My own productivity at the office is only meaningful, only has use value, as part of the production of society as a whole. Its value to me is embodied in my coffee, cup and place mat which have use value to me, but which are related to my actual labor only through the total economic process of society.

What this in effect means is that we are all working for each other, all relying on each other for the necessities and luxuries of life. The original deal between the hat maker and the coat producer was, perhaps, a matter of convenience; now exchange is absolutely basic. Then, the makers of hats and coat recognized each other as human beings cooperating with each other. Now, however, the universal cooperation is hidden from our consciousness. This is the second characteristic of capitalist relations, in addition to their equating of all labor and all commodities. The problem is that the relation of use value to exchange value has been obscured. In that original, simple trade, we already caught a glimpse of the beginning of a confusion. The value of my coat was given in terms of the use value of your hats. By the time we get to the situation today, things appear in quite different terms. I have to get a job in order to earn money to buy the commodities I need and desire. It is not apparent that I am producing for other people's needs and they for mine. I relate only to my boss, who I must obey to keep my job and get a raise.

If I want to understand the relation of my work to my needs, my boss and other people, I will need a theory because these relations are hidden by the nature of capitalist exchange. The theory will have to analyze society as a totality because society has become an integrated totality as a result of the universalizing of labor and the equating of all commodities. The two characteristics of capitalism thus determine the nature of an adequate theory of capitalism such as the one Marx formulated.

The ideology of free enterprise

The ideology of free enterprise is an alternative theory of capitalism. It does not, however, theorize society as a totality, nor does it conceive of capitalism as an historical result. It justifies, legitimizes or apologizes for the relation of worker to boss in terms of an exchange of equivalents. The worker supposedly exchanges his labor for its equivalent value in wages.

Marx criticizes this ideology by drawing upon the analysis of use value and exchange value. The boss (or capitalist) pays the worker at the exchange value of his labor, which is generally the subsistence level necessary to keep workers alive and productive. The capitalist gets in exchange the use value of the worker's labor: however much the worker can produce. Thus, the exchange is not truly an exchange of equivalents. The difference between the exchange value and the use value of labor accounts for the capitalist's profit. The history and dynamic of capitalism centers on increasing this difference, both by holding down wage levels and by raising the productivity of labor through scientific knowledge, technical innovation, efficiency and repression.

To the guy on the street, getting a job seems as much a natural necessity of life as breathing. In Marx's theory, however, the economic relations of capitalism are a matter of historical development, not of natural or logical or moral necessity. Further, they are contradictory. The central contradiction of capitalism, hidden because capitalism hides relations and distorts appearances, is this: production is organized socially, but owned privately. A worker produces commodities neither for himself nor for a particular other person, but for society at large. His own needs are satisfied neither by himself nor by any particular group, but by society as a totality. Yet, the mechanism by which this all takes place is determined privately with the goal of maximizing private profits.

Let us take a hypothetical example. Suppose that our society has a housing shortage, but it already has a surplus of bombers. And suppose that a corporation has money to invest in a new business, to hire workers and to purchase equipment for producing something. Now it just so happens that labor is much more productive in building over-priced bombers than in putting up houses that working people can afford. Clearly, the corporation will see that it can make more profit from bombers, and it will lobby for a juicy military contract while ignoring the crying social need. So, the priorities for deciding what will be produced for society are not directly related to social needs. Social exchange value may be very different from social use value.

The socialist alternative

A socialist analysis of modern American society, based on the categories of Marx's critical theory approaches the problems of housing, energy, food, etc. in terms of the fundamental contradiction of capitalism's private ownership of public production. The decisions that affect the whole society are made on the basis of considerations of private profit. The crises of the cities and the environment, the wastefulness of the military and space projects, the reinforcement of racism and poverty, the continuance of unemployment and inflation can all be related to the conflict between the public and the private which defines capitalism.

"Socialism" means socializing the decisions that direct the social process of production, bringing these decisions into line with the process of production, which has already been socialized by means of the division of labor. This would be to carry out the potential already developed by capitalism and the industrial revolution, at the same time purging it of the conflict that distorts its appearances and its consequences. If decisions of production were based directly on social needs, social use values, then the relation of workers to society would become clarified. Further, workers could contribute directly to society according to their abilities and receive from society as a whole in accordance with their real needs. The difference between a worker's use value and his exchange value would cease to be significant. That would mean an end to the history of exploitation. Further, there would no longer be the encouragement of false needs of consumers and of society at large, which presently promotes waste for the sake of abstract profits.

"Democratic socialism" means the democratic determination of production decisions to ensure the meeting of social needs, which are agreed upon by public consensus. This does not involve nation-wide elections on every item in every factory budget. For one thing, decentralization of many decision-making processes would have to take place. Rather, I should think, an informed public would have to reach a general consensus as to social priorities. This would clearly necessitate a transformation in the role of the mass media, which already provide the required technology for communication. Then institutions would have to be established which truly enforced the interests of the public. Here formal democracy, extended throughout the economic realm and the productive process would provide the basis. By eliminating the conflict between private profit and social needs, much of the tendency to corruption would be eliminated.

Community and theory

A post-capitalist society of a democratic socialist nature would differ from our society in innumerable and. unimaginable ways. I will just suggest two ways I can imagine. (1) The universality of production will become a motivation and basis for community. (2) The democratic planning of society will entail a high degree of theoretical understanding of social problems and social relations. Today such possibilities are hard to imagine because they are so thoroughly blocked by the dominance of private profit, which privatizes interests through competition and atomizes the individual's self-consciousness into that of a passive consumer rather than a social agent.

These two necessary characteristics of a democratic socialist society are also required for bringing about the change from a capitalist society to such a post-capitalist social form. Community and theory are prerequisites for socialist change. A sense of community and an eagerness to work, live, study and struggle together are needed to overcome the self-centered attitudes instilled by capitalist social relations. A coherent mass movement is ultimately the only guarantee that leaders and representatives will act in the real interests of the majority. A theory that can guide the movement's understanding of the root causes of social ills and its awareness of forces which might co-opt reforms is also of obvious importance.

I would like to conclude by suggesting that, given the present circumstances of American politics, corporate power, ideological culture and sectarian leftism, the most immediate needs are for community and theory. The community and theory I have in mind are open, personal and alive, not repressive or dogmatic. They must incorporate much that is of irreplaceable value in the heritage of the past and relate it to a vision of the future that is firmly rooted in the actual present. I hope it is clear that this community and this theory can only arise out of a political engagement that confronts the capitalist reality with socialist ideals. But before there can be any question of assuming any form of political power, a long process of self-development must take place within the dimensions of community and theory. This process is the context in which I view this course at LaSalle.

Tonight, I have tried to help you take a first step in the theory of socialism. Marx's analysis of commodity exchange stands at the start of *Das Kapital*, his theoretical masterpiece, yet it is rarely discussed because it is so abstract. I hope my presentation can help you get through the difficult opening of *Das Kapital*. The rest of the book is filled with wit and historical illustration as well as theoretical brilliance and social insight. I hope that some of you will be encouraged to struggle with Marx's work, for I am convinced that it is still necessary for people interested in socialist alternatives to come to terms with Marx's analysis. In preparing for

tonight, I have convinced myself to deepen my knowledge of Marx's theory. Perhaps we can work together on this in the future.

The other sessions in our course here will discuss possibilities for action in today's social and political scene. Working for social change in the kinds of ways to be discussed will either develop both serious theory and a sense of community or—and this is my point for tonight—or it can accomplish nothing toward bringing about a democratic socialist practice.

[This was the first lecture in a course on democratic socialism taught by Gerry Stahl at LaSalle University in Philadelphia on October 19,1976, under the auspices of the Democratic Socialist Organizing Committee (DSOC).]

8. The Economic Facts of Unemployment

By Gerry Stahl

Neighborhoods. (Ed. Kristin Dawkins)
Philadelphia, PA: Institute for the Study of Civic Values.
Vol. 5, No. 1. New Years 1979.

THE ECONOMIC FACTS OF UNEMPLOYMENT

by Gerry Stahl

Unemployment seems so simple. Everyone understands that too many people are unemployed and it is not too difficult to list the harmful consequences to everyone of high unemployment. It seems that there should be a straightforward solution, for everyone knows there is a great deal of work to be done to meet people's needs.

The problem is that economic life is not so direct; it is more circular. People work, produce goods or services, get paid wages to meet their needs, work some more, produce more to meet consumers' needs, and so on. In our society, this cycle or work and payment takes place in the context of a "job." The job is created when someone invests money (capital) in production.

...ECONOMIC LIFE IS CIRCULAR...

"On the Belt"

The investor looks at the cycle of production differently from the worker. The institution or individual who invests expects the investment to be increased after the product is sold. Part of the increased return is reinvested, and part is kept as profit.

Production in our economy is, thus, a continuous cycle which converts raw materials into products, labor into wages, and capital into profits. Philadelphia has plenty of raw materials (like abandoned houses) which could be made into useful products. There is also no lack of labor power (unemployed people) which could be transformed into wages.

THE PROBLEM IS THAT THE INVESTOR LOOKS AT THE PRODUCTION CYCLE DIFFERENTLY THAN THE WORKER...

The problem is that the people who control the capital that turns raw materials and labor into production are convinced that they can get a better return on their investment--that is, they can make a bigger profit--elsewhere in the country and the world. Behind the issue of local unemployment, then, is the local failure to raise capital for production and services.

In searching for solutions, especially in the older industrial cities, some people believe we can attract new private investment from corporations and small businesses by offering tax breaks and cheap land for economic development. Others say that only public investment--funds from local, state, and federal government--can make the difference, given the recent trend of larger corporations to move out of the cities. A third group, activists in the neighborhoods' movement, believe that community organizations can acquire capital for themselves through credit unions, cooperatives, and other ways of pooling local resources for revitalization. Whatever the solution, the problem is finding capital. There is plenty of work to be done, and plenty of people to do it.

"Economic development" is the art of stimulating the economy in ways that encourage new investment and create new jobs. "Community economic development" is the art of raising enough capital within a specific community to produce its own investments and to create its own jobs.

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The Monopolization of Industry

Most Americans still believe that the best way to encourage private economic development is by promoting competition among companies for the profits to be made within a given field. Unfortunately, in many critical industries, competition as we imagine it--several firms fighting for a share of the market, lowering prices and improving quality to attract consumers--disappeared a long time ago. The little, unsuccessful companies have been unable to compete with the relatively small number of multinational corporations which dominate the market.

Of the United States' 213 major manufacturing industries, the top four companies in each case control an average of 42%--almost half--of the market. IBM, ITT, GM and Exxon are familiar examples of monopoly control. But the process of consolidation of economic power is continuing, accelerating and spreading to new areas.

Take beer and cigarettes, two popular consumer goods. In 1950 there were 440 beer companies in the US; now there are only 48, and the top 4 control 2/3 of all beer sales. In 1961 Philip Morris (maker of Marlboro and Parliament) sold only 9% of all cigarettes in the US; today it controls 25% of the market and, together with R.J. Reynolds, sells 67% of all cigarettes. Philip Morris, the second biggest cigarette company, now owns Miller, the third largest beer company.

Heavy industry is well monopolized on a world basis. In the U.S., the fifty largest firms account for nearly ½ of total manufacture sales, while the Fortune 500 companies account for 2/3 of manufacture sales and 3/4 of total industrial employment. Of these companies, 55% are extremely capital-intensive petroleum or chemical processing industries. Exxon, now the world's largest corporation, invests $400,000 in capital assets for each wage-earning production worker. Not much of their money goes to employees. This picture of monopoly power and capital is repeated throughout Europe and Japan.

The Power of Multinationals

One thousand multinational companies (half U.S. based) already control 75% of the Western World's capital, industrial production and distribution, and dominate foreign trade, the monetary system, and international politics. They are intimately linked with the giant multinational banks. This can be clearly seen by comparing Boards of Directors of major corporations and major banks. Many executives have seats on both boards at once; this is called "interlocking directorates."

Together, the largest fifty banks (thirteen American) have combined assets of nearly three trillian dollars. Considering that these assets are liquid and turn over rapidly, the volume of capital and money-credit transactions under the control and influence of these banks is truly astronomical.

Development in the Third World is almost entirely at the mercy of these institutions. In the 1960s, the largest portion of Philadelphia banking credits went to Latin America; this area of the world now accounts for 1/3 of total credits. In the last decade, Europe has received 42% of these credits, Asia has received about 18%, and Africa only 4%.

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Yes, at home we also believe that everything goes better with Coke...

The growth of multinationals has proved disasterous to cities like Philadelphia. Manufacturing jobs were always the most desirable in cities: they were highly-unionized, secure, with decent wages and benefits, and few entrance requirements. Unskilled workers emigrating to America, leaving their farms or coming up North, "made it" in American society thanks to manufacturing jobs.

Now manufacturers are moving their production to areas of cheap labor, and deserting Northeastern cities like Philadelphia. Automation aggravates the consequences. Even as manufacturers expand their production, they cut back on employment. Computerized production systems replace blue-collar workers, with only a few technicians needed to run the entire plant. The sky-rocketting capital requirements for high technology industries like Exxon distort the functioning of the economy. At this point, the objective of multinationals is not to produce goods and services, nor even to maximize profits, but to generate capital with which to grow and extend their power.

COMPUTERIZED PRODUCTION SYSTEMS REPLACE BLUE-COLLAR WORKERS...

Boston Globe/cpf

Thus, multinational companies building new plants will re-locate in other areas with low wages and no unions, and they will usually merge several of their smaller, older subsidiaries (regardless of the local consequences) to accumulate the necessary capital. They are helped along by the banks, which are increasingly interested in foreign investments themselves. In fact, Philadelphia's banks are "in the forefront" of the foreign banking business, according to Business Review published by the Federal Reserve Bank of Philadelphia. From 1972 to 1977, average foreign loans to average total loans increased steadily from 14% to 24% for Philadelphia banks as a group. Foreign earnings made by Philadelphia banks are 40% of their total earnings!

EXPORTS AND IMPORTS TRIPLED IN DELAWARE RIVER PORTS, 1972-1978 TO OVER $10 BILLION

And the dollar value of exports and imports passing through Delaware River ports has tripled since 1972 to over $10 billion. During the same period, U.S. private investment abroad grew at a compound annual rate of 34.2%.

These statistics simply demonstrate that Philadelphia-area capital is being re-invested in foreign countries--at the expense of the capital needs of small business here. The loss is felt by the manufacturing firms that have closed, by the deterioration of our neighborhood shopping districts for the lack of commerical credit, and by all of the houses abandoned for lack of mortgages and repair loans.

Runaways--The Tip of the Iceburg

In the 1960's and 70's jobs have been flowing out of Philadelphia, New York City and other old industrial cities of the Northeast and Midwest at an alarming rate. Among the most dramatic cases are the movement of textile mills to Georgia or the current threat of ITE-Gould to go to North Carolina. But the migration of manufacturing to the "Sunbelt" Southern and Western United States is only the most visible part of the disinvestment iceburg which is chilling inner-city employment opportunities.

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During a period of the last 25 years, while employment increased nationwide by 50%, the City of Philadelphia lost 8% of its jobs. Some of the city's jobs went to the suburbs, so that the Philadelphia region had an overall job increase of 25% in this same period. Other jobs migrated in various ways across the country, while still other employment potentials left the U.S. all together.

Manufacturing jobs were hit the hardest. Of 130,000 jobs the City admits to having lost since 1970, over 80,000 were in the manufacturing sector. This has meant drastic changes in the city's economy. Since 1950, employment in manufacturing decreased by 50%, construction by 35% and retail trades by 20%. Where over 45% of all jobs in 1950 were in manufacturing, today there are less than 20%.

In 1950, for the First Time, More Workers Were in Service-Producing Industries.

On the other hand, service employment has more than tripled. The result is that the percent of the work force in blue collar occupations (craft workers, operatives, and laborers) went down from 45% to 30%. Unfortunately, the shifts have left many former blue-collar workers from manufacturing industries in the unemployment lines and welfare rolls.

By 1985 Service-Producing Industries Will Provide 7 of 10 Jobs.

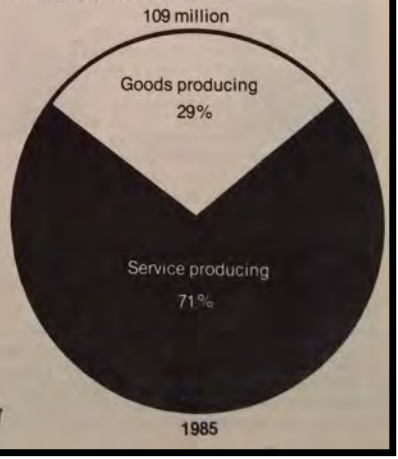
The corporate exodus from Philadelphia and other industrial centers is part of a national problem affecting the entire national economy. A report entitled Industrial Exodus argues that, "Domestic economic stagnation, largely caused by overseas investment of multinational corporations, is the context for the regional shift to the South now occurring." 7

Investment Redlining

Overseas investment by American corporations, estimated at $118.6 billion in 1974, makes the total overseas output of American multinationals the world's third biggest GNP, behind only the U.S. and the U.S.S.R. This resulted in an estimated job loss between 1966 and 1973 of approximately a million American jobs, 735,000 of them in manufacturing.

Plants "run away" in different ways. Small, independent businesses are usually geographically stable. The typical pattern is not simply that an entrepeneur picks up and moves to greener pastures. In cases like ITE-Gould or Youngstown Sheet and Tube's Campbell Works, a locally based firm is taken over by a large national or multinational corporation. The new owner "milks" the company for a few years by limiting maintenance and modernization costs. When the company becomes less profitable than other components of the parent conglomerate, it is abandoned and serves as a tax write-off. The abandonment may proceed gradually, with production slowly transferred to another site or it may come abruptly as the result of a new merger or an economic recession.

The more complex form of "runaway" is actually a form of disinvestment more than anything else. The net effect is to move an investment in production from Philadelphia or Youngstown to North Carolina or Korea. This amounts to "commercial redlining," whereby the Northeast and Midwest are written off the investment maps of multinationals and banks.



The statistics gathered in The President's Urban Policy Report document that the Northeast's economic decline is not due to companies going bankrupt or moving so much as to a lack of investment. The Report notes: "The closure or death rates of firms in the South and West are approximately the same as those in the Northeast and North Central regions, but the rates of expansion and new firm formation in the latter are less than two-third those in the former."

Comparing just the Middle Atlantic to the South, the Report's statistics show the rate of job creation due to new enterprises to be twice as high in the South and that due to expansion of existing enterprises to be eight times as high. This difference in capital investment resulted in an 11.1% loss of job opportunities in the Middle Atlantic states from 1969 to 1974, while the South experienced an 11.6% gain.

The picture becomes very clear by comparing the employment changes in the Middle Atlantic states to those in the Southern states from 1969-1974. For every 10,000 jobs in the region in 1969, the Mid-Atlantic lost 21 and the South gained 45. The Mid-Atlantic created 860 jobs in new businesses to 1710 in the South; the Mid-Atlantic expanded business by 200 while the South expanded by 1570. The same number of jobs closed in both regions due to death of firms.

The effect of runaway shops or migration from the Mid-Atlantic to the South is small compared to the effect of commercial redlining or corporate disinvestment: less than 2% of the problem. Where the South outpaced the Mid-Atlantic region in economic growth by 66 new jobs (for every 10,000) due to migration, it did better by 4220 jobs due to creation of totally new businesses and expansion of existing firms.

Investment Abroad

Foreign imports are often blamed for layoffs at home. But the villains are not always foreighners. American companies themselves own sweatshops in Taiwan paying $1 a day, and in Malaysia paying 30¢ a day. These starvation rates account for much of the recent flood of inexpensive imports, a flood which has caused massive layoffs in the textile, shoe, TV, and auto industries, among other

These imports aren't always "foreign" imports. As a booklet entitled What's Happening to Our Jobs points out, the Dodge Colt is made in Japan by Chrysler's subsidiary, Mitsubishi Motors; the Capri is made in Ford's German factories; RCA, Sylvania and Admiral make TVs in Taiwan and Mexico; and over 500 U.S.-owned clothing and electronics factories in Mexico dump all of their output in U.S. markets.

Between 1960 and 1975, the total direct investment in foreign factories and mines by U.S. Corporations more than tripled from $32 billion to well over $100 billion. This does not even include foreign profits reinvested abroad or American capital loaned to foreign governments and corporations. U.S. corporations and banks dominate the economies (and influence the governments) of many Latin American, Asian, Arab and African countries. They operate in Europe and Japan as co-partners or "friendly" competitors of local corporations.

The Example of China

Red China has now "opened the door" to American investment. Even before the recent establishment of formal diplomatic ties between China and the U.S., Hyatt, Coastal State Gas, Boeing, IBM, Bethlehem Steel, U.S. Steel, Pepsi and other American firms were negotiating or had already made agreements with the Chinese.

The Chinese government has committed itself to an astounding $350 billion development program within the next decade. The 120 major projects the Chinese are planning include ten steel plants, nine nonferrous metals complexes, thirty power plants, five harbors, six trunk railways, eight coal complexes, and ten oil and gas fields.

It is estimated that China would require $600 - $700 billion to finance its ambitious target of achieving economic modernization by the year 2000. The Chinese hope to attract at least half of that from American sources. Peking leaders are apparently now revising the Chinese Constitution to include an incorporation and patent clause that would protect foreign property once established on Chinese soil. Peking has projected plans that include the use of cheap Chinese labor to produce American brand products under American direction, and American exploitation of Chinese resources.

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All of this will clearly benefit the American economy--in some way. But will the benefits "trickle down" to those who do not own substantial stock in multinational corporations? Bayard Rustin recently wrote that "China offers untold possibilities for huge profits won at the expense of defenseless workers." He noted that the per capita income in China is less than $400 per year, so there will be little market there for American products other than food and computers.

If Taiwan is, indeed, to be a model for mainland China, it is more likely that factories here will close to take advantage of a virtually limitless supply of cheap, well-disciplined but non-unionized workers. At the same time, businesses that do remain here will have to compete with yet another source of foreign imports. Additionally, capital to modernize, expand, or convert threatened businesses here will be in short supply, due to China's heavy capital demands. This amounts to three ways of spelling "unemployment" for many Americans. The global economy is structured in such a way that any boon to business ends up increasing the gap between the haves and the have nots.

With the departure of multinational corporations from older cities in the Northeast and Midwest, municipal governments have been hard pressed to find new capital to put citizens back to work. At the heart of the urban crisis is the vast sector of unemployed people, denied economic opportunity in a shrinking job market, living on welfare, available for low-paying positions but existing essentially as permanent wards of the state.

New Businesses and Small Businesses

Throughout the country, mayors have argued that if funds were available to hire these people, the tax base would rise, the cost of city services would decline, and the related problems of crime and mental illness would subside to manageable proportions. The problem, however, is that the three logical sources of capital--from new businesses in the private sector, from the federal government, and from urban cooperative institutions--have not been willing or able to respond. A critical part of the debate over urban economic revival, then, is how a city administration can persuade one or more of these sectors to produce capital for jobs, and on what basis.

With the growth of multinational corporations and the related competition from international trade, the opportunity for Americans to start their own small business has become extremely scarce. Since 1940, the number of Americans who support themselves in this way has been cut in half. Today, a new, small company has about one chance in twenty of surviving for more than two years.

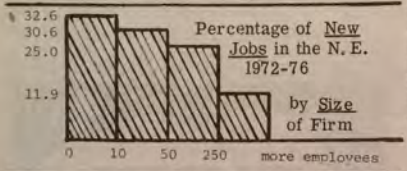
It is unfortunate that small businesses are having so much trouble these days, for they are what is left of the American Dream, and

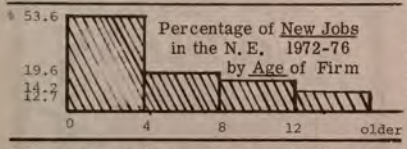
A Working Economy for Americans/cpf

one of the few hopes for creating new jobs. Many people, bored or oppressed by menial labor or welfare, long to open their own shops and capture some control over their own lives. Few people have the necessary capital, however. In the manufacturing sector, the multinationals pose enormous obstacles to anyone hoping to enter their industries on a competetive basis. In the service field, retail chains and conglomerates control the best markets. Inflation and recession hit small enterprises hardest.

Despite these handicaps, small enterprises have been the major source of new jobs in cities since the 1940s. The Department of Labor reports that between 1960and 1976, nine million new jobs were created in the U.S. but there was no increase whatsoever in employment at the 1000 largest corporations! (See Charts I and II.)

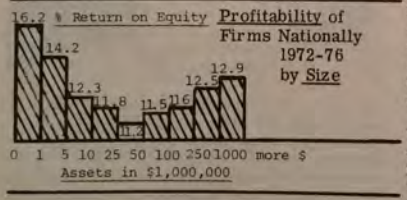
I. and II.





Such results indicate very strongly that the focus of development efforts should not be on the location or expansion of very large corporations or their branches, but on the birth, expansion and retention of small enterprises. Furthermore, as seen in Chart III, these small businesses are the most competitive in terms of actual profitability; where they have been run out of the market, it has been due to the political and economic power of the super corporations rather than by any lack of their own economic viability.

III.



Barriers to Small Business

Unfortunately, the largest corporations wield the greatest political, as well as economic clout. In return for substantial campaign contributions and in response to well-financed lobbying, government officials lean toward the interests of the multinationals. Unnoticably, social programs to solve unemployment become transformed under these pressures to rewards for anti-social behavior.

Tax incentives to attract jobs to one city compete with similar bribes from other cities to encourage plants deserting old sites and writing off the abandoned property, which is left for the community to suffer. This competition among cities to offer the best tax incentives, land deals and wage subsidies actually reduces the tax bases these incentives are supposed to be building. Meanwhile it is becoming increasingly clear that such incentives play little role in corporate location decisions.

Market Gaps and Failures

It is clear that the growth of the small business sector is necessary for increased employment opportunities in the long run. But to suggest this is little more than to hanker after the old American Dream. Why is small business not growing naturally? One reason is the shortage of capital. The other is the lack of modern, professional expertise in the community.

Strange as it may seem, given the popularity of business courses on college campuses this decade, experts all contend that there is a tremendous need for management assistance to people who would like to start businesses. A lack of business skills is cited as a major cause of the high failure rate of new firms, and even established merchants are criticized as being ignorant of modern business practices.

The Newsletter of the Center for Community Economic Development in Cambridge, Massachusetts, has defined the problem in terms of a helpful scheme of three market failures--or capital shortages--and three gaps. Some businesses simply need (1) loans (debt financing); others need (2) long-term subsidies to counterbalance extended periods of loss; finally some require (3) equity funding to permit delayed returns. These failures of availability of loans, subsidy and equity capital may be caused by supply, demand or institutional gaps in the structure of the market. (1) Supply gaps exist when an area's capital market cannot attract sufficient funds for investment; (2) demand gaps occur when an area lacks managers and enterprises; finally, (3) institutional gaps arise when a depressed area does not have the institutions to bring together potential suppliers and users of funds.

Is There a Short Cut Through Washington?

An effective system to stimulate economic development must respond meaningfully to these failures and gaps. First, it must provide a range of finance and support mechanisms sufficient to meet all possible development problems. This includes the need for debt, subsidy and equity financing, and the capabilities to fill supply, demand and institutional gaps. Second, there must be some way of "packaging" the assistance (and also any other federal, state, or local programs) to meet the specific needs of target areas.

The only shortcut to full employment is through Washington. The federal government could undertake a massive employment and public service program to put hundreds of thousands of people to work meeting the social needs that existing corporations ignore or worsen. Of course, corporations cannot compete with well-funded, non-profit, subsidized government enterprises. For this reason, the corporations often apply pressure to limit government programs to only the most critical of social problems--drug abuse for example--and to preserve national security through a huge military budget. Military spending is another boon to corporations, which subcontract for expensive new weapons systems. Contrary to public opinion, military spending does not create many new jobs.

MILITARY SPENDING DOES NOT CREATE MANY NEW JOBS...

Thus, while the federal government offers the most logical source of short term capital for urban jobs, the political climate of the country reimforced by major corporate interests consistently blocks the Congress and the President from taking decisive steps in this direction. The current budget, shifting dollars from welfare programs and CETA to the defense budget is a perfect example to the contrary.

DAIRY COOPERATIVES HAVE GROWN TO MULTI-MILLION DOLLAR BUSINESSES IN FIFTY YEARS

During the early part of this century, cooperative enterprises were the way farmers and urban immigrants collectively pulled themselves "up by their bootstraps." Agricultural cooperatives, such as those in the dairy industry, remain multimillion dollar enterprises to this day. Savings and loan associations show us what immigrants of the past were able to do by pooling their meager resources into substantial financial institutions.

At least one federal program created under the Community Services Act (CSA) in 1974 has made limited progress in stimulating similar cooperative institutions today. The CSA program suggests a model for dealing with the complex forms of capital shortage at the community level; Title VII of the Act formalizes the role of local institutions to deliver packages of services in response to local needs. Community development corporations (CDCs), cooperatives, and other community-controlled organizations are charged with the responsibility to draw from the range of available support programs those that meet their own particular needs. Some, such as Kentucky Highlands Investment Corporation, combine demand-creating techniques such as entrepreneurial development with a flexible venture-financing capability. Others might focus on providing skills and appropriately structured debt financing for new small enterprises. In addition to financial support for CDCs, the CSA has given rise to a network of direct support agencies that can provide assistance in training, legal problems, venture selection, program development and specialized research.

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Controlling the Future

Questions to Ask as Federal and Local Strategies Search for Capital and Create Jobs

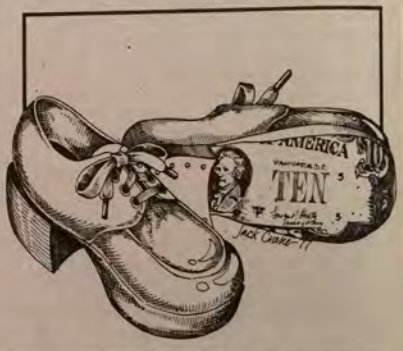
In their search for job-creating capital, urban governments often pursue all three of these strategies simultaneously. For commercial areas, they seek loans for new companies from the Small Businessman's Administration. To put unemployed people to work in providing services to neighborhoods, they fight for expanded funding in the CETA program and for public service jobs. Cooperative institutions are not as widely encouraged, but they, too, are supported in some cases.

The former analysis--emphasizing the problem of acquiring capital to create jobs--suggests several question that citizens should ask about all job development programs undertaken by the local, state, and federal governments.

--Is the program targeted to provide fiscal relief to distressed city budgets, or to provide jobs for underemployed? There is a big difference!
--Will the funds finance new economic development activities, or merely assist existing businesses in target areas?
--What are the mechanisms to insure that those people who are hired are the same people that the program is designed to serve? What are the mechanisms to guarantee that the new jobs will be desirable?
--Are public subsidies sufficient to induce new, socially-conscious behavior by the assisted businesses, or will the program turn out to be just a new windfall for companies who would have done the same thing without assistance?

These questions are useful to raise about any job creation or development program. Yet behind the specifics lies the deeper issue that this analysis emphasizes--namely, control. Major policy-makers in the field of economic development are now arguing about the kind of jobs that will become available in the future, given America's increasing reliance on high technology in production and consumer services. Political leaders in cities are wondering whether it makes sense to concentrate on retaining manufacturing plants that may be doomed to extinction, as opposed to promoting new service industries and tourism geared to the "post-industrial" economy of the future. The question is important, to be sure, but it is not the only one.

Before we can determine what kind of economic program makes sense for the cities, we must ask who will make the decisions?--the large corporations? --local and federal governments? --neighborhood-based organizations and institutions? Right now, the corporate program for urban America is the dominant one, and it has spelled disaster for the urban residents themselves. As we have seen, it is a program built around the withdrawal of capital from the Northeastern cities to elsewhere; the destruction of small-



...CHEAP IMPORTS MADE POSSIBLE BY FOREIGN LABOR...

ler companies through cheaper imports made possible by lower foreign labor costs; and the attraction of available credit away from locally-based companies to the multinationals themselves. It is this program that has simulteneously thrown out of work thousands of people in the clothing and electronics industries, while blocking the entrance of minorities and women into the job market. Yet given the political power of multinationals, large corporations and the financial institutions that support them remain the decisive voice in economic decisions, no matter that these decisions end up hurting millions of people.

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The only alternative is for citizens to find ways of raising their own capital to support jobs in the cities. On the national level, this would mean expanded federal subsidies for local employment. Both the labor movement and the neighborhoods movement have been strong advocates for these subsidies, coordinating lobbying efforts with Congress against cutbacks in public service jobs programs. Unfortunately, we have not succeeded.

A second, more controversial national strategy that might be sought from the federal government would involve the creation of public corporations to compete with private industry in areas where the industry has failed to meet a critical national need. George Meany, President of the AFL-CIO, made this sort of proposal in response to the energy crisis.

Meany argued that if the oil industry were unwilling to explore for new reserves unless guaranteed prices out of the reach of ordinary citizens, then the federal government ought to undertake oil exploration and drilling itself. Obviously, the creation of public corporations such as this is theoretically possible--conceptually, no different from municipally owned power companies that exist throughout the United States. The political opposition to such plans from corporations and conservatives, however, would be tremendous.

OF COURSE, THE POLITICAL OPPOSITION FROM CORPORATIONS AND CONSERVATIVES WOULD BE TREMENDOUS...

On the local level, control over capital might be achieved through the development of cooperatives and development corporations such as those envisaged in the Community Services Administration program. In Philadelphia, such corporations have concentrated on housing construction, rehabilitation, and sale. Elsewhere, they have set up local industries and stores, responsive to both the employment and consumer needs of the community. Obviously, a cooperative enterprise is subject to some of the same forces that influence a privately owned business. If it is badly planned and managed, it will fail. The difference, however, is that an industry or store built by a community will be accountable to it. The community conception of a "return" on investment will be the advantages that accrue to the people within the neighborhood as a result of its being there. It will not leave when some other market promises cheaper labor or better tax breaks. The community will determine its destiny, not the other way around.

In conclusion, the urban experience shows that there will be no solution to the problems of urban unemployment until the people who remain in the cities begin to work together to regain this sort of power over their lives, which multinational corporations have tried so hard to take away.

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PIDC-- Industrial Development

by Gerry Stahl

The Philadelphia Industrial Development Corporation is a quasi-public local agency charged with preserving the existing industrial base of Philadelphia, as well as attracting new manufacturing and, to some extent, service establishments within the City. PIDC takes credit for having "created or retained" over 120,000 jobs in the City in the past 20 years. Its strategies include obtaining favorable terms for land acquisition from the City: PIDC industrial parks cover 2,500 acres, a substantial percentage of the City's industrial land; working out tax breaks and local and federal subsidies for businesses that want to stay or will relocate into Philadelphia; and offering consultations to establishments that, for one reason or another, have gotten themselves into trouble.

The list of private companies that have benefitted from PIDC's land deals reads like a "Who's Who" of local industry. It includes Whitman Chocolates, Pepsi Cola, Western Union, W.A. Reynolds, J.B. Lippincott, Van Heusen, Bell, Dodesco, Otis Elevator, G.E., International Harvester, Strawbridge & Clothier, Silo, and Boeing Vertol. PIDC also handles such projects as the Food Distribution Center, Penn's Landing, major hotels (Bellvue Stratford, Franklin Town, Fairmount), the Gallery, the Frankford Arsenal, and American Street. Clearly, in the area of economic development, PIDC is the main game in town.

Actually, PIDC's numerous accomplishments demonstrate the limit of any economic development strategy that operates within the constraints of private investment. It is the business that dictates the terms, and local government must accept them-- or lose the business. In the name of "improving the business climate," groups like PIDC do not have to apologize to taxpayers for the special deals they offer major corporations; citizens will put up with these arrangements gratefully if there is a promise of jobs.

Despite these economic tools, PIDC was not able to prevent the loss of 130,000 other jobs from Philadelphia in the past seven years. All too often, businesses have reasons besides taxes or land prices for leaving--as slow growth in the industrial parks indicates. In most cases, it is the high cost of unionized labor that these corporations wish to avoid.

The City clearly recognizes PIDC as the major vehicle for economic development. Over half of the federal Community Development money which is earmarked for economic development goes directly to PIDC: $4,000,000 a year. PIDC now has assets of over a third of a billion dollars. It would be interesting to see what could develop if some of this money were used in cooperation with community organizations and local institutions, as well as with private corporations, for economic programs.

PIDC HAS TAKEN A STEP TO BENEFIT THE PEOPLE WHO LIVE HERE BY REQUIRING EMPLOYMENT CRITERIA IN TWO INDUSTRIAL LAND PROGRAMS.

PIDC has taken a first small step to benefit the people who live here, by requiring employment criteria in some of its programs. Its "Inner City Program" provides cash grants for acquiring land to firms which promise to give "first preference" to inner-city residents in filling newly created jobs. A "City-wide Program" reduces the sale price of land for projects which provide at least a minimum number of jobs per acre of land sold.

These are the sort of innovative programs, designed specifically to benefit the residents of Philadelphia, that are desperately needed.

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PHILADELPHIA CITYWIDE DEV CORP

by Gerry Stahl

A local economy develops through the vigor of new, small businesses; it stagnates under the dominance of corporations. Local businesses have a commitment to the growth of local economy; national corporations readily desert a field they have abused for greener pastures.

The Philadelphia Citywide Development Corporation (PCDC) was created in 1977 by the City's CD Office which funds it, to provide financial and technical assistance to small businesses. Other organizations which provide some of the same expertise are: Spanish Merchants' Association, Urban Coalition, OIC, the Anti-Poverty Action Commission (PAAC), and the Greater Philadelphia Community Development Corporation.

PCDC will provide most of its services to any business in the city. It will not only help put together ("package") loan applications, but also provide financial assistance in the form of equity loans to complement SBA loans. The staff of PCDC can give advice on accounting, management and inventory. They want to make businesses more effective so they can better serve the community.

NEIGHBORHOOD COMMERCIAL REVITALIZATION PROGRAM

Another division of PCDC works on neighborhood commercial revitalization. When they have selected a commercial strip (several blocks of stores), they first consult the merchant association, or if none exists, they organize one together. Then, they work out a plan for improving the strip. This involves (1) site improvements to the street: lighting, sidewalks, and parking; (2) a common style of storefronts and signs; (3) a better balance of goods and services; (4) management advice to individual shopkeepers; (5) advertising and events to promote business; (6) finding owners for vacant stores.

Fifth Street Commercial Area

North Fifth Street, between Lehigh and Indiana Avenues, is a commercial corridor located in the heart of the Spanish-speaking neighborhoods and contains approximately 85 stores.

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--PCDC

PCDC has targeted 5 neighborhood commercial strips in the past:
--Frankford Avenue (Margaret/Orthodox area)
--5th Street (Lehigh to Indiana)
--Germantown and Erie Avenues
--22nd Street (Somerset to Toronto)
--Woodland Avenue (60th to 66th Streets)

This year they are adding 2 strips:

--52nd Street (at and below Market)
--Girard Avenue (5th Street to Franklin, including Marshall)

In addition, the City has targeted a large commercial area in central Germantown, below Germantown and Chelten for extensive site improvements.

For the future, the City is considering a somewhat different approach along seven other strips which are large enough to serve many residents, healthy enough to be viable, and near residential redevelopment targets:

--Point Breeze Avenue
--60th Street near Cobbs Creek
--Lancaster from 40th to 44th
--Kensington and Front
--Germantown near Lehigh
--Broad and Old York Road
--Ridge and Columbia

The difference is that there is little money allocated for these last seven. Therefore, community organizations might be welcomed into the process. They could, for example, organize a merchants and consumer organization, carry out market surveys to see what residents need, and cosponsor promotional events. PCDC will assist and advise groups wishing to do this.

Community organizations acting as forceful and energetic advocates for the residents as consumers could benefit their neighborhoods in many ways. A prospering commercial strip brings money and jobs into an area, increases local services, and improves the appearance of a neighborhood.

A further possible step is for neighborhood associations to begin participating as owners and producers. The City and PCDC should provide aid for this, too. Many organizational structures are possible for businesses where the community maintains some control over basic policies. That way, there are guarantees that businesses helped by the community will continue to serve that community.

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DOWNTOWN

The Gallery

by Gerry Stahl

The Gallery is Philadelphia's showplace of commercial development, just as Society Hill is still the pride of residential redevelopment. Both fit into a plan originally designed in 1961 for Center City which clusters banks and insurance buildings around City Hall; department stores to the east; offices to the West; tourism cutting across from the Art Museum through the Franklin Institute, City Hall, Independence Hall and New Market to Penn's Landing; industry in Callowhill; townhouses everywhere else; and all tied together by a magnificent modern subway system.

That these formidable plans have been carried out with nary a hitch, while the simplest homesteading or loan program for neighborhoods outside the Center City target are hopelessly tangled in inept bureaucracies and scandalous dealings, says a lot about the clout of Center City interests.

While Gallery--and soon Gallery II--are part of a global process, they are worth questioning on their own. Gallery I was built with a $100 million investment. The majority of that money came from Gimbel's, the Rouse Corporation; Strawbridge and Clothier's, and Parking Authority revenue bonds. But a substantial $28 million was public tax dollars from HUD, UMTA, and the City budget. Similarly, a Gallery II, consisting of another mall, two office towers and more parking, is now projected at costing $155 million. Here, $107 million will be contributed by private corporations, $24 million by UMTA, EDA, and HUD, $7 million by a City bond issue, and $17 million from the City.

Given that over a quarter of this privately owned project is being financed with public funds, it is important to ask what the overall public impact will be. Gallery supporters point first to the masses of money "brought into the city": average sales of $230 per square foot (about twice what a suburban mall can draw). Second, the City calculates job increases for Gallery I of over a thousand, and six times that for Gallery II. Additionally, the City looks forward to increased wage and real estate taxes of $2 million and $6 million annually from the two projects.

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Paul Levy, in "The Defended City" and elsewhere, has raised a series of crucial questions about the overall effect of the mall strategy being pursued along Market Street East. He asks if the Gallery is really bringing shoppers back to Center City from the suburbs. Or is it rather that the new shoppers in the downtown are being lured away from the struggling businesses of surrounding neighborhoods? Surveys conducted by Rouse Corporation over a year ago indicate, for example, that 70% of the Gallery's customers were coming from Philadelphia neighborhoods, outside of the Center City area. What will be the effect on the shopping districts scattered through the city, on the hundred-odd commercial strips on neighborhood main streets, or scattered Mom-and-Pop stores still serving their local communities?

It is not merely nostalgic to think of preserving local businesses. As Food Fair has dramatized by closing a third of Philadelphia's supermarkets over night, centralization does not provide stability. Suppose Gimbel's, Rouse, and Strawbridge overpower their competition and then follow the lead of Lit's, Grant's or Robert Hall and abandon Philadelphia. The diversity of small shops, corner groceries and family businesses is essential to the economic health, social stability, physical security and vitality of urban neighborhoods.

The City's justifications of their strategy in terms of income, jobs, and taxes also lose some of their force if it is true--as studies suggest--that most of the new shoppers at the Gallery do come from neighborhoods in South Philadelphia, West Philadelphia, North Philadelphia, Kensington, etc. Then, instead of real increases, the figures for the Gallery really represent a redistribution and centralization of economic activity in Philadelphia--away from the small business owners.

The Commuter Tunnel

Perhaps the single most important resource in the hands of the City for stimulating economic development is the transportation system. If the unemployed can reach the factories, if new businesses can count on the availability of employees, if marketplaces are accessible to shoppers, than half the problem is licked. Furthermore, it is the legitimate and accepted role of government to provide an adequate transportation system.

Unfortunately, Philadelphia's massive effort to develop its transportation system has had undesirable consequences on 95% of the city. The network of interstate highways designed to tie Philadelphia businesses into the national economy encouraged suburban sprawl. People working downtown could abandon aging neighborhoods and commute to the suburbs in every direction. Factories, too, found it convenient to move outside the city along the highways. Blue-collar workers excluded from the suburbs economically or racially were left behind, unemployed, to watch their neighborhoods deteriorate.

Somehow, nothing could be done to modernize the vintage 1928 subways, or improve the service and safety through North and South Philly or the antiquated trolley lines in the West and Southwest, while wonders were accomplished to connect Center City with the outside world. In addition to the port and the airport, there is the Schuykill Expressway, Vine Street, I-95, the Lindenwold High Speed Line, Route 202, and the Turnpike.

SOMEHOW, NOTHING COULD BE DONE TO MODERNIZE THE 1928 SUBWAYS.

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As I-95 and an Airport High Speed Line approach completion, the Center City Commuter Tunnel will tie everything together. The Airport rail line will connect the airport with all the region's commuter rail lines, Amtrak, the el and subway, and the Civic Center. The Commuter Tunnel will connect the two Conrail lines which presently terminate at Pennsylvania Suburban Station (15th St.) and the Reading Terminal (12th St.). The major downtown station will be at 11th Street, gateway to Gallery II.

Rather than tying the neighborhoods of Philadelphia together, this approach to transportation benefits only the downtown and the suburbs. Potential economic activity in the neighborhoods is placed at an increasingly unfair disadvantage. Yet, in terms of its land, its strengths, and its people, Philadelphia is a city of neighborhoods.

The

$500 BILLION IN PENSION FUND INVESTMENTS

by Gerry Stahl

A natural way for unions to stimulate economic development in a manner beneficial to their members is by the thoughtful investment of pension fund money. Here is a potential for major changes in the economy, a significant way to create good jobs and avoid the harmful consequences to workers which often unknowingly result from the investment of their pension money.

Today the total of all private and public employee retirement funds is over $500 billion, with billions added every year. Pension funds now have more assets than all of the savings and loans and mutual savings banks in this country (though not more than commercial banks). They also have more than all the life insurance companies, which are traditionally very important sources of long-term capital.

Most of the half-trillion in pension funds are invested in the stocks and bonds of America's largest multinational corporations. This is because control over the investments has been delegated to banker trustees.

Some unions do control their pension funds directly, but the vast majority are legally controlled by corporations or, in the case of public employees, by government bodies. Regardless of the legal structure, two facts are true, as stressed in a book on the potential power of pension funds, The North Will Rise Again. (1) Control over investment decisions by corporations,government and unions has generally been turned over to bank trust departments and portfolio managers who recycle the money back into the coffers of corporate America. (2) Money in pension funds accounts is the deferred wages of workers, who have a right to assert their control over its management.

The most dramatic success to date is that of the Amalgamated Clothing and Textile Workers Union, who successfully forced James Finley, Chairman of J.P. Stevens Company--the #1 violator of the National Labor Relations Act--to resign from his position on the Board of Manufacturers Hanover Trust, a New York City bank, by threatening to withdraw from the bank more than $1 billion in ACTWU trust and pension funds.

International Association of Machinists President William Winpisinger has vowed to put a stop to the use of I.A.M. funds for non-union or anti-union corporations.

The AFL-CIO passed a resolution last spring urging member unions to devote at least 10% of their pension portfolios to residential mortgage loans in order to increase the supply of affordable housing for moderate income people and stimulate employment in the construction trades.

The American Federation of State, County, and Municipal Employees (AFSCME) gave $180,000 to a research group in Wisconsin to find safe, profitable, job-generating investments for the state's public pension funds and other trust accounts.

"OUR MONEY IS BEING USED TO PUT OUR OWN PEOPLE IN UNEMPLOYMENT LINES," SAID STEELWORKER'S PRESIDENT MCBRIDE.

The United Steelworkers at their fall convention discussed ways to assert control over the $10 billion in steel industry pension fund investments in order to prevent the steel companies from closing plants in the unionized northern states and moving to non-union plants in the South or overseas. "Our money is being used to put our own people in unemployment lines," said Steelworkers' President Lloyd McBride. "We can no longer tolerate the situation of using worker-produced capital against ourselves."

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1979 SPECIAL DOUBLE NEW YEAR EDITION

NEIGHBORHOODS

Vol. 5 No. 1

Political activity in Philadelphia has been feverish since last November's successful campaign to stop the Charter Change and Mayor Rizzo's right to seek a third term. It was easy for an incredibly wide range of interest groups--from Center City luxury apartment dwellers to ghetto militants--to agree that two terms are enough.

Since that election, the diverse organizations have not found it as easy to agree on the best new candidate for that office. The hopefuls can expect to be showered with "platform" papers questioning their positions on every issue from gay rights to the election of a new School Board.

There is one issue, however, on which everybody agrees. Philadelphia needs jobs. Six hundred people crowded the Amalgamated Clothing Workers hall on February 10 to plan employment strategies along with dozens of our union leaders, elected representatives, and state officials, including Governor Thornburgh's newly-appointed Secretary of Labor.

JOBS FIRST!

This edition of the Neighborhoods Newsletter is devoted exclusively to Economic Development.

The first section defines economic development and the causes of unemployment in our economy.

The second section criticizes President Carter's federal program for "non-employment," despite passage late last year of the Humphrey-Hawkins Full Employment Act.

The third section analyzes current city programs and Mayor Rizzo's five-year plan, especially the "partnership" concept with private industry which will convert Philadelphia to an "International City" by 1982.

A fourth section describes what neighborhood organizations in other cities have accomplished; they all agree that the best advice for Philadelphians is to first achieve some degree of financial expertise and then to proceed on the basis of a thorough economic plan.

Neighborhood Notes describes two Philadelphia neighborhood organizations that are working on economic projects, and includes the latest redlining data for the City.

A sixth section describes what neighborhoods can do on their own to create capital investment and jobs, including a "How-to-Organize Guide" that step by step prepares a community for a long range economic development plan.

A seventh section mentions several new ideas that are being tried in some communities; most are new and experimental, but they represent the basis of a sound community economy for the future.

The last section analyses the economy of Puerto Rico, and the possible impacts of statehood or independence on this underestimated community of Philadelphia.

There is also a Glossary--to help readers along with specialized economic terms, and a very long Resources section at the end, listing local and national sources of help and information.

On the following page, you will find a very detailed Table of Contents to make sure you can find exactly the material that interests you and your organization.

Institute for the Study of Civic Values

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9. Education for Democracy at Mondragon

During the past 15 years, almost 200 worker cooperatives have been established in the Basque region of northern Spain, creating about 20,000 jobs for people who were otherwise generally excluded from the modern economy. Most of the cooperatives are industrial plants using the latest technology.

This represents an economic development success of major dimensions. Not only has a new economic base been created with a whole range of jobs, but disenfranchised people have trained themselves to bring this about, to do the work, to move from automated jobs to new positions and to plan and manage the whole economic complex.

A group of 30 Americans visited the famed network of industrial cooperatives centered in the village of Mondragon in late June 1984. After visiting factories, schools and the bank that belong to this network, the group had a broad range of questions about just how far the undeniable economic successes at Mondragon had gone in transforming social relations and about the roles of education, broadly conceived, in facilitating economic and social democratization.

On June 29, 1984, Alex Goiricelea, the head of training for several of the largest industrial cooperatives in Mondragon, responded to the questions I posed as spokesperson for the group. In editing Senor Goiricelea's insightful and inspiring comments, I have taken certain liberties to clarify the context of his references.

--Gerry Stahl, editor

Q: The film we saw about Mondragon ended by calling the developments here a process of "permanent revolution." What is the role of education in this process?

Historically, the entire process of the development of the cooperatives in Mondragon was founded on the basis of education. The founding father, Fr. Jose Maria Arizmendiarrieta, began with a school. That's how he started the whole thing.

Arizmendiarrieta liked to say, "You can give a person a fish, or you can teach that person how to fish." It's a proverb he borrowed from the Chinese and used often.

The image of teaching a person to fish is the educational ideal of instilling the capacity for self-support; it is the fundamental thrust of our cooperative movement.

Most processes of progress involve—in one form or another—a seeking of power. The seeking of power, if it is to be democratic, must be based on the communication of information. We place a great deal of importance in such communication of information, in creating a broad opportunity to understand the current issues.

Q: What is your view of adult education: its goals and methods?

We are heavily involved in adult education here. First of all, it has always been seen as essential for giving people opportunities that aren't available to them elsewhere. It's also necessary to keep up with constant changes in technology and society: both to survive as a business and to retrain people for new work. Further, of course, it is important to people's ability to function in a cooperative structure and to reach democratic decisions on complex questions.

I work in the personnel department for Ularco, which is a group of thirteen industrial coops in Mondragon. The largest member of this group is Ulgor. Ulgor was formed by five of the first graduates of Fr. Arizmendiarrieta's vocational school. It produces domestic electrical appliances, such as refrigerators, washing machines, ovens, presses, large machines and machine tools. Although each coop is autonomous, certain functions like auditing, finance, development and personnel are handled at the group level. Other functions are coordinated for the whole Mondragon network by the staff of the Bank of the People's Labor.

At Ularco we spent $1,000,000 in educational training for about 6,000 workers. We earmark 10% of our fringe benefit package for education. Partly, it helps support our polytechnical school and the other schools in the coop network. Some is used for scholarships so people can get post-graduate degrees in areas related to the work in the factories. We also pay for university students and professors to come into our factories and study problems we may have.

Mostly, we use our own people and our own schools for training. It's hard for outside people to adapt to our way of doing business—cooperatively—after working in another form of business. The educational methods used obviously have to be different for adults than for adolescents, because adult workers have other attitudes and interests. Our approach to the classroom is to combine theory and practice. We want to give people the new ideas, but at the same time they have to know how to use them. We use the "case study" method extensively. Education does not just take place from a teacher up front; it takes place through discussion among the learners.

Q: In Mondragon, the workers you are training are the owners of the cooperatives. What differences does that make to the educational process?

In any business you need to match people to certain positions. In other plants, when they need someone for a position, they hire them; when they don't need them, they have little concern for the people. One clear difference the cooperative ownership makes is that we are concerned about the people. We are committed to retraining people whose positions become obsolete. We do a lot of work upgrading people's skills. We take people from the shop floor and train them to be technicians; take technicians and train them to be engineers; upgrade people's ability to do important work.

Another difference is that we give much weight to personal development. The reason for this is justice. Not everyone has had the same opportunities for education. Our purpose is to correct some of the injustices. We put a major emphasis on training people to enter our factories and then to move ahead in them. Despite the necessity of constantly increasing our levels of automation and robotization, we still create new job openings and retain everyone.

A third difference relates to educating members about the coop structure. As people become active inside the coop structures—on the workers' councils or the boards of directors, for instance—we provide training in these roles. We feel this training is crucial to prevent things from falling into the hands of technocrats. We want the decisions to be made through the democratic structures that have been established. We really do. This method of controlling technocrats is something we have been strengthening over the years.

Another fundamental objective of training is to prepare people for new jobs before they come along. We all have to adjust to changes in technology and society. So, people should be trained not only for different jobs, but also for adjusting to changes in the jobs themselves. Right now, we are working on various approaches to this. We are training 250 people in marketing and 300 in alternative methods of production, to prepare for future directions the coop network will pursue. Workers adapting to new applications of computers in their jobs is another area of training, as is economic planning. Also, 400 people are in language training programs, predominantly for English. Because we are cooperatives, we prepare factories and workers for reconversions to altered production methods and new products differently than other kinds of businesses. Education plays important roles in democratically preparing for the future.

Q: What does Mondragon mean for you personally, Alex?

Let's call it what it is: it's revolutionary. Not precisely to break with everything that was in the past and to start with everything new. Rather, it may be the only revolution that is available to us today. That is, a step-by-step process. So that people don't feel exploited. So that someone isn't making a decision for me that I'm able to make for myself. This is the idea of a workers' cooperative.

The cooperative offers an alternative social form of organization for workers. It is not the same as a political mode of governance, however. Some people have conceived of cooperativism as a possible "third way" between capitalism and socialism, distinct from them. I do not think that's true. Cooperatives are more along the lines of socialism in a broad sense, existing within a pluralistic state.

Q: Does Mondragon have a political ideology?

That's a good question.

I would like to speak for myself here, just about how I personally feel. I consider myself a socialist—like some of you.

Many people say that the cooperative movement has to be apolitical. But I think we have to take a clear stance in favor of the workers and their rights. This does not, however, mean that the cooperatives can or should support a specific party or candidate. It's not that a cooperative is apolitical. Rather, it's necessarily pluralistic, with diverse dimensions at work within it. Inside the cooperative, individuals have their own ideas and speak with others about them. There is certainly an active political process going on in the coops. This is very much a live process.

The political parties in Spain do not quite know what to say about the cooperatives. They have no specific plans related to them. The Spanish Worker's Party (P.S.O.E.), which is now in power, has little influence in the Basque region, and therefore little idea about the role of cooperatives. Nevertheless, we can say that the cooperative movement basically lends itself to a socialist ideal; it is something that has been created by the working class.

Q: We have heard about the role that the Basque culture and the Basque nationalist movement have played in promoting the cooperative spirit at Mondragon, to say nothing of Fr. Arizmendiarrieta's inspirational role. Is there an educational process to foster such dedication among new *workers who join the coop network here?*

It's true, of course, that many people come in here just because there is a job opening. With the high unemployment in Spain, particularly in the South, a lot of

people move to this area for work—enough to double the population in the Basque provinces. But motivations are very complex. Some people do come in for ideological reasons as well.

After someone enters the coops, it is expected that they will absorb the ideological and cultural underpinnings of the whole thing. It's obvious that workers have a concern for making money to support their families, but we hope that they will also gradually come to understand the social nature of the work they are doing. One goal of workers' education is to help the general atmosphere of culture and ideology in each cooperative influence new workers over a period of a couple of years.

Another interesting process of social integration at work here is that people feel like people when they are working. We want them to feel like people, not like machines. We try to take advantage of all the potentials that each of our members has. This is not strictly education, but it is part of the training process that we want to promote. Then, when they have an opportunity to move on for higher pay elsewhere, they often choose to stay with the coops.

Q: In Mondragon the hierarchy of owners over workers has been eliminated in the factories. What effects has this had on other hierarchies inside and outside the workplace?

In theory, one could see here a completely democratic institution. But the operational decisions of an economic organization often have to be made within narrow time limits—the operational decisions, that is, not the major policy issues. Logically, we keep a hierarchical management structure. But there are certain committees elected by the workers themselves, and these groups control the decisions that are made.

The hierarchical structure that we need does not allow the pure democracy that we would prefer if we were a group of 10 or 15 people. So, as a compromise, we try to eliminate levels of the hierarchy. The differences in position and pay for the workers in a cooperative exist, but we keep them to a minimum. Except for 6 to 10 people (who have special needs, such as extensive travel for marketing), the highest paid person in a coop does not make more than about twice the lowest salary there. These ratios are mandated in our bylaws.

Q: What about social status now that class has been eliminated?

As I indicated, differences between people in the coops are minimalized. In the social fabric outside the plants there are also not class differences. People come

from similar backgrounds and have advanced through training and ability. A manager and a worker on the shop floor might belong to the same eating and drinking clubs or sports teams. Another subtle indication that status differences are being broken down is that almost everyone speaks to each other in the informal (*tu*) mode of Spanish.

Q: How is the role of women changing?

We live in a concrete social situation. The discrimination against women has existed in the cooperatives—less now than in the past—just like in the Spanish culture around us. Up until 13 years ago, when a woman married, she had to leave her job at the coop. This happened outside the coops too. We changed that 13 years ago. But just because the law changed doesn't mean that the mores changed right away. This is a long-term change.

I think we're taking important steps. Now women are studying in numbers just about as great as men. This is one way to move beyond discrimination. Women already hold positions of very great responsibility in Mondragon. My wife, for instance, is head of personnel at the women's coop. More women are continuing to work after marriage. They still have to go home after work and do work there, but we are taking steps to accommodate that. We give preferences to pregnant women for leaves of absence so they can return to their jobs. Something recent that we are still working on is the opportunity to work half-time. I'm certainly not saying that there's no problem anymore; there still is. It exists in the society at large, but we are trying to address the problem in a serious way.

Q: Let us take a look at the future of Mondragon. How is democratic planning being carried out? What are the roles of education and politics in this process? We have been told that a new structure is being proposed: a Congress of Cooperatives that would build on the grouping of coops into intermediate structures like Ularco. How, for example, is this proposal being debated?

The proposal for a Congress of Cooperatives is in the process of discussion right now. Before, we've always had a tension between a technocratic approach and something that is more rooted in the base of the workers. The plan that I've seen so far at least is a plan that runs more to the technocratic side than to the participation side.

Inside our own group, Ularco, we're going to be discussing this plan on Monday. I'll be there on Monday, and I'll be defending a position that's more participatory. There's got to be more participation of ideas and groups that may not be in the majority in this new Congress. There may be currents that are not part of the clear

majority; they need more participation in my opinion. It's part of the discussion now and I think that shows it's a process and not a ready-made decision.

The discussion is not directly tied to adult education, but it is part of the training process of the people.

Q: How is Mondragon affected by the world economy and the trend away from industrial production?

Here in the Basque country industry employs many people, agriculture few. The majority of employment is in agriculture. It's clear, however, that the number of people employed in industry is going to have to go down because of the technological revolution we are living in. Jobs are going to be created in the service sector. This is a challenge to the Mondragon approach. We have not yet met this challenge: how to create jobs in the service center. Much of the new employment is going to be in government administration we believe. Another factor is that most service ("third sector") businesses are small. We have no clear answers now, but we are working on the problem. For thirty years we have been able to face many problems and succeed. I'm sure we will be able to deal with this issue too! (Applause)

Q: Who at Mondragon is dealing with the problem and how is it presented to the workers at large?

We've made a strategic plan of our businesses. During the month of July all the cooperatives will be discussing this plan. We're starting to move toward cooperatives that are not directly industrial, like computer work. We have already been involved with computers in our work in other areas. In working with them in these other applications, we have seen that we must begin working in the computer field itself. We need to study this more carefully. Now that we have some expertise with computers and can rely somewhat on the people who are using them, we still really need to do a study of whether we should move into that area.

We're also starting a new service business: providing engineering services to other factories setting up different kinds of production processes.

The future presents difficult problems. There are no immediate answers. But the point is that we're going to all—all the worker/owners—be discussing the issues. The problem of unemployment is very serious in our country. We're working on it, but it's going to take time. We put a lot of our resources into figuring out ways to provide new work for people.

Q: We find your success at Mondragon inspiring, and we are anxious to use it to educate people in America about cooperative worker ownership. How do the people of Mondragon feel about being viewed as a model by others?

Surprised!

We did some things. But it was obvious that they had to be done. Some people here had ideas about what needed to be done and they went and did them. We had the support of the residents of Mondragon and the Basque provinces. They put their money in our bank and supported our schools.

By temperament, we are not a people who proclaim their successes. That's just not our way. But we are willing to collaborate with people who want to collaborate with us. We would not want to supplant what someone else is doing, but would want to be useful however we can be.

More concretely, in terms of people learning from us about worker education, I would like to conclude with this thought. It is clear that education was the basis of what has gone on here in Mondragon. There is really nothing special about the education itself. What is critical is the role that education plays in society.

[Gerry Stahl currently works at the Institute for the Study of Civic Values and the Neighborhood Development Center in Philadelphia, where he directs a community computerization project and provides technical assistance in neighborhood economic development. The publication of this talk is dedicated to his father, Ben Stahl, who has always promoted the need for education for democracy in connection with the American labor movement.]

10. Problem-Based Learning: Whitepaper for a Collaboration

draft by Tim Koschmann and Gerry Stahl and Howard Barrows

This is a working paper written to stimulate discussion on the possibilities for initiating a collaboration involving the Center for Lifelong Learning and Design (L^3D) at the University of Colorado at Boulder and the Problem-Based Learning Initiative PBLI) at the Southern Illinois University. The document will begin with a description of each of these organizations (Sections 1 and 2). It will then present a set of shared research goals (Section 3) and will conclude with a plan for realizing these goals (Section 4).

1. The Center for Lifelong Learning and Design

An interdisciplinary center housed under the Department of Computer Science and the Institute for Cognitive Science, L3D is concerned with how learning can be supported with computer technology. Learning is here taken as a life-long endeavor including both formal education (K-12, college, graduate school, professional training) and learning on-the-job or through life experience. Design tasks are taken as paradigmatic learning situations, in which specifying the problem or goal under open-ended conditions is a central part of solving the problem; while there may be better solutions, there is often no final or privileged solution. Another situation of central interest at L^3D is group learning, particularly web-based communication among people who are distributed in space and time.

At L^3D, research into support for learning is conducted through a combination of theory construction, software prototype development and in situ assessment. Accordingly, L^3D projects are concerned with issues of learning cognition (particularly collaborative and organizational learning) and the social context and practices of learning. They are also concerned with technical issues of designing software support tools that provide appropriate communication media among learners and between learners and their computer tools. Finally, they are concerned with issues of assessment of high-functionality tools used in complex social settings.

2. The Problem-Based Learning Initiative

<<Tim's part>>

3. Joint Research Goals

In this section we will attempt to lay out some research questions that drive this collaborative effort. The collaboration between these two organizations is by its very nature interdisciplinary. To facilitate discussion about research goals, we will divide the questions into four, roughly disciplinary categories: cognitive, social science, pedagogical, and technology related.

3.1 Cognitive Research (theories of learning).

- Learners' (and teacher) beliefs about knowledge & learning (i.e., differences in learner epistemologies [Alexander et al., 1998]. Where does it occur? How do you know it has happened?)
- Issues related to Cognitive Flexibility Theory
- Motivation and self-regulated learning by individuals (Pintrich & Schrauben, 1992; Boekaerts, 1996) and groups (Lave & Wenger).
- The nature of collaborative / group / social cognition.

3.2 Social Science Research (theories of practice [c.f. Bourdeiu, 1990]).

- Continuation of microanalytic studies of how people do PBL (i.e., How are learning deficiencies recognized? How are theories occasioned?)
- Learner strategies (i.e., How is time outside of meetings organized [Csikszentmihalyi 'beeper studies'?]? What are learners actually trying to do? [Holt, Eckert] What learning resources are used?)
- How does collaborative learning take place? What social practices facilitate it?

3.3 Pedagogically Related Research (methodology/teaching theory).

- Design of distance-PBL (organization of activities, composition of groups, required tutor/coach skills, "knowledge-building communities" [Scardamalia and Bereiter, 1996] vs. development of skills for lifelong learning)
- Curriculum/content (need for integration across disciplines, conflicts with standards and accountability)
- Assessment issues (assessment in collaborative settings, development of self-assessment skills, assessment in the ZPD)

3.4 Technology-Related Research.

- How to design analogs for the F2F meeting (e.g., the "boards", the PBLM)
- How to support individual and group research (e.g., organizing the results of literature searches on the web using perspectives [Stahl, 1998a]).
- How to support organizational learning (e.g., archiving ideas generated during the research and problem-solving discussion phases [Stahl, 1998b]).

4. Tentative Research Plan

This plan is for a three-year staged project. The approach builds on existing expertise at the partner institutions, namely face-to-face learning by medical students and web tools for support of discussion and organizational memory for people who work and learn together. It gradually extends the teaching methods and technological support until it can be used by geographically distributed high school students learning science. Each year of the project focuses on a different set of users:

Year I: The paper-based PBL curriculum will be extended with computer support and will be field tested using groups of medical students at SUI who are already accustomed to the PBL approach. Computer support will not only put the curricular materials on-line, but will provide tools for discussing the materials outside of class, for organizing information found during research phases and for retaining and browsing all materials collected by the group. Learning practices such as group discussions will be modified to take full advantage of the computer support. Careful evaluation will be conducted to measure the effects of the computer support as compared to control groups.

Year II: The project will be extended in two directions:

Distributed learning: groups of medical students will participate in PBL modules in which they never meet physically. All interaction will be conducted through the web tools.

High school: a couple of high school classrooms will study life sciences using a specially modified PBL curriculum and the tools from Year I. The students will meet face-to-face to do problem solving, as well as conducting web research individually.

Year III: Two courses in the life sciences will be offered over the web for high school students in Illinois and Colorado. Individual students from distributed schools will enroll, with the participation of their local science teacher. All materials will be distributed on the web and all participation will take place via web-based tools. Participating high schools will be selected to provide a diversity

of experiences for evaluation, from privileged, resource-rich schools to disadvantaged schools.

5. References

Alexander, P., Murphy, P.K., Guan, J., & Murphy, P. (1998). How students and teachers in Singapore and the United States conceptualize knowledge and beliefs: Positioning learning within epistemological frameworks. *Learning and Instruction, 8*, 97–116.

Boekaerts, M. (1996). Self-regulated learning: A new concept embraced by researchers, policy makers, educators, teachers, and students. *Learning and Instruction*.

Bourdieu, P. (1990). *The logic of practice* (Trans. by R. Nice). Stanford, CA: Stanford University Press.

Koschmann, T. (in press). Tools of termlessness: Technology, educational reform, and Deweyan inquiry. To appear in Tim O'Shea (Ed.), *Virtual Learning Environments*. Mahwah, NJ: Lawrence Erlbaum.

Lave, J. & Wenger, () *Situated Learning: Legitimate Peripheral Participation*.

Pintrich, P.R. & Schrauben, B. (1992). Students' motivational beliefs and their cognitive engagement in classroom academic tasks. In D. Schunk & J. Meece (Eds.), *Student perceptions in the classroom: Causes and consequences* (pp. 149–183). Hillsdale, NJ: Erlbaum.

Scardamalia, M. & Berieter, C. (1996). Computer support for knowledge building communities. In T. Koschmann (Ed.) *CSCL: Theory and practice of an emerging paradigm* (pp. 249–268). Rahwah, NJ: Lawrence Erlbaum.

Stahl, G. (1998a) Learning Perspectives. Submitted to *ICLS'98*.

Stahl, G. (1998b) Collaborative Information Environments for LifeLong Learning in Communities. Presented at *DCSCW'98*.

11. The Evolutionary Analysis of Knowledge

Anyone interested in learning – including figuring out how to design computer support for learning – might learn some useful insights from a theoretical approach that might be called the "evolutionary analysis of knowledge." This document is intended as a brief guide to some of the literature on this fascinating and expansive body of theory. This theory is a very contemporary approach to fundamental questions of the nature of human knowledge, language, and consciousness. The selection of specific books and the summaries of them are, of course, based on my own experience: what I enjoyed reading, what I got out of the books, and their significance for my own work and thought.

These books are all important contributions within their own fields of biology, psychology, and philosophy, yet they are all written in a popular style that presupposes no specialized background. They require careful reading and an open mind. They present controversial arguments in their own disciplines, and it is up to the reader to decide what to make of the claims as well as how to apply them to your own concerns. In general, I found them all generally convincing, despite the fact that they each make outrageous claims.

The Tree of Knowledge (Maturana & Varela, 1987). This provides a nice overview of evolution. It could be well used to collect a set of terminology for discussing evolution. Although it is often associated with New Age thought, this text actually provides a very clear, highly scientific view of the biological roots of human cognition. In addition, with original concepts like that of "autopoiesis," the book goes significantly beyond traditional, reductionist biology to stress the relationship between an organism and its environment. Thus, it can provide a theoretical foundation for understanding contextual phenomena. It is in this sense that it plays an important role in (Winograd & Flores, 1986), one of my favorite books in the field of human-computer interaction and CSCW.

The Selfish Gene (Dawkins, 1976). This is a fun book by an important innovator in evolution theory. It focuses on the gene, rather than the organism, as the entity that strives to survive, adding a provocative twist to the evolutionary outlook. It also makes extensive use of computer simulations (artificial life). Dawkins is a charming writer and introduces the reader effortlessly to controversies such as his theory of punctuated equilibrium (also discussed in his *Blind Watchmaker*).

Thought and Language (Vygotsky, 1986). Perhaps the most important book on learning that approaches its topic from a theory of how thought and language evolve in the development of the child within social settings (with parents, teachers, peers). The presentation is somewhat long-winded because it is motivated by critiques of the leading theories of his day, most notably Piaget. Since much recent psychology is still strongly influenced by those theories and their focus on the isolated individual (e.g., in the lab), Vygotsky's insights are still fresh and relevant. Here are two of his principles: (a) One cannot understand cognitive processes unless one analyses how they developed, both in society and for individuals. (b) Cognitive processes of the individual are internalized versions of social processes. For instance, one learns new ideas by hearing others articulate them, starting to integrate the terminology into one's conversation, gradually gaining a deeper understanding of the meaning of the terms, and finally using the concepts in one's own thought. Vygotsky analyzes how the nature of knowledge changes as it passes through these different stages. For instance, even the syntax of formulations changes as they are variously articulated in external media, dialog, self-talk, thought. This raises questions about how computer software should represent ideas for learning and how social practices should be structured to facilitate development and transformation. How does the computer medium change the nature of knowledge, and can these changes be designed into the software?

Origin of the Human Mind (Donald, 1991). Donald provides a *tour de force* of anthropological and psychological evidence documenting the development of our intellectual abilities. Since our current mental skills combine forms of memory and thought that emerged at different stages, the evolutionary picture he provides may be the best way to understand how people learn, recall, and process knowledge. The book concludes with a discussion of the all-important and rapidly increasing role of external memory, including computer support. Anyone who still thinks that thought is a process performed by isolated individuals should read this: Donald persuasively argues that most ideas in the past couple thousand years were only possible because of external representations, and that makes these ideas social products. He cites both science and philosophy as being major social dialogs that go far beyond the capabilities of an individual. Perhaps this is what computers should be supporting: community cognition.

Rethinking Innateness (Elman et al., 1996). The connectionist perspective on development presented here combines results of neural network simulations with brain science and linguistics to argue that the brain of a human infant is rather loosely structured. Thus, our mental skills – most notably linguistic skills – evolve as the child moves through developmental stages within supportive environments. Perhaps that is why those of us who grew up before VCRs still cannot program

them. What software should your two-year-old be using to develop the right mental skills? Drill-and-kill or shoot-em-up?

The evolution approach to knowledge leads the interested reader into a rich and growing literature concerned with social development, neurological development, and the origins of consciousness. *The Origin of Consciousness in the Breakdown of the Bicameral Mind* (Jaynes, 1976) combines a social history with neural science (especially studies of split-brain patients) to propose an intriguing view of consciousness as a rather recent social product. *The Cerebral Symphony* (Calvin, 1990) also combines social history (actually prehistorical speculations) with neuroscience to argue why consciousness would have been a survival advantage for early humanity. (Good reading during your vacation at the shore). *Consciousness Explained* (Dennett, 1991) is one man's view on a number of the current issues in the philosophy of consciousness. It is a stimulating and perhaps too easy-to-read introduction from someone who is conversant with philosophy and with computers (a combination that I respect).

References:

Calvin, W. H. (1990). The Cerebral Symphony: Seashore Reflections on the Structure of Consciousness. New York: Bantam.

Dawkins, R. (1976). The Selfish Gene. Oxford, UK: Oxford University Press.

Dennett, D. C. (1991). Consciousness Explained. Boston, MA: Little Brown and Company.

Donald, M. (1991). Origins of the Modern Mind: Three Stages in the Evolution of Culture and Cognition. Cambridge, MA: Harvard University Press.

Elman, J. L., Bates, E. A., Johnson, M. H., Karmiloff-Smith, A., Parisi, D., & Plunkett, K. (1996). Rethinking Innateness: A Connectionist Perspective on Development. Cambridge, MA: MIT Press.

Jaynes, J. (1976). The Origin of Consciousness in the Breakdown of the Bicameral Mind. Boston, MA. Houghton Mifflin.

Maturana, H. R., & Varela, F. J. (1987). The Tree of Knowledge: The Biological Roots of Human Understanding. Boston, MA: Shambhala.

Vygotsky, L. (1986). Thought and Language. Cambridge, MA: MIT Press.

Winograd, T., & Flores, F. (1986). Understanding Computers and Cognition: A New Foundation of Design. Reading, MA: Addison-Wesley.

12. The Rapid Evolution of Knowledge

The perennial question of whether life is becoming more complex at an ever increasing pace is hard to resolve. Technologists love to engage in hyperbole about how the information society is ramping up. Historians – conservative by training – point out that the concerns of people as reflected in Shakespeare's dramas, Plato's dialogs, or even in Homer or passages from the Old Testament are as sophisticated and multi-faceted as the informational burdens of the man on the street as we enter the 21st century.

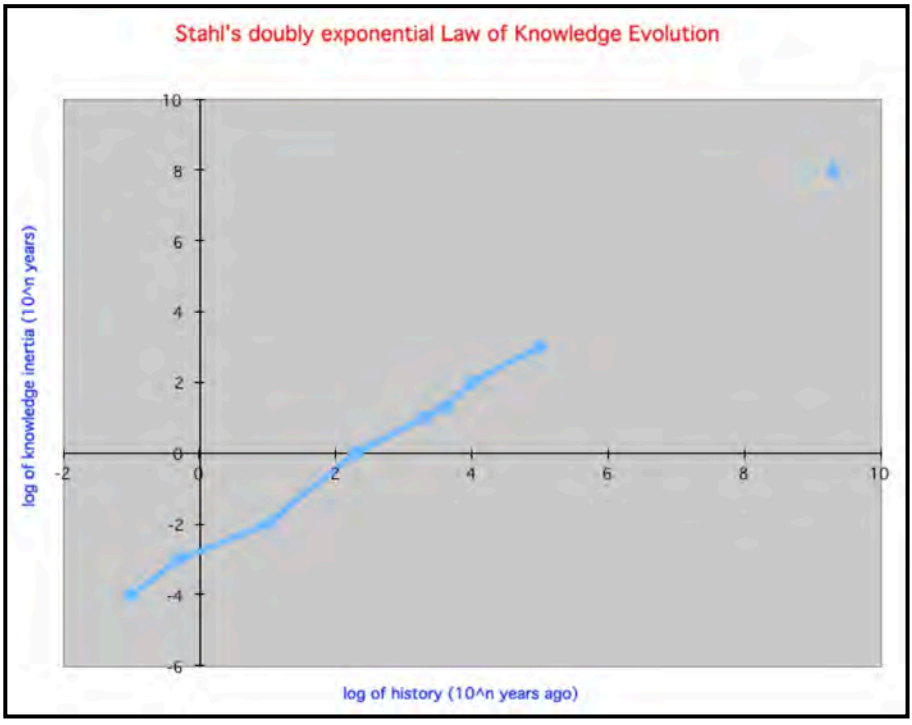
Perhaps an even broader net must be cast to settle this question. Based on a number of books about the evolution of knowledge, I graphed a measure of the ability of knowledge to spread around the world at different evolutionary stages. Admittedly, there are serious problems with my graph as a scientific theory. The measure I used was necessarily fuzzy in order to apply to the broad range of "knowledge technologies" I wanted to consider. Moreover, all the dates and times are unacceptably rough – at best orders of magnitude. However, the result I arrived at was incredible (not just in the sense of being scientifically un-credible).

I relied for my data primarily on three books. (Dawkins, 1976) traces the origins of life back to chemical replicators existing 3.5 billion years ago on Earth, and shows how they involved into cells housing modern DNA. (Maturana & Varela, 1987) connect these biological roots to contemporary human understanding. Finally, (Donald, 1991) defines episodic, mimetic, and cultural forms of human memory as the primary stages leading up to our current development of computer-assisted external memories. I made a chart listing the various forms of memory I could distill from these books. For each form of memory, I listed the date that it evolved as well as a measure of its "inertia." By inertia I mean the time it takes for an idea to spread around the world given a particular form of memory. I then graphed the date of appearance of each new memory technology versus its inertia.

The result was that the relationship being graphed turned out to be *doubly exponential*! The term "doubly exponential" is an uncommon mathematical term because there is virtually no phenomenon in nature that evolves so fast. In graphical terms, this means that when graphed on log-log paper (log of time since historical appearance versus log of inertia) the relationship is a straight line. This

certainly seems to be a strong indication that when observed at an evolutionary scale things are speeding up rather quickly.

A possible interpretation of the doubly exponential nature of the growth is that there are two phenomena interacting, both of which are growing exponentially. That is, significant new memory technologies are emerging at a faster and faster rate. And the effect of these successive technologies is more and more extreme. These two phenomena may, in fact, drive each other.



What are the consequences of this rapid evolution of knowledge? For the historians, I guess it means that they had best start to chronicle these changes faster. For the technologists, I think it means that the impact of memory enhancing technologies will have great repercussions. The World Wide Web, for instance, is becoming an essential global external memory at a speed nobody could have predicted. Software to take advantage of this memory will multiply the power of this memory technology beyond our ability to predict. As with every advance in memory technology, the real impact is only felt when social practices adapt themselves to the new capabilities. But, given the rapidly diminishing inertia of knowledge, this is also happening at break-neck speed.

References:

Dawkins, R. (1976). *The Selfish Gene*. Oxford, UK: Oxford University Press.

Donald, M. (1991). *Origins of the Modern Mind: Three Stages in the Evolution of Culture and Cognition*. Cambridge, MA: Harvard University Press.

Maturana, H. R., & Varela, F. J. (1987). *The Tree of Knowledge: The Biological Roots of Human Understanding*. Boston, MA: Shambhala.

13. We Have to Work in the Future Now. (In Fact, We are Already Late.)

Technological change has accelerated to the point where we do not simply have to change our technological base more frequently, but we have to work in a technology that does not exist yet but that we predict will be dominant in the future. We need to comply with CORBA standards that are scarcely implemented now. We have to code in Java although there are not yet any tools for doing that. We need to incorporate software components that may not be available for years (and who knows what they will look like or what functionality they will support if they ever do become available). I do not say all this to conclude that we should stick with our old and do-able technology. On the contrary, I think we have no choice but to work in the unknowable future; I think that is the way it will be from now on.

These new work circumstances require far more than Life-Long learning. That was a strategy for the old days when you merely had to keep adjusting to the times and learn the current technology. Now we have to predict the future. Even more, we have to create the future. If we conclude that the evidence is over-whelming that Java will be the programming language of 1997 than we have to start programming in it now or we will be hopelessly outdated by 1997. (Even in late 1995, before Java was released on any platform, I was asked in a job interview by a company turning out a Java product if I was an experienced Java programmer. Of course, I said “Yes” because I was already living in the future.) If I start programming in Java I have to develop my software to take advantage of object libraries, of components, of plug-ins and of global software environments that I cannot even dream of. As I and millions of other programmers around the world begin to do this, we create the future that includes all these things.

It used to be that heads of companies like Apple, IBM, Microsoft, Sun would scheme in back offices to create the future, driven by anticipated quarterly bottom-lines. Now the discussion is out on the Web. The new capitalism is driven by hype about the future. If Sun and Netscape can convince the programming world that the future is aligned with their forth-coming products, then and only then those products will create wealth. The Web is a medium for involving the whole world in creating this profitable future. If we want our products that we are undertaking

now to look good when they come out in demos, papers, conferences, resumes or shrink-wrap boxes then we have to be skilled players in this futures game.

14. LSA Visits the Chinese Room: A Guided Tour

One way of responding to the question, does LSA do the same thing that people do, is to adapt the answer that the prominent American philosopher John Searle gave to the question of the relation of minds, brains and programs. Searle was responding to the claim of "strong AI" as articulated by Newell and Simon (1963) that minds are programs executing on brain hardware. Searle's controversial response is in Searle (1980) "Minds, Brains and Programs", Behavioral and Brain Sciences, 3:417-424. It is reprinted in Readings in Cognitive Science and elsewhere.

Searle's argument centers on the difficult concept of "intentionality." For Searle, "intentionality is by definition that feature of certain mental states by which they are directed at or about objects and states of affairs in the world. Thus, beliefs, desires, and intentions are intentional states; undirected forms of anxiety and depression are not." Using this concept, we might postulate that when a person expresses a belief, they have an intentional content in mind that is nowhere present or even represented in LSA. This intentional content is the additional ingredient that we intuitively sense is missing from a definition of meaning restricted to the interconnections of linguistic tokens as captured by LSA. Searle tries to make this intuitive sense very graphic with his Chinese room scenario. I will try to adapt it to the LSA question. I think that even without fully understanding intentionality we will see that LSA does not understand in the sense that people do.

Let us distinguish "strong LSA" from "weak LSA." According to weak LSA, the principal value of the computer in the study of the mind is that it gives us a powerful tool: e.g., to formulate and test hypotheses in a precise fashion. But according to the strong interpretation of LSA as a cognitive theory, the computer is not merely a tool in the study of the mind; rather, the appropriately programmed computer really *is* a mind, in the sense that computers given the right LSA programs can be literally said to *understand* and have other cognitive states. In strong LSA, because the programmed computer has cognitive states, the programs are not mere tools that enable us to test psychological explanations; rather, the programs are themselves the explanations.

The aim of an LSA program is to simulate the human ability to understand texts. It is characteristic of human beings' text-understanding capacity that they can answer questions about the text even though the information that they give was

never explicitly stated in the text. When the computer is asked questions, it will print out answers of the sort that we would expect human beings to give. Partisans of strong LSA claim that in doing this the computer is not only simulating a human ability but also:

- That the computer can literally be said to *understand* the text and provide the answers, and
- That what the computer and its program do *explains* the human ability to understand the story and answer questions about it.

One way to test any theory of the mind is to ask oneself what it would be like if my mind actually worked on the principles that the theory says all minds work on. Let us apply this test to LSA with the following *Gadankenexperiment*. Suppose that I am locked in a Chinese room with large matrices of numbers and instructions for following the LSA algorithm. Occasionally, I receive a string of numbers. Following the LSA instructions, I count how many instances there are of each number in the input string. I use each distinct number as an index into a matrix to retrieve a vector of 300 decimal numbers; multiply each of the 300 decimals by certain other numbers I look up and then add all the resultant vectors together. I use the resultant vector to perform a calculation with each vector in a second matrix, choosing the index to the vector that led to the highest computation result. This index is used to select the string of numbers to return out of my room.

Unknown to me, researchers outside my room have taken normal English sentences expressing questions and encoded them in a string of numbers. When I return a new string of numbers, these people decode it into an English sentence. When the researchers outside my room compare the English of my responses to the English responses of a control group of people who simply respond naturally to the sentences, they find that mine show just as high a level of understanding as the others, within the limits of experimental error and inter-rater reliability. They conclude that I have understood the text in the same way as other people and that my processing (which can be observed as the manipulation of symbols) must explain how other people (whose neural processing cannot be observed) understand the same texts.

But in fact, I have not understood a word of either the input or the output sentences. If they were about the heart and blood, I had no idea of that but merely manipulated formal symbols. I may have inputs and outputs that are indistinguishable from a person responding to the English sentences, but I understood nothing. The LSA program cannot explain human understanding since when I am running the program, I understand nothing.

Well, then, what is it that people have when they answer English sentences that I did not have when I processed the LSA rules? The obvious answer is that the

people know what the sentences *mean* while I haven't the faintest idea what the numbers I am manipulating mean. So LSA does not contribute to a theory of meaning (semantics).

Now, you may argue that English words are rather arbitrary symbols just like the numbers that encode them are and that the computer understands these numbers because it has been trained to understand them on a large corpus of text encoded in these numbers just as people have learned English words from being trained on a large corpus of words. However, note that I was able to manipulate the LSA symbols without any understanding based on training: I simply looked up indices and carried out computations on numbers that had nothing to do with any content however expressed. As in all AI programs, the attribution of meaning to manipulated symbols is projected by programmers and other people interpreting the meaningless shifting of arbitrary symbols; the same goes for attributions of *training*, *learning* and *understanding*.

So, is Searle a dualist? *Au contraire*! He believes that only a brain (or some other physical object with similar abilities to cause intentionality) can have a mind. It is the people who think that mind is a program that can be dissociated from the physical computer on which it runs who are the dualists. For instance, someone who argued that understanding could be derived purely from an analysis of corpora of text and computational algorithms (all non-material entities) would be in danger of hypothesizing a mental realm of mind that is independent of (rather than emergent from) the physical world of brains and bodies and interactions with the physical world.

* * * * *

The discussion of Searle's argument underscored some concerns for me about how LSA is discussed. If we accept Searle's argument that we cannot talk about LSA understanding meaning the way that people do, then why does LSA work? That is the interesting question. I suspect that much insight can be gained by looking carefully at the logic behind LSA's development and its successes, being careful not to make hasty claims about human understanding. The design rationale for LSA makes arguments about *textual corpora*. For instance, there is a justification in terms of text for why common words are given a smaller role in defining the LSA representation of a document, while repeated terms are given a logarithmically scaled role to give more power to repeated words without letting them completely dominate. Dimension reduction forces generalization, but must be stopped at some point. The point of optimal reduction seems to be a function of the structure of the corpus—there is no reason to associate this with some brain structure as though the abstract mathematical *dimensionality* of some computation had anything to do with the physical dimensionality of neurons in the brain. It may be a mistake to draw conclusions about meaning, understanding or the brain too

directly from what seems to be an analysis of textual corpora. Let us look at what went into the design of LSA and of the experiments in order to understand the results of the experiments, recognizing that experiments have to be set up rather carefully for LSA to do well.

The very name of LSA may be misleading, for the analysis is of structural co-occurrence, which is syntactic (at the level of the corpus, not the sentence), not semantic. It may be a questionable leap to say that LSA analyzes latent *semantics*. There may be good evidence that the reduction of co-occurrence data results in something like semantic relations, but this is something that needs to be demonstrated, not assumed. Even more, the representation of the semantics of a document by the weighted sum of the vector representations of its constituent terms needs to be defended. If these things seem to work in certain experiments, then we need to ask why that is. Is it that the experiments have so much room for error (because people do things so differently from each other) that LSA can fit in even though it is doing some very different things? Or do the experiments prove that something very interesting (and possibly surprising) is taking place.

This reminds me of another issue, somewhat off the topic. Text seems to have a hierarchy of structures: letters, syllables, words, phrases, clauses, sentences, paragraphs, sections, chapters, documents, corpora, languages. LSA seems to have only the levels of words, documents and corpora—where it is unclear whether LSA documents should be sentences, paragraphs, sections or documents. Maybe we need to do some experiments to see what should serve as LSA documents. Maybe it is different in different situations. Does LSA need a more detailed hierarchy and how would the different levels be represented computationally—they cannot all be weighted sums of their word vectors or could they?

To me, the analysis of Plato's problem was paradigmatic. Here, a nice argument was made that kids must learn a lot of word meaning through latent semantic relationships and a computer model was presented that showed how this could work computationally. The success of LSA experiments does not convince me that LSA understands meaning the way that humans do, but rather it suggests that human mind is largely a social artifact defined by the structure of textual (and spoken, etc.) corpora—although I still maintain that mind must be grounded in bodily/worldly lived experience. It may just be that this grounding is less pervasive quantitatively (though no less essential qualitatively) than we might have assumed in the past.

I guess the practical point is that we should remain clear that LSA is an analysis of text and not make the common mistake in strong AI of projecting human interpretations onto it. Perhaps the direction of argument when the evidence shows a parallel between LSA and people should not be that LSA must be doing what

people do, but that people must do what LSA does—learn from historical occurrences of terms in texts.

I guess the philosophical point is that mind is overwhelmingly a product of language experience and culture. However, to avoid idealism we must insist on the importance of bodily/worldly grounding (especially in the early formative years) and the fact that language and culture are products of social interaction, which is ultimately grounded in physical interactions starting with social bonding.

* * * * *

Let me try to be specific about the essay "Learning from text: Matching readers and text by LSA" which I found very interesting and stimulating, but also disappointing. It consists of reflections on four intriguing issues: (a) the role of technical vocabulary, (b) the required length of student essays, (c) the cosine as optimal measure and (d) the problem of dimensionality. Here are my gripes about each discussion:

(a) The role of technical vocabulary. It was hard to tell that the cosines being compared were to Text C or why you use essays written before students read the texts. At any rate, the conclusion that "non-technical words students use contain a great deal of information about their knowledge of the heart" is a bit strange on the face of it. Perhaps they just use a similar writing style or general vocabulary to Text C. How would the non-technical words from essays by these students on the optical system compare to Text C? Would such a control be interesting to compare? Then you "conclude that nothing is to be gained by separating." Yet, if we stop-listed all the non-technical words that would be a gain in simplifying the computations. Finally, you put in your conjecture about bags of words. But no investigation of this interesting conjecture was undertaken—wouldn't that have been the interesting thing to explore?

(b) The required length of student essays. It seems clear that the data you have here is not what you need to answer this question because students were constrained to write about 250 words. If others wrote 100 or 400, would their curves be similar on the same scale or a proportionately different scale? That is, is the optimal around 200 words or is it around 80% of the requested length? You have no comparative data to answer this and therefore cannot answer the question you pose.

(c) The cosine as optimal measure. This discussion had some interesting aspects. My problem was that I wondered about using distance as the measure and it was not clear whether this was the definitive rejection of doing that. For instance, distance was not included in Table 3 for comparison. You conclude that both length and cosine are important, and they are included in distance (as shown in detail by your appendix); does that mean that distance could be a useful joint measure or does the regression result rule this out—I could not be sure. I did find

it interesting that the cosine measures narrow comparison to the target essay while length is a reflection of the corpus space (although you stated this in terms of human knowledge).

Again, as in (b) the discussion of word count versus vector length suffered from having the wrong data in which essays were constrained in length.

(d) The problem of dimensionality. This was the strongest discussion, although it was hard for me to follow some details. One problem was that it referred all the way back to Table 2 on page 9 (and now I finally found out what "dim-method n" meant there). Then the figures were hard to read: "A" would have been clearer than "TA" and what do the numbers on the x-axis mean? Why don't the medical students score better than TA in Figure 4b? (I guess that is why we have to go on to methods 2 and 3.) On page 20 I wondered about the statement: "There are undoubtedly many ways in which the textual units differ from one another, and yet it appears that knowledge level is largest systematic difference between them." How do you know that this appears to be the case? Is it because of the level of correlation with knowledge tests? If so, to what extent are these more than tests of vocabulary? I guess you meant this to be a transition to method 3 and I need to study that more carefully to understand what is going on.

15. Consciousness Without Neural Correlates

Presented in Mike Mozer's seminar

"The Scientific Study of Consciousness"

January 28, 1997

Patricia Churchland seems to argue that the proper theory of consciousness will be based on an understanding at the level of neurons in the physical brain. She offers evidence that we may be able to correlate the firing of specific neurons with certain mental behaviors taking place simultaneously. However, I would claim that she gives no evidence for thinking that we will be able to explain the *distinction* between conscious and non-conscious mental states in terms of a distinction at the neural level. Indeed, it is hard to imagine what such an explanation would be like.

Of course, it is likely that conscious states will be associated with neural correlates of linguistic, working memory or symbol manipulation tasks. But how do we explain the distinctively *conscious* aspects such as self-awareness? (I take it that this is the main issue of qualia, rather than the secondary issue of how do we know that we experience the same qualia as someone else.)

Churchland's main argument seems to be that we cannot *imagine* a non-neural explanation for consciousness without positing some phlogistin-like soul-substance. But someone like Searle does not believe in a non-physical substance of consciousness any more than Churchland does, and he insists that there are neural correlates of conscious states -- he merely doubts that an understanding of neural activity could explain what is distinctive about consciousness. That is, the same physical evidence might or might not be accompanied by consciousness -- as in Searle's Chinese room -- and there would be no way of telling which was the case based on events at the neuron level.

In the following I sketch two rough stories about consciousness just to show that we *can* imagine an explanation of consciousness that is independent of neural behaviors. In fact, I think it is easier to imagine a satisfying explanation of consciousness in such terms than at the level of neurons.

* * * *

Once upon a time people had no conscious states. They went through life on autopilot, interacting with each other and with their environment instinctively, with no concept of self and no worries about the purpose of "their" lives. Their behavior was driven by raw physical and simple social needs. Neurons fired in correlation with their behavior, but there were no firings of consciousness.

Gradually, people started to use tools, raise food and generally engage in tasks that required increased interpersonal interaction, social decision-making and group memory. As their vocal abilities evolved and their brains grew, they developed languages that met those needs. Spoken language is concrete in that there is always a specific physical speaker, yet abstract in that it can refer to things no longer present (memory) or not yet present (predictions, plans). Neurons fired now in new brain regions of language capabilities, but they were just like the other behavior correlates, and there were no firings of consciousness.

Then, perhaps mostly in rather modern, especially literate times, people started to internalize language. That is, they would engage in the useful practices of articulating things in language, but now even when no other people were present. As they discovered how really useful this could be, they talked to themselves even while in the physical presence of other people by talking silently. As a derivative of spoken language, such "self-talk" implied a speaker or subject. While people may have at first attributed this role to some external authority figure (tribal chief, god, super-ego), they eventually postulated a self (soul, homunculus) as the subject of their own current and remembered internal monologues. Thus, consciousness arose: an internal monologue about various behaviors of oneself. This in no way affected the character of neural firings.

* * * *

Once upon a time I was born. Or rather, a physical human infant was born who grew into the person I now am. At first this infant just behaved non-reflectively and without conscious memory. It responded to its environment directly based on physical needs and reflexes. It responded to stimuli without articulating and manipulating a symbolic representation of them and it remembered events that had a physical impact on it by adjusting its bodily responses in accordance with its body’s needs.

(It may be hard for you to imagine that I was ever so thoughtless. But think about common animals. When you were young and under the sway of Walt Disney, you probably projected a lot of human personality and thought onto the behavior of your pets. But now, having studied behaviorist psychology you may see through that anthropomorphism and understand how animals do all the things they do without consciously debating what to do and how to do it. Now look at an infant that same way.)

Gradually, in order to enhance my social interactions, I learned to communicate in language. As Vygotsky argued against Piaget, I then internalized this social language as self-talk or mental reflection — it is fascinating to hear four-year-olds talking to themselves — just as I later learned to read out loud first and silently subsequently. Now I use self-talk extensively. It is useful to me in many ways, letting me engage in the complex, socially constructed activities that fill my mental day. It is also confusing, causing me to wonder about this self who started talking gradually in my youth and now won't shut up.

* * * *

So, what is consciousness? How can we study it scientifically? According to these stories, it is a product of social culture. As a human behavior, it relies on brain functions and so there will be neural correlates of thought just like there will of non-conscious behaviors. But there will be nothing about the neural correlates that distinguish or identify (let alone explain or shed light on) the consciousness behaviors — except to say that they involve linguistic activities, which we already know. Because consciousness is a confusing business, scientific study can clarify just what some of the causal relations are among conscious and non-conscious behaviors, but neuroscience will never explain consciousness, let alone eliminate it (except to agree it is not a distinctive brain function).

So, who is conscious according to this theory? Anyone who engages in self-talk! But exactly what is self-talk according to this theory? It is the internalized form of social communication developed through social interaction to help with one's behavior in a mixed cultural/natural environment. Accordingly, consciousness is a cultural product, shared only by relatively mature people -- i.e., not by very young children or primitive homo sapiens. One could probably identify a stage in history (c. 1000 BC says Jaynes, 1976) and in child development where consciousness grows from dim awareness to full self-consciousness.

Can computers be conscious? They can certainly manipulate symbols internally and report on their states, including remembered states. But their "language" -- both internal and external — is different from human language: it is not the evolutionary product of active interaction with a natural and cultural and social environment. Thus, the language of computers is purely formal (syntactic) and lacks the meaningfulness (semantics) that grounds both human language and human consciousness.

Is Data of *Star Trek* conscious? When he does formal information retrieval from his data banks, no. When he muses emotionally about his interactions with his shipmates, one suspects consciousness is dawning. But Data and his adventures are a thought experiment, not necessarily possible in principle. He serves to show how far the computers we use and program actually are from being conscious.

16. Software Semiotics

What is software?

As reflective software practitioners we may wonder what software is made of. Bridge builders and steam engine designers pay careful attention to the composition of steel and the structural properties derived from that composition. Specific material characteristics generally impose important constraints on the design of physical artifacts. If software consists of many layers of signs – from elemental logic functions buried deep in chips up to high-level software components corresponding to functional requirements – and if the electro-magnetic and silicon substrate are irrelevantly distant from the nature of software, then where do the constraints come in? If we do not have to move atoms around but merely manipulate bits (signs), then whence the resistance we meet in trying to implement our goals?

Signs of the limits of semiotics

Some years ago, I asked Frieder Nake if software art might point toward the nature of software and at the resistance it offers us like art in other media brings out their natures (see the essay on Software as a New Art Form). This summer Frieder put forth the claim that semiotics, based on the writings of Peirce, could explain the nature of software as a system of signs if we understood what a sign is. A group of us met four times to investigate this suggestion. Frieder further enticed us with the claim that software is the ultimate *postmodern* medium, presumably in the sense that it constitutes a reality in which there is nothing but signs and signs of signs.

Four meetings and a couple brief excerpts from Peirce's obscure texts were by no means sufficient to disentangle our preconceptions, Peirce's shifting ideas, subsequent developments in semiotics, and Frieder's own complex interpretations. However, I came away with the impression from all this that statements of semiotics (e.g., Peirce's and Frieder's) were open to two opposed interpretations: (a) a purely symbolic interpretation in terms of nothing but signs and (b) an interpretation that rooted signs ultimately in something non-symbolic. I think there is a tendency toward reading (a) of semiotics. As opposed to that, I would claim that semiotics needs to recognize that it is limited, and that signs are ultimately founded in non-symbolic material human reality. Only when we recognize that

signs cannot be understood solely in terms of other signs can we understand the nature of software as a resistive medium. (This claim is closely related to Searle's that a room full of signs and algorithms cannot understand Chinese, or the critique of LSA as a cognitive theory that statistical relationships among signs cannot fully capture meaning any more than an uninterpreted dictionary – see the essay above on the Chinese Room.)

I will start by looking at two statements by Peirce. Then I will briefly summarize a couple of philosophical distinctions in order to introduce some terminology for defining the non-symbolic context of signs. Finally, I will apply this terminology to suggest a rough description of the nature of software.

The ambiguity of Peirce's signs

I will illustrate the ambiguity of Peirce's statements by arguing against Frieder's interpretations of two points. Peirce defines a sign as having three elements: a symbolic representation (the *representamen*), the object represented, and the *interpretant* perspective. To this definition Frieder remarks, "Ludwig Wittgenstein, in his later writings, defined the meaning of a word to be its use. This amounts to the same as Peirce's concept of sign." To me the opposite seems true of Peirce's definition. Peirce seems to be very much in the tradition of the *early* Wittgenstein, who tried to reduce language to symbolic representations of real-world objects. With the notion of *meaning as use* the later Wittgenstein rejected the idea that word signs represented objects and moved to a functional view of language: people use words to accomplish social and communicative goals. Language is no longer a semiotic system of signs representing objects, but a network of social games embedded in cultural forms of life.

The second point that Frieder makes is that the *interpretant*, one of the elements of the sign, is itself a sign: "It is this recursiveness of the concept that makes it irreducible and maximal." For Frieder, apparently, the sign's definition in terms of an infinite regress of signs links semiotics to software and postmodernity. But Peirce noted that the recursion of symbolic *interpretants* bottoms out at some point in "habits" of the human interpreter. With habits, one leaves the explicit realm of symbolic expression and reaches its roots in tacit knowledge.

Some distinctions

According to Heidegger, all explicit knowledge derives its meaningfulness from a network of significance that makes up the interpretive (hermeneutic) situation. This significance is based on tacit knowledge that comes from our lived experience as historical embodied beings living in the physical and social world (see also Merleau-Ponty, who explicated this view). So, semiotics deals with a level of knowledge that is not irreducible, but is based on a non-symbolic level of experiential meaning.

Marx provides a more specific analysis of human existence in the world with his concept of labor as human activity transforming nature. Two of his distinctions are useful for analyzing the sign nature of software. Marx distinguishes *intellectual labor* from *manual labor*. We can take this as the separation of symbolic from physical processes. Marx shows how this increasing separation is an historical development arising from capital accumulation – the symbolic distinction is produced by material social reality. Managerial functions are separated from material production, assigned to different people, departments, or even countries. This raises the possibility that the "information society" may not represent a post-capitalist form of production, but merely the further separation of intellectual labor in the first world from manual labor in the third world.

Marx's second distinction is between *live labor* and *dead labor*. Dead labor is the productive capability of artifacts in which past labor is now congealed. Machines are Marx's prime example of dead labor. Machines have a productive capability based on two conditions: (a) they encapsulate past human labor and (b) they magnify the effects of current live labor. Capital is dead labor. As the theoretician of the industrial age, Marx focused on dead manual labor as the basis for machinery. Today we might extend this approach to a concept of *dead intellectual labor* as the basis for the meaningfulness of symbolic artifacts: signs as dead intellectual labor.

An analysis of signs as dead symbolic activity could account for the recursive nature of signs as well as for the bottoming out of this recursion in live human activity in the physical, social world. It could also tie communicative signs to social activity and culture since culture is the paradigmatic agglomeration of dead intellectual labor at a social level.

Software as machinery

Let us apply these distinctions to software. A program represents the intellectual labor that went in to designing it (to accomplish some human goal), writing it (to define an algorithm that is humanly meaningful), and debugging it (to ensure that it produces humanly useful output). Like a piece of machinery enclosed in a black box, a software artifact in an executable file may persist long after the labor that went into it is forgotten and the artifact may reveal little about the intentions of that past labor. However, when the artifact is put to use by new live labor it performs in ways determined by its congealed dead labor.

Consider a piece of software that you are creating with your live intellectual labor right now. You are making use of software libraries, compilers, assemblers, operating systems, utilities, etc. that are the result of countless hours of intellectual labor – virtually the result of the entire history of software. You also make use of concepts like *variable*, *recursion*, *class* that incorporate models of thought whose cultural history can scarcely be comprehended. To all this you add your meager contribution, expecting that since you are just manipulating bits – arbitrary signs – you should encounter no inertial resistance.

If one considers the amount of dead intellectual labor incorporated in a software artifact (and in the design of its hardware substrate), it is incredible that it works and allows the live labor of programmers or end-users to accomplish their own specific human goals. Clearly, this enormous symbolic machine only works because (a) a considerable amount of the labor that went into it was devoted to making it simplified, standardized, and reliable and (b) much social effort went into developing compatible practices of live software labor through socialization and training. Rather than adopting a postmodern, allegedly post-capitalist ideology in which being digital is divorced from pushing atoms, we might view Software as the biggest machine yet produced for increasing intellectual productivity and maximizing capital accumulation. Is it a coincidence that today's wealthiest robber baron sells bits?

Gerry Stahl, August 9, 1998

17. Software as a New Art Form

Inspired by the CHI '95 panel on creativity, Mark Gross posed the following dichotomy:

- "The computer is too constraining! It does not provide the freedom to create; it limits what I can do" or
- "There aren't enough constraints! The computer lets me do anything I want; there's nothing to work against, say as opposed to working with ink on rice paper, the medium is very unforgiving; you must execute the strokes with skill and craft; the constraints are very exacting, and this enhances creativity."

Mark asks, "What are we to make of this dichotomy? Which side is right? What can we as media makers learn from this?"

As part of the panel, Frieder Nake referred to the computer as the purely semiotic medium of the postmodern situation. Later, I posed essentially Mark's question to Frieder in the following terms:

1. Art theory since Aristotle has focused on the imposition of form upon material. The material offers "resistance" (in CS terms, constraints) which the artist forms, masters, overcomes or reflects upon (depending on the historic era or your theory of art).
2. As purely semiotic, the computer medium has no resistive matter, no constraints imposed by the nature of the medium. It is universal at least in the sense of the universal Turing machine. For instance, as the composer Varese noted when computers were first invented, electronic music is free of all the restrictions of traditional musical instruments.
3. Yet, as programmers we know how restrictive any given software environment really is. For instance, since the 1960's I have been looking for an electronic music system where I could create sounds defined by arbitrary mathematical equations and I still have not found one or had the time to build one. Most music software re-imposes the constraints of traditional composition, and none allow me to do what I want.

Frieder agreed that the relation of the universality of software to the constraints imposed on any software creator are complex. This relation is qualitatively different from what it was with material media; it is harder to grasp.

Here are some initial thoughts toward an aesthetics of software:

1. Let us extend our model of domain-oriented design environments as a sequence of successively higher-level systems: machine instructions, assembler, languages, DODEs (domain-oriented design environments), a DODE customized to a particular creative person's interests and knowledge base, a creative artifact along with its specific software supports. Here we see that a final creative work depends not only upon the abstract potentialities of computation (which may be relatively universal and unconstrained -- at least for certain kinds of creative work), but on a concrete technology base (a chip design with an instruction set, controlled by an operating system, compilers, applications, environments, etc.). This technology base is extremely constraining. Its constraints are not a result of nature -- physical or chemical laws and evolutionary patterns -- but of countless human design decisions. These decisions encompass the history of technology, which is a central process in our society. Much of the concrete technology base has become second nature to us.

2. Second nature is a social construct. Our technology is vigorously pushed in directions corresponding to the economic priorities of modern society. Computers and their software are designed to promote productivity, a socially specific form of efficiency measured by reductions in human work time. The ways in which computers could empower people to control information or processes or could empower them to reflect more deeply on issues related to what they are creating are suppressed in favor of speeding up work. A famous animator shown during the panel rejected the use of computers because it eliminated the time for reflection in drawing animations. But is this an inherent property of computers or just the use that they are put to in modern society? Shouldn't computers give animators tools to create images they could not otherwise envision (and therefore inspire their creativity)? Shouldn't computers free animators from tedious chores (e.g., with automated morphing) so they have more time, concentration and energy for creative reflection and imagination? And don't we particularly believe that software should support reflection with tools that augment human intelligence? But, at least as seen in the vast majority of software in the marketplace, computers just seem to push people to work faster and faster -- frantically, stressfully, almost mindlessly. Just as the tv in our society turns us into consumers, the computer turns us into efficient machines. Second nature in these parts is not conducive to creative activities.

3. I recently demoed at Apple headquarters a modest proposal for supporting creative curriculum development among high school teachers. The bottom-line response was: the marketplace does not support software that places any demand upon the user to think. Everyone agreed personally that the proposed software addressed a major social need in a reasonable way, but they insisted as decision

makers that it was not appropriate for the economic market. If Apple refuses to pursue software that makes us smart, certainly IBM and Microsoft will not produce tools that promote creativity.

4. Throughout the history of software development there have been people advocating the design of software to enhance people's creativity. These advocates have been effectively marginalized by the marketplace, either as shareware producers who cannot make a living, as academics who also train students in skills needed by industry, as visionaries who propose ideas that may someday be adapted to the needs of industry, or as tokens who humanize the image of a ruthless economy.

5. There is, surprisingly, no recognized category of the software artist. Other technological media have been pioneered by artists: printing, photography, film, etc. The creative heroes of computer culture are the entrepreneurs: individuals who have come up with breakthrough ideas for practical systems that are successful in the market. But the inventor of a better mouse trap is not an artist. By software artist I do not mean a musician who programs electronic music or a visual artist who programs displays of colors. I assume that a software artist would create programs. That is, software would be the end product, the artwork itself, not its means. Such a software artifact might demonstrate some potential of software that had not previously been thought about, even though it was not a practical, money-making idea. It might be a reflection upon the software medium, demonstrating in code something about the nature of software. (I cannot think of a good example of this off hand -- if I could I might become a software artist, possibly the first one.) It might be a critique (or a postmodern deconstruction) of the way that software development is currently skewed by market forces.

6. Where would a software artist's works be displayed? Not at a traditional museum. Is there a journal of software art? I haven't seen any software art in Leonardo, the journal of art and technology that consistently treats technology as a means for forming some matter. Where is an audience? What would the products look like physically: textual code, displays of executing code on a monitor? Does the audience need to be able to read code and/or to understand technical issues? Surely a purely semiotic medium should be displayed in a virtual environment like the Web. The Agentsheets Remote Exploratorium comes immediately to mind as an appropriate venue. Coincidentally (?) there are Agentsheets titles that have to do with art (color or sound patterns) and others that have to do with software (e.g., Petri nets).

7. Mark wants to know, "What can we as media makers learn from this?" I think our group has been trying to do what needs to be done. I think that our heroes (e.g., Rittel, Ehn, Winograd, Schoen) have been pointing the way for some time, emphasizing that we are designing media of communication and creation within a

political (socio-economic) context. All we can do is to try to dream up and promote software approaches that empower people's personal creativity by supporting processes of reflection-in-action. Gerhard Fischer emphasized this during the panel. Of course, I would add that reflection or interpretation is from different perspectives and so we should support the tailoring of software to individual (not just domain) orientations.

8. Most software is designed to force the user to adapt to the software, so that the software serves as a management tool for controlling employees who use the software. In HCI we pretend that we are tuning software to the end user. But I think that if one analyzed the constraints on software design (even in American examples of so-called participatory design), one would find that corporate (Fortune 500) management interests overwhelm all other concerns. What can we do in the face of this? At least we can try to become more conscious of what we are doing and of the context in which we are doing it.

9. Software may be universal in a sense not true of any material medium. However, the second nature of actual software environments impose impenetrably complex constraints. There is an ideology that says technology is an impartial tool. There is even an ideology that says that marketplace decisions are necessarily the best and fairest. Unfortunately, we have no software artists who can poke holes in these ideologies. It is up to us to resist the prevailing ideologies and forces in order to push software design in directions that can allow users to be creators rather than just machines and consumers.

I assume that our efforts to address the needs of serious professionals such as designers is a useful antidote to treating users as consumers or robots. I assume that our interest in providing end-user languages, tailorable controls, evolving knowledge bases, media of interpersonal communication and tools for collaborative domain construction point in the right direction.

If we can come up with convincing examples of software that promotes personal creativity and unhurried reflection, then some people may demand such tools. Software artists, if they ever appear, may be able to demonstrate such potentials of our universal semiotic tool that have been largely suppressed to date but that we know could exist.

Gerry Stahl . . . from the philosopher's corner

18. On Alexander's pattern language as end-user programming

Last week's L3D meeting began with a presentation by Ernie of some failures of end-user programming in architecture, citing Alexander's *A Pattern Language* as a source of the idea that people could design their own living spaces. I would like to present a positive counterexample.

In my dissertation I cited Alexander as claiming that his patterns of architectural form were to be used by each person adapting them to their own preferences and local conditions. My thesis advisor, Ray McCall, argued against me that Alexander meant his patterns to be used in a rigid, cookie-cutter way.

After completing my dissertation, my next system-building effort was to build a house. I studied Alexander's book carefully and worked closely with an experienced architect. The architect and I (and my wife) engaged in an iterative process of discussing and critiquing each other's ideas in detail. My wife and I also worked closely with individual contractors and suppliers to design and select systems like lighting, sinks, doors, paint colors, cabinetry, etc. In my design effort I relied heavily on Alexander's patterns to provide a language for conceptualizing, arranging and critiquing. The result was a beautiful and unique house that expresses our personalities, our aesthetic and our local setting. The house fits the site -- which is rare in our neighborhood -- and meets our daily living needs perfectly. Most visitors (including our neighbors, most of whom built houses without much end-user designing) are impressed with the house.

(Click here for a tour of some interpreted patterns in my house.)

When Ray toured our house recently, he was struck by the way Alexander's patterns were, in every application, *interpreted* creatively by me. For instance, the pattern "light on two sides of every room" calls for outdoor windows on at least two walls of every room. My dining room has only one outside wall, so I left an inside wall open to the hall, kitchen and living room, so that light could flow in from those rooms. Or take Janus' critic that the sink should be under a window. Because I adapted Alexander's *farmhouse kitchen* pattern and put the kitchen in the center of activity, it had no outside walls. So, I left the wall above the sink counter open to the living room and to its expansive view across the plains to the flatirons. This gives the sink-user an interesting view, light and social contact. (But would Janus be happy? The idea that patterns are to be creatively interpreted means that critics must be very abstract or subject to the designer's interpretive perspective -- but that would take a dissertation to discuss.)

In summary, Alexander gave me a language for programming my house as an end-user. It was a flexible language that allowed for interpretation. It empowered me by opening up design possibilities that I had not known about without it. Having looked at a number of books, I found Alexander's the only one that really gave me a useful sense of how to think about architectural space. His 253 patterns provided critics that I applied repeatedly to the design of my house.

How does this relate to end-user programming of software? I think at least three distinctions are relevant. These were all implicit in last week's discussion, but are worth subjecting to incremental explicitness:

1. Atoms versus bits. In *Being Digital*, Negroponte argues these are different universes. It seems hard to modify an existing house without dynamite, but trivial to modify a collection of bytes. This needs to be a more subtle distinction, I think. With tools (sledgehammer, saw) and skills (carpentry, sheetrocking) one can indeed tear down walls and erect new ones. Just watch out for load-bearing walls. In software, it also takes tools (high-level visual environments, EUP languages) and skills (understanding the structure and function of routines) to modify systems. And watch out for all those functional dependencies among routines. Software may not consist of atoms at a fundamental level, but it has its own complex kinds of inertial mass.
2. Personal design versus groupware. Ernie's examples involved conflicts among multiple end-users. I only have to deal with my wife, and we can come to agreements. Even in just tailoring a software package through its preferences settings, conflicts can arise when there are multiple users. Look at our problems with EndNote, trying to adapt to a group software designed for single users. So, there are issues of end-user programming and separate issues of making changes within groups of users.
3. Programming from scratch versus modification. I tried designing my house from scratch but did not get too far until an architect came up with a basic design based on my specs. Then I had something to interpret and to critique. Almost all professional programming involves heavy reuse and adaptation. Modern programming environments are supporting this increasingly with application templates and object libraries supplying typical basic functionalities. A useful and usable EUPL must have a carefully selected set of domain primitives and come with a seed of typical and prototypical implemented applications.

… from the philosopher's corner … Gerry

Date: Sun, 11 Feb 1996

19. Lela's Birthday is a "Lela Birthday"

I would like to propose a mathematical concept I call a "Lela Birthday."

My friend Lela was born on 4/9/49. She just celebrated birthday 49 on 4/9/98.

It is a rare event when someone whose birth date had the structure M/D/MD celebrates her MDth birthday on M/D/2xMD, where M and D are digits. How rare? I will try to calculate the percentage of birthdays that are "Lela birthdays".

First, what percent of the population is born on a date with the structure M/D/MD where M and D are non-zero digits? In any century, 19 of the 100 years have 0 in them, so 81% have the structure MD. In any year, 9 of the 12 months have the single digit structure M. In any month, 9 of the roughly 30 days have the single digit structure D. Of these people, about 1 out of 365 has their month/day M/D corresponding to their year MD. If we assume an average life expectancy of 80 years, then people on average do not live to celebrate the 17 birthdays from 81 through 99 (90 does not count), reducing the 81% to 64%. So, the percentage of celebrated Lela birthdays is 64/100 x 9/12 x 9/30 x 1/365 = .04% or 1 birthday party in 2,500.

Now Lela turned 49 in '98, where 98 = 2 x 49. It is always true that a candidate for a Lela birthday turns MD years old MD years after the year 'MD. So, in most even numbered years from 1922 to 1998 (except 1940, 1960, 1980), Lela birthdays took place where the year (e.g., '98) was twice the person's age (e.g., 49). This will no longer be true for people born in 1951 to 1999 since they will celebrate in 2002 to 2098. Of course, these special Lela birthdays will resume in 2022 for people born on 1/1/2011 and later. In general, then only 35/81 of Lela birthdays as calculated above have this special double-date feature, or .017% = about 1 birthday party in 6,000. The Lela birthday yesterday will be the last such very special birthday until 2011. If someone went to a birthday party every week of their life, they would be lucky to attend one Lela birthday -- but now they would have to wait about 24 years for the chance.

20. Time and Being: A translation of Martin Heidegger's "*Zeit und Sein*"

The following lecture requires a short forward.

If two pictures which Paul Klee created in the year of his death, the watercolor "The holy one from a window" and "Death and fire" in temper on cloth, were shown to us in the original we would wish to linger long before them and would give up every claim to immediate comprehension.

If the poem "Seven songs of death" could be recited for us now, and by the poet Georg Trakl himself, then we would like to hear it often and would give up every claim to immediate comprehension.

If Werner Heisenberg presented to us some of his thoughts in theoretical physics on the way to the world-formula that he seeks, then perhaps at best two or three of the listeners could follow him; the rest of us would however unquestioningly give up every claim to immediate comprehension.

However, it is different with the thinking called philosophy. Because it is supposed to offer "worldly wisdom" or even "instruction for the blessed life." Philosophy may, however, be placed in a position today which requires reflections far removed from a practical wisdom about life. It may have become necessary to think about that from which the forenamed painting, poetry and physics receive their determination. We must, then, here too give up the claim to immediate comprehension; we must in this too listen, because the point is to think about what is uncommon but preliminary.

Therefore, it should be neither surprising nor bewildering if most of the listeners have difficulty with this lecture. Whether some succeed with it now or in a future reflection cannot be known. Something should now be said about the attempt to think about Being without reference to a grounding of Being in beings. The attempt to think about Being without beings has become necessary because, it seems to me, otherwise there is no possibility of bringing the Being of that which today *is* around the Earth's sphere truly into view, not to mention of adequately determining the relation of man to what has been called "Being."

A small hint is given for listening: the point is not to listen to a string of declarative sentences, but to follow the movement of exhibition.

*

What gives us the opportunity to name Time and Being together? From the beginning of Western European thought until today, Being has meant the same as being present. From being present, presence connotes the present. According to the usual conception, the present characterizes Time with the past and the future. Being is determined by Time as presence. This relationship alone could suffice to bring thought to a ceaseless unrest. This unrest increases as soon as we decide to reflect upon the extent to which this determination of Being by Time is given.

The extent? This asks where, how and why something like Time speaks in Being. Every attempt to think adequately about the relationship of Being and Time with the help of the common and approximate conceptions of Time and Being becomes immediately entangled in a mesh of connections which have barely been thought through.

We name Time when we say everything has its time. This means, every being that ever is, comes and goes at the right time and remains for a length of time, during the time allotted it. Everything has its time.

But is Being a thing? Is Being like some being in Time? Is Being at all? If it were to be, then we would certainly have to recognize it as a being and thus find it as such among the other beings. This lecture hall *is*. This lecture hall *is* lighted. We immediately recognize the lighted hall as a being, But where in the whole hall do we find the “is”? Nowhere among the things do we find Being. Everything has its time. But Being is not a thing. Being is not in Time. However, Being as presence, as the present, remains determined by Time, by the temporal.

That which is in Time and thus determined by Time is called the temporal. We say that when a man dies and is taken from the here and now, he has left the temporal. The temporal means the passing, that which passes as time runs on. Our language says this even more exactly: that which passes with Time. Because Time itself passes. But Time remains as Time in that it continually passes. Remain means: not disappear, that is, be present. With this, Time is determined by a Being. Then how can Being remain determined by Time? Being speaks out of the permanence of the passing of Time. However, we never find Time in front of us like a thing.

Being is not a thing, therefore nothing temporal, yet it is determined by Time as presence.

Time is not a thing, therefore not a being, yet it remains permanent in its passing, without itself being something temporal like beings in Time.

Being and Time determine each other reciprocally, but in such a way that neither can Being be claimed to be temporal nor Time to be a being. All of this that has been reflected on we are stating in contradictory statements.

Philosophy knows a way out for such cases. One lets the contradictions stand, even sharpens them, and attempts to put the contradictory and mutually exclusive parts together in an encompassing unity. This method is called dialectic. Granted that the mutually contradictory statements about Being and about Time could be put in harmony by an encompassing unity, then this should indeed be a way out, namely a way which dodged the subjects and their state of affairs since it would discuss neither Being as such nor Time as such nor their relationship. The question has been completely ignored here whether the relationship of Being and Time is one which can be produced by a combining of the two or whether Being *and* Time names a state of affairs out of which are first given both Being and Time.

Yet, how are we to begin appropriately with the state of affairs named by the titles "Being and Time," "Time and Being"?

Answer: by contemplating the named subjects carefully. Carefully—this means to avoid overtaking the subjects with uninvestigated conceptions, rather to reflect upon them with care.

However, can we refer to Being and Time as subjects? They are not subjects, since "subject" means a being. The word "subject," "a subject," will now mean for us that with which we are concerned in a significant sense, in so far as something that cannot be neglected is hidden in it. Being—a subject, possibly *the* subject of thought.

Time—a subject, possibly *the* subject of thought since something like Time speaks in Being as presence. Being *and* Time, Time *and* Being name the relationship of both subjects, the state of affairs which holds both subjects together and sustains their relationship. It is given to thought to reflect on this state of affairs if it remains inclined towards its subject.

Being—a subject, but not a being.

Time—a subject, but nothing temporal.

We say of a being: it is. Concerning the subject "Being" and the subject "Time," we remain careful, we do not say: Being is, Time is, but: it gives Being and it gives Time. So far, we have only used an alternative expression. Instead of saying, "it is," we say, "it gives."

[Translator note: The German phrase, "*es gibt,*" has the idiomatic meaning, "there is (are)." However, because of Heidegger's use of its root meaning, the phrase is herein translated as "it gives."]

In order to get back to the subject and away from the expression, we must demonstrate how this "It gives" is experienced and caught sight of. The appropriate way to do this is to discuss what is given in the "It gives," what "Being" means

which—It gives; what "Time means—which It gives. Accordingly, we try to look at the It that *gives* Being and Time. This way we will be careful in another sense. We try to bring the It and its giving into view and capitalize the "It."

We reflect on Being first to think about it itself in terms of what is proper to it.

Then we reflect on Time to think about it itself in terms of what is proper to it.

Thereby the manner must show itself in which Being is given, in which Time is given. In this giving it will become clear how that giving is to be determined which, as a relationship, first holds both together and gives them forth.

Being, through which every being is determined as such, signifies being present. Considered in view of the thing present, presence shows itself as letting-be-present. Now this letting-be-present must itself be considered, insofar as being present is allowed. Letting-be-present shows what is proper to it in that it brings into unconcealment. Being-present means disclosing, bringing into the open. A giving is at play in disclosure, namely that which gives being-present, i.e., gives Being, in *letting*-be-present.

To consider the subject "Being" appropriately requires that our reflection follow the direction that shows itself in letting-be-present. Disclosure shows in letting-be-present. A giving, an It gives, speaks in this disclosure.

So far, this giving remains as dark for us as the "It" which gives.

To think properly about Being itself requires us to stop looking at Being in so far as it is described as in all metaphysics only in terms of beings and as their ground. To think about Being appropriately requires us to discard Being as the ground of beings in favor of Being as the playful giving which is hidden in disclosure, i.e., Being as the It gives. Being belongs to the giving as the given of this It gives. Being as the gift is not thrown out from the giving. Being, being-present, is transformed. As letting-be-present, it belongs in disclosure, it remains contained in the giving as its gift. Being *is* not. It gives Being as the disclosure of presence.

The "It gives Being" may appear clearer as soon as we reflect more decisively on the giving under consideration. This reflection will succeed if we take notice of the wealth of changes of what is vaguely enough called Being. That which is most proper to Being is missed as long as it is held to be the emptiest of empty concepts. This conception of Being as the purely abstract is still not discarded in principle, but rather confirmed when Being as the purely abstract is raised into the purely concrete of the reality of absolute spirit, as took place in the most violent thinking of modern times, in Hegel's speculative dialectic, and as it is presented in his *Science of Logic*.

The attempt to reflect upon the changes of Being wins its first and directing support by our thinking about Being in the sense of being-present.

Thinking, I mean, and not mimicking and acting as if the explication of Being as being-present were obvious.

Where do we get the right to characterize Being as being-present? The question comes too late. Because this characterization of Being was decided upon long ago without our participation or even our help. Henceforth we have been tied to the characterization of Being as being-present. It has its necessity since the beginning of the disclosure of Being as something say-able, that is, something thinkable. Since the beginning of Western thought with the Greeks, all talk about "Being" and "is" has kept in mind the determination of Being as being-present which binds thought. This is also true of thinking influenced by the most modern technology and industry, of course only in a certain sense. Since modern technology established its reach and mastery over the entire Earth, it is not mainly the Sputniks and their followers which encircle the Earth, but rather Being as being-present in the sense of calculable stock, which is imposed on everyone on Earth—without the inhabitants of the non-European parts of the Earth knowing anything about it or wishing or being able to know anything about the origin of this determination of Being. Such knowledge would least of all be able to reveal the commercial developers, who today push the so-called under-developed people within hearing distance of that claim of Being which speaks out of what is most proper to modern technology.

By no means do we perceive Being as being-present first and only in contemplation of the early display of the disclosure of Being which the Greeks achieved. We perceive presence in every simple, unprejudiced concentration upon the presence-at-hand and readiness-to-hand of beings. Presence-at-hand and readiness-to-hand are modes of being present. The all-encompassing character of being-present shows itself most forcefully when we realize that even being absent remains determined by a being present which is occasionally intensified to the uncanny.

We can also determine the changes of being-present historically with the indication that presence showed itself as *hen* (the unifying unique-unity), as *logos* (the collection which preserves all), *idea, ousia, energia, substantia, actualitas, perceptio, monad*, as objectivity, as the positing of self-setting in the sense of the will of reason, of love, of spirit, of power, as will to will in the eternal recurrence of the same. The historically determinable can be found within the study of history. The development of the changes of Being looks at first like a history of Being. But Being does not have a history like a state or a folk has a history. The manner in which the history of Being is historical is determined by and only by the way in which Being happens. According to the previous argument, this means by the way in which It gives Being.

In the beginning of the disclosure of Being, Being was thought about—*einai* and *eon*—but not the "It gives." Instead, Parmenides said: *estin gar einai*, "It is namely Being."

Years ago (1947) it was mentioned in the *Letter on Humanism* (p. 23) that, "Parmenides' '*estin gar einai*' is still not thought through today." This hint was to remark that we must not underlay the quoted speech—"it is namely Being"—too quickly with a handy analysis which makes the thoughts in it unapproachable. Whatever we say is, is conceived of as a being. But Being is not a being. Therefore, the "*esti*" emphasized in Parmenides' sentence, the Being to which it refers, cannot be conceived of as a being. While the emphasized "*esti*" is literally translated as "it is," the emphasis connotes what the Greeks already understood by "*esti*" and which we can express with: "It permits." However, the meaning of this permission remained as un-thought for the Greeks and later as the "It" which permits Being. To permit Being means: to deliver Being up and give it. The It gives is hidden in the *esti*.

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In the beginning of Western thought, Being was thought about, but not the "It gives" as such. This withdrew, leaving the gift that It gives. This gift was later thought about and conceptualized exclusively as Being in relation to beings.

A giving that only gives its gift but holds itself back and withdraws we call a sending. In this sense of giving, Being that is given is history. Each change of Being remains so sent. The historicity of the history of Being is determined by the fatefulness of a sending, but by an indefinitely meant occurrence.

History of Being (*Geschichte*) means destiny (*Geschick*) of Being, in which sending both the sending (*Schicken*) and the It that sends restrain themselves with the manifestation of themselves. To restrain oneself is called *epoche* in Greek. Hence the talk of epochs of the sending of Being. Epoch does not here mean a temporal slice of an occurrence, but the main feature of the sending, the continuous restraining of itself for the sake of the perceptibility of the gift, i.e., of Being with respect to the grounding of beings. The sequence of epochs in the destiny of Being is not accidental, nor can it be considered necessary. However, the sending manifests itself in the destiny of the epochs; the commensurability manifests itself in the sequentiality of the epochs. These epochs cover themselves over in turn, so that the original sending of Being as being-present is hidden more and more in various ways.

Only the dismantling of this cover—that is, its "destruction"—creates for thought a preliminary glimpse into that which then reveals itself as Being's destiny. Because Being's destiny was everywhere conceived merely as history and this as a process, it was vainly attempted to explain this process on the basis of what was

said in *Being and Time* about the historicity of Dasein (not of Being). Rather the only possible way to consider the later thoughts on Being's destiny on the basis of *Being and Time* remains to think through that which was presented there on the destruction of the ontological doctrine of the Being of beings.

If Plato conceived of Being as *idea* and as the *koinonia* of ideas, Aristotle as *energia*, Kant as positing, Hegel as the absolute concept and Nietzsche as will to power, then these are not accidently appearing doctrines, but words of Being as answers to the exhortation which speaks in the self-concealing sending, in the "It gives Being." Always contained in the self-withdrawing sending, Being is hidden from thought by its abundance of epochal changes. Thought remains bound in the tradition of the epochs of Being's destiny also and especially when one is mindful of how Being itself always receives its proper determination, namely from the It gives Being. The giving shows itself as sending.

But how can one think about the "It" that gives Being? The introductory remark about the placing together of "Time and Being" pointed out the Being as being-present, as the present, is determined in an as yet indefinite sense by a temporal character and thereby by Time. From this it was easy to presume that the It, which gives Being and which determines Being as being-present and letting-be-present, could be found in that which is called "Time" in "Time and Being."

We follow this presumption and contemplate Time. "Time" is known to us through common conceptions in the same way as "Being" is, but it is also unknown in the same way as soon as we propose to describe that which is proper to Time. When we contemplated Being we saw that which is proper to Being, that to which it belongs and that in which it remains contained, shows itself as sending in the It gives and in its giving. That which is proper to Being is not Being-like. When we think about Being properly, then the subject itself leads us away from Being and we think about destiny, which gives Being as a gift. By noticing this we convince ourselves that what is proper to Time can also not be determined with the help of the ordinary characteristics of the commonly imagined Time. The placement together of Time and Being does however contain the indication to describe Time in its proper terms with an eye to what was said about Being. Being means being-present, letting-be-present, presence. We read somewhere, for instance, "The festival took place in the presence of numerous guests." The sentence could also run, with numerous guests "present."

The present—we barely name it before we also think of past and future, the earlier and the later in contrast to now. However, the present as understood on the basis of now is not at all the same as the present in the sense of the presence of the guests. We never do or could say, "The festival took place in the now of numerous guests."

However, if we should characterize Time on the basis of the present, we understand the present as the now in contrast to the no-longer-now of the past and the not-yet-now of the future. But the present entails presence. We are not used to determining what is proper to Time on the basis of the present in the sense of presence. Rather, Time—the unity of present, past and future—is conceived on the basis of the now. Aristotle already said that which *is*, i.e., which is present, of Time is the respective now. Past and future are a *me on ti* : something which is not a being but not simply nothing, rather something present from which something is lacking as indicated by the "no-longer" and "not-yet" now. So viewed, Time appears as the one-after-another of nows, of which each, barely named, already disappears in the just and is already followed by the forthwith. Kant said of Time so conceived, "It has only one dimension" (*Critique of pure Reason*, A31, B47). When one measures and calculates Time, one uses Time known as a sequence of nows. It seems as though we have the calculated Time directly in front of us when we hold a watch, look at the hands and determine, "Now it is 8:50 p.m." We say "now" and mean Time. But we do not find Time anywhere on the watch which gives us the time, neither on the dial nor in the works. Just as little do we find Time on a modern technical chronometer. The claim arises: the more technical, i.e., the more exact in measurement the chronometer, the less the possibility to contemplate what is proper to Time.

But where is Time? Is it and does it have a place? Clearly, Time is not nothing. Therefore, we remained careful and said, It gives Time. We become even more careful and look carefully at that which shows itself to us as Time, in that we take a preliminary look at Being in the sense of presence, of the present. However, the present in the sense of presence is so vastly different from the present in the sense of now that the present as presence can in no way be determined by the present as now. The reverse seems more possible (see *Being and Time* §81). If this is so, then the present as presence and all that belongs to such a present must be called proper Time, even if it has nothing directly in common with the ordinary conception of Time in the sense of the sequence of calculable nows.

So far, we have neglected to show more clearly what the present in the sense of presence means, Through this, Being is unitarily determined as being-present and letting-be-present, i.e., as disclosure. What subject do we think about when we say being-present? Being (of being-present) means endurance. But we too quickly consider enduring as mere duration and take duration according to the usual conception of Time as a temporal stretch from one now to a later now. However, the talk about being-present demands that we conceive duration as lingering and abiding, Being-present is of concern to us; the present means abide towards us, us—man.

Who are we? We remain cautious with the answer. Because it could be that that which distinguishes man as man is itself determined by that which we must think about here: man, who is concerned with being-present, who is present in his own way out of such concern to all which is present and absent.

Man is in the midst of concern for being-present, but in such a way that he receives as a gift the being-present that It gives, in so far as he perceives that which appears in letting-be-present. If man were not the constant receiver of the gift from the "It gives being-present," if he did not get what is given in the gift, then not only would Being remain hidden and locked away, but man would remain shut out of the realm of the It gives Being. Man would not be man.

Now, it seems that with the indication about man, we have come off the path on which we would like to contemplate what is proper to Time. In a sense, this is so. At the same time, we are closer than we imagine to the subject called Time, which should properly be seen on the basis of the present as presence.

Presence entails the constant abiding which concerns man, which is reached by him, which reaches him. But whence this reached reaching with which the present as being-present belongs in so far as presence is given? Granted, man remains always concerned with the being-present of some present being, without thereby truly paying attention to being-present itself. But just as often, i.e., always, we are concerned about being-absent. Sometimes so that much is not present in the way in which we know it from being-present in the sense of the present. Yet, also this no-longer-present is directly present in its being-absent, namely in the manner of the having-been-present which concerns us. This does not fall away out of the previous now like the merely past. The having-been-present is rather present in its own way. Being-present is rather present in its own way. Being-present is reached in such having-been-present.

Being-absent also concerns us in the sense of the not-yet-present in the manner of being-present in the sense of coming-towards-us. Talk about coming-towards us has become jargon. One now hears, "The future has already begun," which is not the case, because the future never first begins, in so far as being-absent as the being-present of the not-yet-present always already concerns us in some way, i.e., is present in some way, just as directly as that which has-been-present. Being-present is reached in the future, in coming-towards-us.

If we pay more careful attention to what is said, we find in being-absent, whether that of the past of or the future, a manner of being-present and of concern which in no way corresponds to being-present in the sense of the immediately present. Thus, it should be noticed that not every being-present is necessarily in the present, strangely enough. And we do find such being-present, namely that concern which reaches us, also in the present. Being-present is also reached in the present.

How shall we determine this reaching of being-present, which is at play in the past, present and future? Does this reaching consist in reaching us, or does it reach us because it is a reaching? The later. Coming-towards as not-yet-present reaches and brings at the same time the no-longer-present, the past, and conversely the past reaches the future. The interplay of these two reaches and brings the present at the same time. We say, "at the same time" and thereby assign a temporal character to the reaching-each-other of future, past and present, i.e., to their proper unity.

This procedure is clearly not appropriate if we must call this unity of reaching and just this "Time." Because Time is itself nothing temporal, any more than it is a being. Therefore, we are forbidden from saying that future, past and present are "at the same time" present-at-hand. However, their reaching-each-other does belong together. Their unifying unity can only be determined on the basis of what is proper to them, out of their reaching each other. But what do they reach to each other?

Nothing but themselves and that means: the being-present that is reached in them. With this what we call Time-space opens up. However, with the word Time we no longer mean the sequence of nows. Thus, Time-space no longer means the separation of two points of calculated Time as when we determine that such and such happened in the temporal space of 50 years. Time-space now names the open, which is cleared in the reaching-each-other of future, past and present. The possible expanse for the ordinarily known space is cleared first and only by this openness. The clearing reaching-each-other of the future, past and present is itself pre-spatial; only thereby can it grant, i.e., give, room.

The ordinarily understood Time-space in the sense of a measured separation of two temporal points is the result of temporal calculation. Through it, Time conceived as a line and parameter and thereby one-dimensionally is numerically measured off. The dimensionality of Time so considered as the sequence of nows is borrowed from the representation of three-dimensional space.

That which is proper to the Time-space of proper Time is due to the clearing reaching-each other of future, past and present before and independently of any temporal calculation. Thus, proper Time and only it is suitable to what we easily mistakenly call dimension. This suitability is due to the characterized clearing reaching, which as the future gives the past, as the past gives the future and as both of these movements gives the clearing of the openness. Thought in terms of this three-fold reaching, proper Time shows itself to be three-dimensional. To repeat—dimension is not here considered as the range of possible measuring, but as the reaching through, as the clearing reaching. This first permits a range of measurement to be considered and delimited.

But whence is the unity of the three dimensions of proper Time determined, i.e., of the three ways of reaching of their respective proper being-present, which ways

play in each other? We already heard that a kind of concern and bringing, i.e., being-present, plays respectively in the coming-towards of the not-yet-present as well as in the having-been of the no-longer-present and in the present itself. We cannot assign this so conceived being-present to one of the three dimensions, like to the present. The unity of the three temporal dimensions is due much more to the interplay of each with each. This interplay shows itself to be the proper reaching that plays in that which is proper to Time as if it were the fourth dimension—and not only as if, but as it is on the basis of the subject.

Proper Time is four-dimensional.

What we have counted as fourth is first according to the subject, i.e., it is the reaching that determines everything. In the future, past and present, it brings the being-present that is properly theirs, it holds them cleared apart and it holds them together in the nearness from which the three dimensions remain sewn together. Hence, we name this first, original reaching, in which the unity of proper Time consists, the nearing near, "nearness"—an early word which Kant had already used. But it brings future, past and present near each other by distancing them. Because it holds the past open by denying its future as the present. This nearing of the near holds the coming-towards out of the future open by withholding the present in coming. The nearing near has the character of denial and withholding. It holds the manners of reaching of past, future and present together in their unity in advance.

Time is not. It gives Time. The giving which gives Time determines itself by the denying-withholding near. It furnishes the open of Time-space and preserves what is denied in the past and what remains withdrawn in the future. We name the giving which gives proper Time the clearing-concealing reaching. In so far as the reaching is itself a giving, the giving of a gift conceals itself in proper Time.

But where are Time and Time-space? However forceful the question may at first seem, we must no longer ask in such a manner about a where, a place of Time. Because proper time itself, the domain of the nearing near, is the pre-spatial vicinity through which a possible where is first given.

Since its beginning, philosophy asked where Time belonged whenever it contemplated Time. One primarily had in mind calculated Time as the passage of a sequence of nows. One explained that counted Time, with which we calculate, could not be given without *psyche*, without *animus*, without soul, without consciousness, without spirit. Time is not given without man. But what does this "not without" mean? Is man the giver of Time or its receiver? And if the later, how does man receive Time? Is man first man in order to sometime (i.e., at some time) receive Time and take up a connection to it? Proper Time is the nearness of being-present from present, past and future that unifies its three-fold clearing reaching.

It has reached man in such a way that he can only be man by standing in the three-fold reaching and enduring its characteristic denying-withholding nearness. Time is not a product of man; man is not a product of Time. No making is given here. There is only the giving in the sense of the aforementioned reaching that clears Time-space.

However, granted that the manner of giving in which Time is given needs the present characterization, we still stand before the puzzling It, which we name in saying: It gives Time. It gives Being. The danger arises that we arbitrarily apply an indeterminate power with the naming of the "It," a power that supposedly achieves all giving of Being and of Time. We can offset the indeterminacy and the arbitrariness by sticking with the characterization of the giving which we tried to show on the basis of the foresight into Being as being-present and into Time as the domain of the reaching of the clearing of a manifold being-present. The giving in "It gives Being" shows itself as sending and as the destiny of being-present in its epochal changes.

The giving in "It gives Time" shows itself as the clearing reaching of the four-dimensional domain.

In so far as the likes of Time announces itself in Being as being-present, the previous suspicion is strengthened that proper Time, the four-fold reaching of the open, lets itself be discovered as the "It" that gives Being, i.e., being-present. The suspicion seems fully justified if we notice that being-absent also always announces itself as a form of being-present. Now, that manner of clearing reaching, which gives all being-present in the open, shows itself in the past, which allows the no-longer-present to be present by denying the present, and shows itself in the coming-towards-us, which allows the not-yet-present to be present by withholding the present.

Thus, proper Time appears as the It which we name in saying, It gives Being. Destiny, in which Being is given, consists in the reaching of Time. Does Time prove itself in the demonstration to be the It which gives Being? —By no means. Because Time itself remains the gift of an It gives, whose giving preserves the domain in which being-present is reached. The It thus remains indeterminate, puzzling, and we remain puzzled. In such a case it is advisable to determine the It, which gives, on the basis of the previously characterized giving. This shows itself as the sending of Being, as Time in the sense of the clearing reaching.

Or are we only puzzled because we are letting language, or rather the grammatical analysis of language, lead us into an error in which we stare at an It which is supposed to be given but which is simply not given. When we say, It gives Being, It gives Time, we are speaking sentences. Grammatically, a sentence consists of subject and predicate. Its subject need not necessarily be a subject in the sense of

an I or a person. Grammar and logic use the It-sentence as an impersonal and as a subject-less sentence. In other Indo-Germanic languages, in Greek and Latin, the It is lacking, at least as a special word and sound complex. But that does not mean that what is meant by the It is not thought: in the Latin *pluit*, it is raining; in the Greek *cre*, it is necessary.

But what does this "It" mean? Linguistics and philosophy of language have contemplated this extensively without a good clarification having been found. The domain of meaning meant by the It reaches from the insignificant to the demonic. The It said in the talk of "It gives Being," "It gives Time" may name something exceptional which cannot be gone into here. Therefore, we limit ourselves to a fundamental consideration.

According to the grammatico-logical analysis, that which is talked about shows itself as the subject, *hypokeimenon*, the already lying there somehow present-being. What is said about the subject as predicate shows itself as the already present-being-with with the present-being, the *symbebekos*, *accidens*: the lecture hall is lighted. In the "It" of the "It gives Being," a being-present of something which is present, thus in a certain sense a Being, speaks. If we put this in place of the It, then the sentence, "It gives Being," says as much as Being gives Being. With that we are thrown back to the difficulty stated at the lecture's start: Being is. But Being "is" just as little as Time "is." So let us drop the attempt to characterize the "It" in isolation. But let us retain in view that the It names, at least in the most readily available analysis, a being-present of being-absent.

In saying, "It gives Being," "It gives Time," we are not dealing with propositions about beings, although the sentence structure has been passed down by the Greco-Roman grammarians entirely with such propositions in mind. In view of this, we must be alert to the possibility that in saying, "It gives Being," "It gives Time," we are not, despite all appearances, dealing with propositions which are frozen in the sentence structure of the subject-predicate connection. But how else can we bring into view the "It" which is said in "It gives Being," "It gives Time"? Simply by thinking of the "It" on the basis of the kind of giving which belongs to it: giving as destiny, giving as clearing reaching, Both belong together insofar as the former, destiny, consists in the later, clearing reaching.

In the sending of the destiny of Being and in the reaching of Time a dedication, a transfer, shows itself, namely of Being as presence and of Time as the domain of the open to what is proper to them. What determines both, Time and Being, in what is proper to them, i.e., in their belonging together, we call *the appropriating happening* (*das Ereignis*). What this word means we can only think about out of what announces itself in the fore-sight of Being and of Time as destiny and as reaching, in which Time and Being belong. We called both, Being as well as Time,

subjects. The "and" between them left their connection to one another indeterminate.

[Translator note: The German word "*Ereignis*" commonly means "event," but is used by Heidegger in a way that makes "appropriating happening," with its etymology and connotations, a more proper or appropriate translation for this central term of Heidegger's later writings. The term "happening" does not necessarily denote an event of short duration and carries more of a processual sense of a verb than a noun or a being.]

Now we see that what lets both subjects belong to each other, what not only brings both subjects into what is proper to them, but preserves them in their belonging together and holds them in it, the relation of the two subjects, the subject-relation, is the appropriating happening. The subject-relation is not tacked on to Being and Time later as a stuck-on relationship. The subject-relation first appropriates Being and Time out of their relationship to what is proper to them and through the appropriation that hides itself in destiny and in clearing reaching. Hence, the It, which gives, certifies itself as the appropriating happening in "It gives Being," "It gives Time." The proposition is correct and yet at the same time false, i.e., it hides the subject-relation from us; because unnoticed we have imagined it as something being present, while we are trying to think about presence as such. But perhaps we can have all the difficulties, all the detailed and apparently fruitless descriptions removed if we finally ask the simple question: What is the appropriating happening?

An intermediate question is allowed here: What do "to answer" and "the answer" mean here? To answer means to say that which speaks to the subject matter that is to be thought about here, i.e., the appropriating happening. But if the subject matter forbids talking about it in the manner of a proposition, then we must renounce the proposition which is anticipated by the posed question. However, this means accepting the impossibility of thinking appropriately about what is to be thought about. Or is it more advisable to renounce not only the answer, but even the question? Because what is the status of this illuminatingly qualified, candidly posed question: what is the appropriating happening? Here we are questioning the what-ness, the essence, the way in which the appropriating happening is, i.e., is-present.

With the apparently harmless question—What is the appropriating happening? — we seek information about the Being of the appropriating happening. But if Being now proves to be something which belongs in the appropriating happening and which receives the characterization of presence from it, then we fall back with our question to that which above all else is missing its characterization: Being from Time. This characterization shows itself out of the fore-sight of the "It" which gives, in looking through the intertwined manners of giving, sending and reaching.

Sending of Being is based in the clearing-concealing reaching of the manifold being-present in the open domain of Time-space. But reaching is based together with sending in the appropriating happening. This, i.e., this that is proper to the appropriating happening, also determines the sense of that which is here called being based.

What has now been said permits—in a sense, necessitates—saying how the appropriating happening is not to be thought about. We can no longer understand what is named the "appropriating happening" on the basis of the word's common meaning, because that would be to understand it in the sense of occurring or process—not on the basis of making proper as the cleared preserving reaching and sending.

Thus, for instance, it is announced that the unifying of the European Common Market is a happening of world-historical significance. If the word "*Ereignis*" appears in connection with a description of Being and if one hears this word only with the ordinary meaning of "happening," then it clearly obtrudes upon speaking of the happening of Being. Because without Being, no being can be as such. Accordingly, Being can be taken for the highest, for the most important happening.

But the whole point of this lecture was to bring into view Being itself *as* the appropriating happening. Only that which is named with the word "*Ereignis*" says something completely different. Accordingly, the "as," which is unapparent and always entangled because ambiguous, must also be thought about. Even assuming that we forsake the usual meaning of the word "*Ereignis*" for the description of Being and Time and instead use the meaning given in the sending of presence and the clearing reaching of Time-space, then the talk about "Being as appropriating" is still indefinite.

"Being as appropriating"—earlier, philosophy thought about Being on the basis of beings as *idea*, as *energia*, as *actualitas*, as will and now—one might think—as the appropriating happening. So understood, the appropriating happening means a transformed explication of Being, which, if it is valid, presents an advance in metaphysics. In such a case, the "as" would mean the appropriating happening as a kind of Being, ordered under Being, which would form the retained main concept. But if we think in the manner attempted of Being in the sense of being-present and letting–be-present which is given in destiny, which in turn depends upon the cleared-concealed reaching of proper time, then Being belongs to the appropriating happening. From this the giving and its gift receive their determination. Then Being would be a kind of appropriating happening and not the appropriating happening a kind of Being.

The flight to such a reversal would be too cheap. It would pass by the state of affairs in thinking. The appropriating happening is not the encompassing highest

concept under which Being and Time can be ordered. Logical ordering connections have nothing to say here. Because by our reflecting upon Being itself and by following what is proper to it, it proves itself to be the gift of the destiny of being-present which is preserved in the reaching of Time. The gift of being-present is the property of the appropriating happening. Being vanishes in the appropriating happening. In the expression, "Being as the appropriating happening," the "as" now means: Being, letting-be-present sent in the appropriating happening, Time reached in the appropriating happening. Time and Being appropriated in the appropriating happening. And what about this appropriating happening itself? Can more be said about the appropriating happening?

More has been thought here than was properly stated, namely that to giving as sending there belongs a restraint, namely that in the reaching of past and future a denial and withholding of present are at play. What are now named—restraint, denial, withholding—show the likes of a self-removal or a pulling-back. However, as long as the manners of giving, sending and reaching are determined by and dependent upon the appropriating happening, pulling back must belong to what is proper to the appropriating happening. A discussion of this is beyond the scope of the present lecture.

With brevity and insufficiently, according to the manner of a lecture, we have hinted at what is proper in the appropriating happening.

The sending in the destiny of Being was characterized as a giving, whereby the sent restrained itself and in its restraining removed itself from disclosure.

In proper Time and its Time-space, the reaching of the past, i.e., of the no-longer-present, shows the denial of the present. In the reaching of the future, i.e., of the not-yet-present, is shown the withholding of the present. Denial and withholding announce the same pulling as the restraint in sending, namely the self-removal.

In so far as the destiny of Being is due to the reaching of Time and they are together due to the appropriating happening, that which is proper, which removes its most proper self from the unrestrained disclosure, is announced in the appropriating happening. Considered in terms of the appropriating happening, this means that It expropriates itself in the named sense of itself. To the appropriating happening as such belongs expropriation. The appropriating happening does not give itself up in this, but rather preserves its property.

We glimpse the other thing which is proper to the appropriating happening as soon as we think clearly enough about what has already been stated. In Being as being-present, is announced the process which concerns us men so, that we have acquired the characteristic of humanity in the perception and acceptance of this concern. This acceptance of the process of being-present is however due to standing within the region of reaching, as which four-dimensional proper Time has reached us.

In so far as Being and Time are only given in appropriation, to this belongs the proper, which brings man into what is proper to him as he who perceives Being by standing within proper Time. As such, man properly belongs in the appropriating happening.

This belonging is due to the making appropriate that characterizes the appropriating happening. Through it, man is let into the appropriating happening. Because of this, we can never stand the appropriating happening in front of ourselves, neither as an object nor as something all-encompassing. Therefore, representational-founding thinking accords with the appropriating happening as little as merely propositional speech.

In so far as both Time and Being as the giving of the appropriating happening can only be thought about on the basis of the later, the relationship of space to the appropriating happening must accordingly be considered. This can clearly only succeed when we have already seen into the origin of space in the sufficiently considered proper view of place. (See "Build Live Think," 1951, in *Vorträge und Aufsätze*, Heidegger, 1954, p. 145ff.)

The attempt in *Being and Time* §70 to trace the spatiality of Dasein back to temporality cannot be ended.

In peering through Being itself, through Time itself, in glancing at the destiny of Being and the reaching of Time-space, what "*Ereignis*" says becomes glimpse-able. But do we gain anything but a mere edifice of thoughts in this way? In the retention of this suspicion speaks the opinion that the appropriating happening must after all "be" a being. However, the appropriating happening neither *is* nor is it *given*. To say either is to confuse the state of affairs, just as if we wanted to lead a spring out of its stream.

What remains to be said? The appropriating happening appropriates. With this, we say the same from the same to the same. This appears to say nothing. And it does say nothing as long as we hear what is said as a mere sentence and surrender its examination to logic. But what if we accept what was said inescapably as the topic of concern for contemplation and consider that this same is not something new, but the oldest of the old in Western thought, the ancient that hides itself in the name *a-lethia*? From that which was dictated in this beginning of all leit motifs of thought, a constraint speaks which binds every thinking, assuming it heeds the call of that which is to be thought about.

The point was to think about Being proper by peering through proper Time—on the basis of the appropriating happening—without reference to the connection of Being to beings.

To think about Being without beings means to think about Being without reference to metaphysics. Such a reference is, however, still dominant in the attempt to overcome metaphysics. Therefore, the point is to dispense with overcoming and to abandon metaphysics itself.

If an overcoming remains necessary, then it concerns that thinking which properly has to do with the appropriating happening, in order to say It from it and toward It.

The point is inescapably to overcome the obstacles that easily make such a speaking insufficient.

Speaking about the appropriating happening in the manner of a lecture also remains an obstacle of this sort. It has only been spoken in sentences.

Publication note:

The lecture "Time and Being" was held on January 31, 1962, in the Studium Generale of the University of Freiburg i. Br. under the leadership of Eugen Fink. The title "Time and Being" refers to the outline of "*Being and Time*" (1927, p. 39), the third section of the first Part of the book. The publication of "*Being and Time*" was broken off at this point.

The text of the lecture can no longer be appended three-and-a-half decades after the original publication of the book. Granted, the leading question remains the same; but this just means that the question is even more questionable and the times even stranger.

The lecture was first published in 1968 with a French translation in a Festschrift for Jean Beaufret. It was then published in: Heidegger, M. (1969) *Zur Sache des Denkens*. Tubingen: Max Niemeyer Verlag. 1-26.

The lecture was published in English in: Heidegger, M. (1972) *On Time and Being*. Transl.: Joan Staumbaugh. New York: Harper & Row. 1-24.

The current translation was based on the 1969 publication. Presented at a seminar at Northwestern University in 1970, it was slightly revised in 2015.

21. The Working of Aural Being in Electronic Music

Heidegger's exploration of how things are disclosed (his ontology or philosophy of being) provides innovative ways of understanding many phenomena, including works of art. Although Heidegger did not write about music, he discussed the working of other art forms, including painting, pottery and sculpture. To discuss the implications of Heidegger's philosophy for understanding the nature of music, we can consider his analyses of these different art forms and adapt them to music. This chapter will extend Heidegger's approach to art by applying it to the development of electronic music in the mid-twentieth century to elucidate both his philosophy and that intriguing movement in music.

Heidegger is concerned with the way things come into being, their forms of being, or how their being is worked out. The *being* of something centrally involves how it presents or discloses itself in its specific form. This chapter will explore the being of works of a certain genre of music, *e-music*—that is, how works of electronic music are structured to disclose worlds of sound in certain ways.

"E-music" is here coined to refer to a particular vision of electronic music as it developed in the 1950s and 1960s.[1] E-music grew out of the serial music of Schoenberg and others, and featured composers such as Varese, Stockhausen, Boulez and Xenakis. It had broad influences on classical, jazz, fusion, acid rock, rap, new-age trance and disco-dance music. Integral to e-music's compositional experimentation was the concomitant development of analog and digital technologies of sound production, including tape splicing, sound sampling, sequencers and synthesizers. We will consider e-music specifically as exemplified by paradigmatic works and reflections of Stockhausen,[2] which defined an approach to composition with striking parallels to Heidegger's philosophy.

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[1] Dunn, David, "A History of Electronic Music Pioneers," in *Eigenwelt Der Apparatewelt: Pioneers of Electronic Art* (Linz, Austria: Ars Electronica exhibition, 1992). Eimert, Herbert. "What Is Electronic Music?" *Die Reihe* 1 (1957): 1-10.

[2] Stockhausen, Karlheinz, "The Concept of Unity in Electronic Music," *Perspectives of New Music* 1, no. 1 (1962): 39-48. Stockhausen, Karlheinz, "Four Criteria of Electronic Music" (1972), https://www.youtube.com/watch?v=7xyGtI7KKIY.

We will view the being of works of e-music from the perspectives of four identifiable approaches by Heidegger to analyzing how works of art and other beings are disclosed:

(a) Available beings like tools are disclosed as *understood* within the nexus of beings that form one's world as one pursues human concerns.[3]
(b) Works of art like paintings disclose by setting truth into work—i.e., disclosing a *world* created by the working of the artwork.[4]
(c) Things like hand-crafted jugs are disclosed in accordance with their historic *epoch* of being, such as the antique, medieval, mechanical or digital era.[5]
(d) Works like sculpture disclose *relations of form, space and time*—thereby creating material, moments and places for people to dwell.[6]

We will explore how to apply each of these four ontological approaches to works of music through an investigation of e-music as it emerged in the 1960s. The following characteristics of e-music relate to Heidegger's philosophy:

(a) E-music illustrates how one hears *interpreted* sound versus noise.
(b) Works of e-music open sonic *worlds* in which novel aural phenomena are set into work.
(c) E-music is produced with innovative *technologies*—such as the use of digital synthesizers or computers to manipulate sound parameters—which are explored by e-music compositions.
(d) Works of e-music establish *relations of form, space and time* among sounds through the explicit, controlled composition of these dimensions.

While Heidegger offers a transformative way of viewing art, his conception of historical change is open to critique. In addition to illustrating the power of Heidegger's innovative insights, we will also note their limitations—primarily

[3] Heidegger, Martin, *Being and Time: A Translation of Sein Und Zeit*, trans. J. Stambaugh (Albany, NY: SUNY Press, 1927/1996).
[4] Heidegger, Martin, "The Origin of the Work of Art," in *Philosophies of Art and Beauty*, ed. Albert Hofstadter and Richard Kuhns, (647-701, New York, NY: Modern Library, 1935/1964).
[5] Heidegger, Martin, *On Time and Being* (New York, NY: Harper & Row, 1962/1972).
[6] Heidegger, Martin, "Art and Space," *Man and World,* 6, no. 1 (1969/1973): 3-8.

from the viewpoint of Marx's socio-historical philosophy, which Heidegger failed to appreciate:[7]

(a) Heidegger's view of authentic man is ideological and individualistic, while his analysis of tools like e-music technologies downplays their ties to modes of production and consumption.[8]
(b) Heidegger's analysis of art ignores the complexity of the labor involved in making a film, a jug or a musical composition, and how that work is socially and historically mediated.[9]
(c) Heidegger's account of history ignores its social structuration, whereby history is not just given, but is produced, reproduced and transformed by works, including works of music.[10]
(d) Heidegger's characterization of sculpture imposes his conceptualizations of space and time, rather than developing them from how they are disclosed in the work of sculptors and composers.[11]

Heidegger sees the revelation of truth in the working of the work of art. Marxists see the production of art as creative labor mediated by technological means and social processes. Although neither Heidegger nor Marx explicitly considered music at length, analysis of the technology and history of e-music can provide increased understanding of the insights and the limitations of both philosophies. The following sections discuss e-music and other art forms from the perspectives

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[7] Stahl, Gerry, "Marxian Hermeneutics and Heideggerian Social Theory: Interpreting and Transforming Our World" (Ph.D. Dissertation, Northwestern University, 1975). Habermas, Jurgen, "Work and Weltanschauung: The Heidegger Controversy from a German Perspective," in *Heidegger: A Critical Reader*, ed. Hubert Dreyfus and Harrison Hall (Oxford, UK: Blackwell, 1992).

[8] Adorno, Theodor W., *The Jargon of Authenticity* (Evanston, IL: Northwestern U. Press, 1964/1973).

[9] Benjamin, Walter, "The Work of Art in the Age of Mechanical Reproduction," in *Illuminations*, ed. Hannah Arendt (217-251, New York, NY: Schocken Books, 1936/1969).

[10] Giddens, Anthony, "Elements of the Theory of Structuration," in *The Constitution of Society* (1-40: U of California Press, 1984). Bourdieu, Pierre. "Structures and the Habitus," in *Outline of a Theory of Practice* (72-95, Cambridge, UK: Cambridge University Press, 1972/1995).

[11] Mitchell, Andrew, *Heidegger among the Sculptors: Body, Space and the Art of Dwelling* (Stanford, CA: Stanford University Press, 2010).

of Heidegger's four successive approaches to the being of artworks, raising concerns about the adequacy of those views. Examples from the development of e-music—and observations from painting, pottery and sculpture—are used to extend Heidegger's philosophy. These instances should render Heidegger's abstruse ontological theories more tangible and comprehensible, as well as suggest how aspects of the production process and socio-historical context should be incorporated in the origin of the being of works of art.

Beings in the World

Heidegger's most important publication—which argued for the need to understand the being of beings in terms of how they are disclosed—was *Being and Time.*[12] Here he rejected the traditional view that people exist within an objective, value-free environment, surrounded by material objects upon which they impose meanings. In contrast, he proposed that human existence discloses a network of meaningful beings, whose significance is tentatively suggested from the start in terms of one's concerns, expectations and pre-judgments. The world around us is always already understood; Heidegger's analysis is a philosophy of just how the world is pre-interpreted—and how this understanding may subsequently be made explicit and further articulated.[13]

Heidegger illustrates the pre-interpretation of the world in terms of how we hear sounds:

> Initially we never hear noises and complexes of sounds, but the creaking wagon, the motorcycle. We hear the column on the march, the north wind, the woodpecker tapping, the crackling fire. It requires a very artificial and complicated attitude in order to "hear" a "pure noise."[14]

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[12] Heidegger, *Being and Time*.

[13] Stahl, "Marxian Hermeneutics and Heideggerian Social Theory." Stahl, Gerry, "Interpretation in Design: The Problem of Tacit and Explicit Understanding in Computer Support of Cooperative Design" (Ph.D. Dissertation, University of Colorado, 1993).

[14] Heidegger, *Being and Time,* S. 163/p. 153. See also Heidegger, Martin, "Der Ursprung Des Kunstwerkes," in *Holzwege,* ed. M. Heidegger (Frankfurt a. M., Germany: Klostermann, 1935/1963): S. 15/p. 656. Citations of German publications list publication/translation year, with German/English pagination.

In perceiving a sound, we perceive it *as* something, as the sound of a certain object, instrument or process, or as a certain kind of sound.

This can be directly applied to how we hear music. We do not first or primarily hear music as uninterpreted raw sounds that we must then interpret. Rather we hear the bowing of a violin, the ringing of a bell, the strumming of a guitar. We hear the solemnity of a requiem, the joy of a jig or the romance of a love song. We may also hear the expressive communication of a performer or the emotional intention of a composer. According to Heidegger, these initial forms of being of the sounds are determined by our culture, by how "one" interprets them. Once something is initially disclosed in a certain way, we can develop our interpretation of it through explicitly building upon possibilities opened by how it was disclosed.

While Heidegger is focused on describing the experiential phenomena of pre-interpretation, it is easy to see that there are social mechanisms at work there. For instance, pop music prejudices are systematically manufactured by a powerful culture industry, which produces, promotes, hypes and sells musical concerts and recordings.[15] More subtly, composers adopt mechanisms that contribute to pre-understanding. The system of Western classical tonality is one example. Although music theory defines 12 tones to the octave, virtually every classical musical piece focuses on a subset of those 12 tones. For instance, a piece in the C Major scale primarily uses the 7 notes of the octave that are white keys on a piano. Different scales produce different pre-understandings of mood for listeners.

The alternative twelve-tone approach of serial composers like Schoenberg was an attempt to avoid the pre-understanding fostered by tonal composition. Schoenberg arranged all 12 tones of the octave in a series, and his serial pieces ran through their series before repeating any tone.[16] That eliminated the suggestion of an emphasized key and removed corresponding prejudices about the piece for the audience. The audience then had to overcome the consequent feeling of disorientation and search for other interpretive features of the music. Although he sometimes rejected the tonality of traditional keys, Schoenberg retained the timbres of orchestral instruments and the emotionality of standard patterns of loudness (amplitude) and speed (tempo).

The pioneers of e-music extended Schoenberg's rejection of classical tonality to other parameters of sound in their compositions. Webern—still within the Schoenberg school—integrated loudness into the serialization process,

[15] Adorno, Theodor W. and Max Horkheimer, *The Dialectic of Enlightenment* (New York, NY: Continuum, 1947/1972).

[16] Adorno, Theodor W., *Philosophy of Modern Music* (New York, NY: The Seabury Press. 1948/1973).

emphasizing silence at one end of that parameter's scale. Silence was transformed from just an implicit rest to slow down notes, into an explicit (disclosed, hearable) composed element.

The vision of e-music was influenced by Edgard Varèse and others who foresaw the possibility of composing with arbitrary timbres, not just the characteristic sounds of traditional physical instruments. The new science of acoustics and the developing technologies of electronic sound production suggested creating sounds with any desired characteristics. In theory, the sound of a note played on a piano, organ, guitar or violin—while quite complex—could be scientifically analyzed in terms of its pitch (frequency), timbre (overtones or waveform), and the attack, sustaining and decay of its loudness (amplitude envelope). Sounds could be produced and manipulated by electronic devices (oscillators, controllers, filters, modulators, etc.), creating radically new sonic material through the total organization of the sound parameters.[17] Subsequently it was possible to define a sound digitally by specifying with a computer its amplitude at each of thousands of microseconds. These individually constructed sounds could then be combined into a sound composition by splicing tape recordings of fabricated and/or "found" (recorded) sounds, playing them sequentially on a synthesizer (figure 1) or aggregating them with a sequencer.

[17] Eimert, "What Is Electronic Music?"

Figure 1. A 1975 Moog synthesizer. Photo retrieved from: https://en.wikipedia.org/w/index.php?title=Electronic_music&oldid=998812023

E-music eliminated many of the familiar aural clues that provided a pre-interpretation to an audience. Historical developments in musical composition met resistance from changes in the audience of music. The reproduction of music through radio and records had created a huge audience for music. However, much of that audience did not have the cultural background to understand and appreciate classical music, such as Schoenberg's serial music. To people who were not oriented to exploring the new potentials of sound production, works of e-music could sound like "just noise"—incomprehensible sounds.[18] However, as discussed below, e-music opened up a world in which the nature of noise was itself disclosed as interpretable through a technological understanding of its being.

(b) The Working of the Work of Art

In an essay central to his middle period, Heidegger focused on the being of art. *The Origin of the Work of Art* proposes that an artwork can disclose a world in which people may encounter the being of tools. [19] For instance, Vincent van Gogh's painting of a peasant woman's shoes (figure 2) discloses the being of her shoes as embedded in the peasant's world:

> Van Gogh's painting is an opening-up of that which the tool, the pair of farmer's boots, in truth *is*. This being steps out into the unconcealment of its being…. There is a happening of truth at work in the work, if an opening-up of the being happens here in that which is and how it is.[20]

[18] Neill, Ben, "Pleasure Beats: Rhythm and the Aesthetics of Current Electronic Music" (*Leonardo Music Journal* 12, 2002): 3-6.

[19] Heidegger, "The Origin of the Work of Art." Heidegger, "Der Ursprung Des Kunstwerkes."

[20] Heidegger, "Der Ursprung Des Kunstwerkes," S. 25, my translation.

Figure 2. Van Gogh's painting *A Pair of Shoes*. Van Gogh Museum, Amsterdam. Photo by author.

Heidegger proposes that the oil painting of the shoes discloses the nature of the shoes as serviceable and reliable tools in the peasant's world. This represents a reversal of perspective from *Being and Time*, in which the being-there (*Da-Sein*) of the viewer discloses the painting within its relations in the viewer's and peasant's networks of tools and concerns. Here, being is disclosed by artworks as well as by human Dasein.

In Heidegger's consideration of art, the opening of being can take place through a work, such as a painting, jug, sculpture or poem. Such works disclose meaningful worlds. A tension (struggle) exists in these works between disclosing (world) and concealing (earth). For instance, by opening access to the world of the shoes, van Gogh's painting conceals its own earthy materiality as paint on canvas. Heidegger refers to this tension as a *Riss*, which in German means tearing apart, but also the design, outline or boundary. This boundary is particularly apparent in sculpture: A wood carving opens the space around and between the surfaces of the wooden forms that make up the sculpture's design, while the wood itself lies hidden below the surfaces.

Heidegger argues that van Gogh's painting discloses the nature of the shoes. However, this analysis only works because the painting is representational. Heidegger misses the painting's deeper art-historical importance: the relationship

to impressionist revelations about light and shadow, or van Gogh's own exploration of brushstroke as an element of the materiality of paint. The significance of van Gogh's paintings does not primarily have to do with how they disclose the lives of the people or the being of the tools represented in the worlds of the paintings. More important are his techniques of applying paint to the canvas, leading to the emergence of abstract art as exploration of the materials, geometry, light and texture of oil painting. By focusing on the painting's representational function, Heidegger misses much of its historical import.

The year after Heidegger's essay on art was written, the Marxist literary critic Walter Benjamin published *The Work of Art in the Age of Mechanical Reproduction*.[21] This essay can be read as a (possibly intentional) response to Heidegger, who does not acknowledge the historic changes in art. Benjamin reflects on the essential transformation from painting to mechanically reproducible forms of imaging, such as lithography, professional photography, silent film and sound movies.

Benjamin delves into what takes place in historic transitions due to reproducibility, such as the transformation from live theater to film. In a play on stage, the actors take on the roles of human characters and present them in a unique setting. By contrast, in the production of a movie, the actors are treated more like props, who adopt isolated poses, which are later edited together by a complex process involving many professionals and technical processes. The produced movie—having lost the "aura" of the unique occurrence—may then be seen by viewers anywhere and at any time. What formerly opened an innovative world is now constrained as a commodity for mass consumption.

Theodor Adorno, music critic and friend of Benjamin, extends the analysis to music and the "culture industry."[22] He argues that commercial pop music and big-band jazz represent trends in music resulting from its popularization through mechanical reproduction in recordings, similar to that of film.[23] Adorno discusses the dialectic of enlightenment, in which social progress toward increasing knowledge and morality has always been accompanied by regress. Benjamin's examples of mechanical reproduction of art works illustrate this: the increasing democratization, popularization and accessibility of art due to technological progress in means of production has been accompanied throughout history by regression in the innovation of popular works and the depth of understanding by the audience. While Adorno's dialectic of culture parallels Heidegger's abstract notion of the *Riss* as a conflict in art's impact, Adorno and his critical-social-theory

[21] Benjamin, "The Work of Art in the Age of Mechanical Reproduction."
[22] Adorno and Horkheimer, *The Dialectic of Enlightenment*.
[23] Dunn, "A History of Electronic Music Pioneers."

colleagues such as Benjamin, Horkheimer, Marcuse and Habermas delve into the social and historical processes through which this tension occurs. The history of e-music illustrates the decline in the public's musical understanding in the following sections, as the ontological vision of e-music is gradually lost in the commercialism of pop music using electronic technologies.

(c) Art in the Age of Technology

In a late essay, Heidegger returned to the project of *Being and Time* with a discussion of *Time and Being*.[24] Here, he maintains that the disclosure of being is given by successive "epochs of being" throughout history. For instance, things were disclosed as creations of God during medieval times and now they are given as material for, or products of, technological manipulation. This is Heidegger's approach to integrating history into his ontology. The question is whether this is an adequate comprehension of the role of history, particularly in the working of artworks.

According to Heidegger, works of art set truth into work as the disclosure of being, where being is always disclosed in accordance with the prevailing epoch of being. Consider how this applies to music. Works of music open worlds—acoustic landscapes of meaningful sound. When the music is self-consciously technological, such as Stockhausen's *Kontakte*,[25] the sonic world is opened and understood as a technological product, and the technical parameters may be made perceptible (heard as such). The nature of the sound is itself disclosed, rather than appearing as a presence of some other being (instrument, performer).

E-music provides a propitious example of technological being. E-music treats sound from a technological perspective (figure 3): as technically defined in objective, measurable terms of frequency and amplitude and as material for production and manipulation by technological means.[26] Even individual notes can be composed out of sound parameters—generating new kinds of sounds. Works of e-music often evoke reflections on our technological age, such as images of space

[24] Heidegger, Martin, *On Time and Being* (New York, NY: Harper & Row, 1962/1972).

[25] Stockhausen, "The Concept of Unity in Electronic Music."

[26] Puckette, Miller, *Theory and Techniques of Electronic Music* (Singapore: World Scientific Publishing Company, 2007). Manning, Peter, *Electronic and Computer Music* (Oxford, UK: Oxford University Press, 2004).

travel or video games. At the same time, they are frequently heard as noise—either the din of mechanical and technical contrivances or the incomprehensibility of strange sounds.

Figure 3. Karlheinz Stockhausen in the Electronic Music Studio of WDR, Cologne, in 1991. Photo by Kathinka Pasveer, retrieved from https://commons.wikimedia.org/w/index.php?curid=8385683.

Within a Heideggerian viewpoint, noise is sound that is not pre-interpreted: It makes no sense to the listener; it is not disclosed as meaningful (Stahl 1976). The pioneers of e-music had to explain to the listening public what they were trying to do with sounds that seemed to *be* just noise. Verbal descriptions of the aims and methods of e-music works supported understanding, helping the music to be disclosed in a way that would not be rejected as incomprehensible noise but could be interpreted within a context (world) of aural being (explorations of sound). Rigorous theoretical considerations by e-music composers abounded in the 1960s: Stockhausen's *Texte*, Xenakis' *Formalized Music*, Boulez' *Boulez on Music Today*, and articles in *Die Reihe* and *Perspectives of New Music*. In this way, the composers acted as ontologists, elucidating the hermeneutics of e-music. For Heidegger, ontology is simply the explication or radical interpretation of everyday

understanding, which was particularly urgent for e-music, given the extent to which it rejected many of the traditional crutches of music appreciation.

The working of an e-music composition discloses something of the ontology of sound. In being crafted by a composer, performed by a musician, appreciated by a listener and analyzed by a critic, the work makes something of its sonic ontology visible to each of these audiences. They each articulate a different narrative of their interpretations, based on their concerns, expectations and pre-judgments. However, a successful work must connect these communities within the shared world opened by the e-music work.

Even *noise*—which is generally taken to be a rejection of understandability—can be interpreted through a technological approach to sound and its theory. E-music analyzed and worked with noise. In technical terms, "white" noise is a mixture of all frequencies of sound. It can, for instance, be digitally generated with a random-number generator specifying all frequencies stochastically. White noise can then be manipulated with filters and amplitude envelops to produce musically interesting noise sounds within selected pitch ranges. Controlled noise can be integrated into music to add depth, as rock musicians did with feedback from speakers and electronic distortion of their instruments, but now manipulated across the spectra of its technical parameters.

The way in which a new understanding of noise arises through the composition of e-music suggests that Heidegger's analyses inadequately appreciate the role of the artist's productive labor that makes the work of art what it is. The artist does not merely bring forth a work whose being is given by history, but rather structures the details of the work's being through the artist's creative labor (working). This may point to a general problem with Heidegger's ontology. While providing a brilliant phenomenological description of how beings are disclosed, he does not describe how an individual being (whether thing, tool, work or Dasein) comes to be disclosed not only as the kind of being it is, but also as the unique being it is. Even if one focuses on the art work's being, it is necessary to analyze how that being becomes specified.

What is the relation of an artwork's working to the artist's historically situated work? Perhaps what Heidegger discusses as the *Riss* between earth and world in the being of van Gogh's painting was set into the artwork by van Gogh's artistic working with earth and world in creating the painting, as they interacted within the play of van Gogh's historical world. How is his painting's earth related to the artist's brushstroke style and how is the painting's world related to the life of contemporary farmers? How is the working of noise in e-music structured by the composer's work in creating the music?

In his essay on *The Thing*, Heidegger considers the example of a jug to discuss in general how things are disclosed.[27] He suggests that the being of the jug is centered on its interior void, which can be filled with water or wine and can offer it for pouring and imbibing. Heidegger seems to have in mind a hand-crafted ancient Greek jug, which functioned with the "aura" of a unique thing in the here and now—not an interchangeable jug from a factory assembly line in the technological era. However, he does not describe how an individual jug concretely comes to be what it is—with its unique character and aura as well as with its particular, functional shape—through the potter's effort, rather than a factory's production.

Learning to make traditional pottery involves skills and knowledge to be able to produce jugs that can fulfill a well-functioning jug's tasks. An artist does not simply impose a pre-conceived template on some physical material (clay, wood, pigment, sound, etc.). There is an interplay between creator and created, between mind and eye, between disclosing and concealing, between enlightenment and regress. This interplay during creation is then established in the work of art as its specific working or unique being.

In *The Origin of the Work of Art*, Heidegger writes about the connection of the work to its creator:

> Although the work of art becomes actual only in the carrying out of the creating, and thus depends upon this act for its reality, the nature of creating is thereby dependent upon the nature of the work…. From the perspective of the achieved outlining of the nature of the artwork—according to which, in the work the happening of truth is at work—we can characterize creating as a letting something emerge as something brought forth. The work's becoming a work is a way in which truth becomes and happens.[28]

Here, Heidegger acknowledges the craft of the artist but subordinates it to the working of the work itself that opens a world and reveals something. Heidegger's shift from the artist to the work as primary creative agent is central to his philosophic contribution, overcoming the subjectivism of previous philosophy and aesthetic theory. However, his presentations lack adequate concreteness and tend to leave underlying processes vague and mysterious. He does not recognize the ontological role of the artist in shaping how the individual work that is brought forth becomes what it is as a particular work with a unique way of working. While

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[27] Heidegger, Martin, "Das Ding" in *Vorträge Und Aufsätze II* (37-60, Pfullingen, Germany: Neske, 1950/1967).

[28] Heidegger, "Der Ursprung Des Kunstwerkes," S. 48f/p. 683f, my translation.

it is true that the potter's work is guided by the nature of jugs, each jug is different in detail due to the specifics of the potter's work.

The creation of art is always a historically mediated process, reaching back to the stone age for pottery, painting, music, sculpture and poetry—while innovating into the future. The artist pushes previous inquiries further, confronting issues that arose in past works and adopting techniques that have been developed by earlier artists. For instance, the potter, in creating a jug that will open a world that discloses people enjoying the fruits of the earth and skies, explores how best to accomplish that, given the historically prevailing conditions and technologies. The potter selects the right clay and glazes. She experiments with how different construction techniques, various spouts and specific handle curves contribute to how the unique created jug works to open a specific world, in which the jug can work effectively as desired. The potter's craft, worked out on a specific, concrete piece of work, refines the being of that work, deciding how it will work, that is, how it will be.

Only through the historically situated labor of the artist is the work of art established the way that it is (its being) in the world that it opens—not just through historical change writ large, but through the concrete application of specific production technologies under particular socio-economic conditions. This process is suggested by Heidegger, but not investigated in sufficient social and historical detail. Benjamin's studies of mechanical reproduction and Adorno's writings on the culture industry provide important extensions and correctives to Heidegger, showing that in addition to the artistic and craft-related explorations of the artist, the current forces of production (e.g., mechanical reproduction) and the prevailing social/economic relations (e.g., commodification by the culture industry) affect the way a work opens (and conceals) its world.

The development of e-music illustrates the complexity of historic processes of progress and regress. We have already seen how the composers of e-music explored innovative ways to open acoustic worlds. However, there is also a retrograde movement: Technology enables new sounds but removes compositions of these sounds further from the comprehension of an audience. The origins of music in the human body (heartbeat, breathing), dance and the physicality of playing physical instruments are replaced in e-music by technical tasks that manipulate abstract parameters on machines. For instance, Stockhausen often computes the timing and other parameters of sounds mathematically rather than through bodily movements.[29] Live, responsive performance is supplanted by methodical efforts in electronic laboratories far removed from potential audiences (figure 3).

[29] Neill, "Pleasure Beats."

The issues of performance and audience raised by e-music had to be addressed. They led to the incorporation of sounds and techniques pioneered by e-music being integrated into and co-opted by more popular musical forms. This brought in live performance, reintroducing and even accentuating movement of the human body as a basis of repetitive rhythm.[30] The electronic synthesizer, the sequencer of recorded sounds and even the computer-generated tape became additional musical instruments, eventually often subordinated to traditional instruments (piano, guitar) and practices (tonality, common tempo).[31] New genres also appeared, incorporating and concealing e-music techniques: electro-acoustics combining synthesizers, tape and instruments; rap mixing drum machines and recorded sounds; trance-music exploiting ethereal resonances and mechanized repetition. These hybrids were easier to market as cultural commodities and they frequently lost their aura of innovative openings to worlds of sound as disclosed in e-music. Electronic music had a profound impact on the history of music. It fueled a diverse array of new genres, enabling innovative ways for music to be and work. Simultaneously, the technologies of electronic music were coopted by the pop music culture industry, slightly modifying commercial music, but ignoring the e-music vision of opening worlds that disclosed the nature of sound. This history of e-music is much richer than suggested in Heidegger's simplified history of being.

(d) Relations of Artistic Form

One of Heidegger's last publications, *Art and Space*,[32] is associated with his contact with sculptors.[33] Here, Heidegger rejects the traditional view of sculpture as formed matter within an objective, pre-existing extended space. Although he does not discuss any specific example of sculpture, he considers how sculptures define "places" in relation to each other. Heidegger resorts to his critique in *Being and Time* of Newtonian space in favor of human places, now expressed in his later terminology. He writes that sculpture does not passively occupy homogeneous three-dimensional space, but opens-up regions in which people can meaningfully live:

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[30] Glover, Richard, "Minimalism, Technology and Electronic Music," in *Ashgate Research Companion to Minimalist and Postminimalist Music* (161-180, Farnham, UK: Ashgate, 2013).

[31] Neill, "Pleasure Beats." Dunn, "A History of Electronic Music Pioneers."

[32] Heidegger, Martin "Art and Space," *Man and World* 6, no. 1 (1969/1973): 3-8.

[33] Mitchell, *Heidegger among the Sculptors*.

> Sculpture [is] the embodiment of places. Places, in preserving and opening a region, hold something free gathered around them which grants the tarrying of things under consideration and a dwelling for man in the midst of things.[34][35]

Sculpture, as a form of artwork, can reveal spatial being. Moore's *Three-Piece Sculpture* (figure 12.4) illustrates a region of places opened-up and embodied by a sculpture. The massive bronze forms of bonelike knobs and points of Moore's sculpture define multiple *places* in relationship to each other. They reflect each other as related, but each unique. The interconnected forms press upon one another and support each other, creating a complex of places that defines a structured region.

Figure 4. Henry Moore, *Three-Piece Sculpture: Vertebrae*, 1968-69, bronze, approx. 3' x 8' x 4'. Hirschhorn Sculpture Garden, Washington, DC. Photo by author.

As a work, a sculpture opens a devoted area around itself, structured by the sculpture's massed forms, which extends out from that work. The surfaces of the forms are revealed, but they simultaneously conceal what lies below, behind or beyond the surface: the interior of the wood, stone, bronze or other material, as well as the voids, hidden surfaces and surroundings. Through such elements of the work's design, the interior is opened-up, but then simultaneously closed along the new surfaces (outline or *Riss*).

Sculptors like Moore explore materials, sizes, shapes, representations and topologies that allow their sculptures to work to open worlds, places and regions

[34] Heidegger, "Art and Space," S. 11/p. 7.
[35]

for human tarrying. Through their sculpting, they pursue ontological investigations of how to let works be, such that they open certain sorts of worlds. Moore's sculpture of vertebrae incorporates his lifetime of sculptural studies of boney forms, reclining human figures and multi-piece interactions.

Analogously to sculpture, e-music can be heard as sequences of sculpted moments of sound, often delimited and individuated by silences. In a lecture on "*The Four Criteria of Electronic Music*," Stockhausen specified that e-music was characterized by its focus on composing relations among times, tones, spaces and noise. His defining features of e-music were:

1. Unified time structuring.
2. Splitting of the sound.
3. Multilayered spatial composition.
4. Continuum of tone and noise.[36]

His composition *Kontakte* was structured by de-composing sound into its parameters of temporal duration, timbral components, spatial location and noise band, as well as pitch and loudness—each defined along scales. Here, Stockhausen extended the intervallic serialization he learned from Schoenberg and Webern to all the parameters of sound, creating tones that had not been composed before, in more complex relationships, opening new possibilities of acoustic places and moments layered upon each other to create temporal structures.

Music, more explicitly than other art forms, creates temporal forms. The being of a musical work according to Heidegger's analysis of art is its working, which is a process that necessarily unfolds in time. The character, being or origin of a work of music is not an attribute of its immediate presence but is disclosed through its manner of opening a sonic world temporally. Specifically, e-music harnessed electronic and digital technologies to control the timing of individual sounds, of phrases and of overall compositions. E-music explored innovative timings of sound wave forms, envelopes, sequences and movements. It not only replaced traditional timings but developed a wholly new systematic approach to temporality as a central dimension of control and composition.

Stockhausen methodically explored the being of sound and how works of music open acoustic worlds. He shifted the science of acoustics into a philosophy and ontology of sound by investigating the effects of the various parameters of sound on the working of e-music compositions to achieve musical works with innovative being. Many of Stockhausen's major pieces of e-music were designed, defined, composed and refined by him to disclose selected aspects of the being of sound through the working of the musical work. For example, his composition

[36] Stockhausen, "Four Criteria of Electronic Music."

"*Beethoven Opus 1970*" electronically transformed moments from Beethoven's oeuvre to re-disclose the acoustic being of Beethoven's sounds in the technological era. His monumental "*Hymnen*" manipulated sound samples from national anthems to disclose how they opened nationalist worlds, just as Hendrix's distorted electric guitar version of "*Star Spangled Banner*" opened a politically construed world for his audience at Woodstock during the Vietnam War.

As part of its working, a work of art functions as a communication between its creator and its recipients. It discloses to the listener/viewer/preserver what is rendered perceptible in the work—an opening of worlds that can be shared. Heidegger notes about the audience role:

> Preserving the work does not individualize people to their life-experiences, but draws them into their belonging to the truth that happens in the work, and thereby grounds their being-for and being-with-one-another as the historical standing-out of being-there (Da-Sein) in relation to unconcealedness.[37]

Thus, the work functions to build historically situated inter-subjectivity, grounded in the work. It opens ontological understanding: a shared understanding of the being of the sounds, work and world.

An artwork brings a work into the world, opening a space for it to do its work in its historical social setting. Of course, a work of music, painting, pottery or sculpture does not appear *sui generis*, on its own, as Heidegger's presentation might lead one to believe. Just as the clay jug, van Gogh's painting or Moore's sculpture required a complex crafting, based on culturally developed and passed-down practices, Stockhausen's compositions called upon the skill and intellectual effort of a world-class artist and drew upon the state-of-the-art technical world to compose works with the proper being.

While Heidegger's focus on the being of the work is central to his contribution, it is also necessary to consider the role of the artist and the audience in not just passively dwelling in the world opened by the work, but also in actively determining the concrete and specific way a work, as a unique being, works. Talented artists are ontologists, sculpting the being of their works, as evidenced by the historically innovative forms of disclosure of the worlds they open.

Heidegger's philosophy of being, as it evolved through his life's work, provides useful ways of considering the nature of music and other art forms. Conversely, considerations of socio-historical aspects of artistic production provide important correctives to Heidegger's incomplete analyses. E-music offers an example of

[37] Heidegger, "Der Ursprung Des Kunstwerkes," S. 55f/p. 690, my translation.

musical development—contemporaneous with Heidegger's writings—that opens a view that can both confirm and extend his insights.

Notes .

Here is a diverse collection of writings, starting with my undergraduate thesis on Nietzsche. After studying German philosophy from Hegel and Marx to Heidegger and Adorno, during my community organizing days and teaching careers, I incorporated their ideas into academic and other presentations. This volume includes a wide-ranging diversity of writings on philosophy, aesthetics, politics, technology and history.