

## The Freudian Robot: Digital Media and the Future of the Unconscious

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## The Future of the Unconscious

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### [–] Abstract and Keywords

This chapter suggests that the Freudian robot embodies the unconscious of the posthuman social structure. Democracy drifts into technocracy, and language is impoverished and reduced to mere instrument. The recent evolution in the technology of alphabetical writing—especially in the postwar work on neural nets and the psychic machine—has allowed the *techne* of the unconscious to be refigured as a cybernetic process. With Printed English and with the eruption of the discrete symbol upon the scene of writing in the digital revolution, the ideographical movement of the phonetic alphabet can be said to have come full circle. That movement has made all the difference to how we think about language, writing, and the Freudian robot of the future.

**Keywords:** unconscious, Freudian robot, English language, digital revolution

Men would make their history with will, but without consciousness. Jürgen Habermas,  
*Toward a Rational Society*

In his well-known critique of the instrumentalization of reason, Max Horkheimer contends that technocratic consciousness begins to dominate social and political life when scientists and experts become the only social group to be given the power to determine the means of production and everybody else is excluded from the public discussion of means and ends. Democracy drifts into technocracy, and language is impoverished and reduced to mere instrument. What it means for philosophy is that objective reason degenerates into subjective reason and into formalism in the machinery of modern capitalist production.<sup>1</sup> This should sum up the direction in which the critical theorists of the Institute for Social Research—forced by the Nazis into collective exile from Frankfurt to New York—pursued their systematic critique of technology, reason, and capitalism from World War II through the postwar years.<sup>2</sup> **(p.250)** And they were justified to worry about the situation of language, calculating devices, and symbolic practices in the modern world.

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In *Eclipse of Reason*, Horkheimer addresses the question of language thus: “Every sentence that is not equivalent to an operation in that apparatus [of production] appears to the layman just as meaningless as it is held to be by contemporary semanticists who imply that the purely symbolic and operational, that is, the purely senseless sentence, makes sense. Meaning is supplanted by function and effect in the world of things and events” (22). The figure of apparatus in the quote is left vague by the author, and we do not know whether it should include the telecommunication machines that were being developed during the war and then extended to other fields and disciplines after the war.<sup>3</sup> Horkheimer speaks in starkly concrete terms about the kind of damage that the machine is capable of inflicting on reason. He writes: “In so far as words are not used obviously to calculate technically relevant probabilities or for other practical purposes, among which even relaxation is included, they are in danger of being suspect as sales talk of some kind, for truth is no end in itself” (22). The negation of sense and meaning in linguistic exchange and in symbolic life in general has been Horkheimer's uppermost concern, and he speaks for the general public, that is to say, the vast majority who are excluded from the operations of the technical machinery of modern political life in the postwar decade.

### The Missed Rendezvous between Critical Theory and Cybernetics

Several decades after the publication of *Eclipse of Reason*, that sentiment would be echoed by a rare computer scientist like Joseph Weizenbaum—an exiled German-Jewish scientist at MIT and the inventor of the computer program ELIZA—who reflected critically on reason and digital media and whose words of warning are: “We can count, but we are rapidly forgetting how to say what is worth counting and why.”<sup>4</sup> For the very reason he states here, few scientists are likely to raise such issues of judgment and human destiny the way Weizenbaum does. That should not surprise us. What I did not expect was that a computer scientist would read Horkheimer and Arendt and be familiar with the arguments of critical theorists, and Weizenbaum (p.251) did read both. His *Computer Power and Human Reason* gives us an uncommon glimpse of the threshold of possibility when human minds meet halfway between the sciences and humanities.

In order to dispute the illusion that ELIZA created amongst those who interacted with the machine, Weizenbaum has pointed out that the “sense” of the machine's teletype is supplied by the person conversing with it. The human interlocutor assigns meanings and interpretations to what ELIZA “says” just as he might do with what a fortune-teller says to him. Yet Weizenbaum was shocked to discover that many of his contemporaries would cling to the illusion and conviction that ELIZA could conduct sensible conversations with human beings. This conviction has been embraced both by those who are ignorant of how computer programs work and by AI programmers, such as Colby, Feigenbaum, Abelson, Terry Winograd, Newell, Shaw, and Simon, who went on to design computer programs to simulate human cognitive behavior on the machine.

It is worth reiterating that Weizenbaum's critique of the limitations of the computer and simulation programs has been inspired by the writings of Horkheimer and Arendt, whom he cited in the book. Weizenbaum found Horkheimer's critique of instrumental reason more to the point than philosopher Hubert Dreyfus's criticism of the computer in defense of man. Weizenbaum writes: “Hubert Dreyfus, for example, trains the heavy guns of phenomenology on the computer model of man. But he limits his argument to the technical question of what computers can and cannot do. I would argue that if computers could imitate man in every respect—which in fact they cannot—even then it would be appropriate, nay, urgent, to examine the computer in the light of man's perennial need to find his place in the world” (Weizenbaum, *Computer Power and Human Reason*, 12). This critique shows a better philosophical grasp of the

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human-machine relationship than Dreyfus's, who merely argues against the computer by showing its limitations vis-à-vis man. When Weizenbaum states that "language has become merely another tool, all concepts, ideas, images that artists and writers cannot paraphrase into computer-comprehensible language have lost their function and their potency," he is speaking as a computer scientist speaking the language of critical theory (Weizenbaum, *Computer Power and Human Reason*, 250). This is very unusual. The irony is that the same critical theorists themselves did not turn their attention to the relevant issues raised by cybernetics or communication machines that were unfolding under their very eyes. We have seen how closely those issues must bear upon the critical agenda of the Institute for Social Research, but it seems that none of the institute members in their years of exile in the United States made an effort to meet the cybernetician halfway by acquainting himself or herself with the theoretical, technical, and social problems of the cybernetic machine. I am not saying this to put the burden on the humanist and ask him or her to acquire a specialist's knowledge and become a computer scientist. What I hope to emphasize is that there are good reasons for the humanist to get acquainted at least with what the scientist has done with our concepts of language, writing, and symbolic code at a level that goes deeper than the instrumentalization of reason.<sup>5</sup>

With the machine being a main target of their critique, it is unfortunate that the Frankfurt School and many of its followers have missed the opportunity to engage with the fundamentals of the communication machine and the cybernetic machine at the basic levels of language and symbolic code.<sup>6</sup> After all, the preoccupation with language has characterized their collective project and has been central to Horkheimer's and Adorno's critique of instrumental reason. When Horkheimer complains about the nonsense or senseless sentences associated with the operation apparatus (of a computer), he lays the blame at the door of some fictional semanticists who seem to think that the purely symbolic and operational makes sense. To be sure, he could not have anticipated the contestation between Shannon's approach to "senseless" information and Donald MacKay's attempt to formalize sense; still, he could have considered the differences among language, writing, and symbolic code or at least the distinction between linguistic sense and mathematical sense as far as the machine is concerned. The missed rendezvous between critical theory and cybernetics in the postwar decades—the work of Jürgen Habermas included—may be attributed to a number of factors, historical as well as intellectual. By far the most important factor is their philosophical view of language and its relation to reason. One could conceivably address the following questions to the critical theorist: Does his critique of linguistic nonsense and meaning derive from a pretheorized notion of language or from a coherent philosophy? If it is the latter, what philosophy of language would prompt (p.253) him to override or suspend the distinctions among language, writing, and symbolic code in pursuit of the word and linguistic meaning?

Symptomatic ally, Horkheimer declares "that philosophy is the conscious effort to knit all our knowledge and insight into a linguistic structure in which *things are called by their right names*" (my emphasis).<sup>7</sup> The proper use of language is deemed central to the philosophical enterprise at the Institute for Social Research—which, as I argue below, exhibits a shared telos with Habermas's normative emphasis in the later phase—and it seems that Horkheimer and Adorno want their philosophy and the concept of truth to be rooted in mimetic knowledge and in the translation of that knowledge into the "adequation of name and thing" (Horkheimer, *Eclipse of Reason*, 180). Habermas would take issue with this approach and argue that Horkheimer and Adorno mystify the mimetic capacity of language—equating name and thing—and that by positing a reason before instrumental reason, they remain trapped in the philosophy of

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consciousness, which presupposes “a subject that represents objects and toils with them.”<sup>8</sup> The power of this philosophical legacy asserts itself unmistakably in their *Dialectic of Enlightenment*.

In that book, they argue that “a technological rationale is the rationale of domination itself. It is the coercive nature of society alienated from itself.”<sup>9</sup> The technologies they analyze are automobiles, bombs, movies and the cultural industry in general. They point out that under the domination of these technologies, “the need which might resist central control has already been suppressed by the control of the individual consciousness” (Horkheimer and Adorno, *Dialectic of Enlightenment*, 121). In their investigation of the conditions of truth and knowledge, Horkheimer and Adorno see consciousness, language, instrumental reason, and social domination as closely intertwined. Their thesis that the “enlightenment becomes the wholesale deception of the masses” is built upon the authors' analysis of the relationship between thought and language (42).<sup>10</sup> That analysis suggests that the processes of reification in the form of mathematics, machine, and organization are bound to lead to the “abandonment of thought” (41). The argument of “abandonment of thought” appears to coincide with the conundrum of the thinking machine examined earlier, although we must **(p.254)** push their insight a bit more and raise some further questions: Is the human being who has abandoned thought replaced by the thinking machine in the new social environment? Does the abandonment of thought end in schizophrenia, automatism, or the sociopsychic machinery of capitalism as explored by Deleuze and Guattari many years later in *Anti-Oedipus*?

Evidently, the conceptual wall against which Horkheimer and Adorno cannot venture further in their critique of instrumental reason is the philosophy of consciousness. Habermas observes that the concept of reason they propose as an alternative to the instrumental use of language cannot be grounded other than in a fraught relationship among philosophy, consciousness, and language. This criticism brings out an interesting aporia in their work that is shown to be steeped in the metaphysical philosophy of language that is implied by their philosophy of consciousness. For example, one cannot imagine either of them delegating any sort of intelligence, conscious or unconscious, to the machine. Yet one of the unintended consequences of their judgment—the abandonment of thought—is precisely the leveling of the metaphysical playground of the unthinking human and the thinking machine. As an alternative to the philosophy of consciousness, Habermas puts forward a theory of communicative action to emphasize intersubjectivity and privilege linguistic philosophy. He believes that “a change of paradigm to the theory of communication makes it possible to return to the undertaking that was interrupted with the critique of instrumental reason; and will permit us to take up once again the since- neglected tasks of a critical theory of society.”<sup>11</sup>

Habermas's intersubjective model of communication is said to put the “cognitive instrumental aspect of reason in its proper place as part of a more encompassing *communicative rationality*” (Habermas, *The Theory of Communicative Action*, 390). Linguistic philosophy is made to carry the burden of grounding critical theory and to lift it out of the aporia of objective reason and subjective reason. And what does Habermas mean by his intersubjective model of communication? Obviously, a full reevaluation of his theory of communicative rationality lies beyond the scope of this study. Our main focus is his premise about language, communication, and intersubjectivity, for these impinge inevitably on the issues of writing, cybernetics, the unconscious, and media technologies that this study tries to elucidate. Revisiting Habermas's intersubjective model of communication **(p.255)** from this limited angle will help clarify and perhaps explain the missed rendezvous between critical theory and cybernetic developments.

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I do not mean to imply that Habermas is unaware of information theory and cybernetic developments, which clearly escaped the notice of the earlier members of the Institute for Social Research. On the contrary, he does take notice of the new self-regulated systems of cybernetics and sees them as a means of “physical and psychological control.” He is concerned that “behavioral control could be instituted at an even deeper level tomorrow through biotechnic intervention in the endocrine regulation system, not to mention the even greater consequences of intervening in the genetic transmission of inherited information.”<sup>12</sup> Habermas goes on to ponder if the old regions of consciousness that developed through ordinary-language communication would in the end completely dry up. Were that to happen, he speculates that “men would make their history with will, but without consciousness” (Habermas, *Toward a Rational Society*, 118). If the above insight appears to bring Habermas close to a real encounter with the psychic machine of cybernetics, he quickly goes off in the opposite direction by advocating a Utopia of unrestricted communication and rationalized social norm.

In a way, this narrowly missed encounter with cybernetics should not surprise us. Much of Habermas's knowledge of the new technological developments came from secondhand sources, through the mediation of systems theory, and often in conjunction with Talcott Parsons and Niklas Luhmann, whom he treats extensively in his writing. Commenting on Structuralism and systems theory, Habermas takes them as “subjectless” and “anonymous systems of rules” and observes a meaningful parallel between the two.<sup>13</sup> He argues—inaccurately—that Structuralism models its rules on grammar whereas systems theory thinks of them as self-regulating systems or instances of autopoiesis.<sup>14</sup> The value of Structuralism or systems (p.256) theory as social theory is limited for the obvious reason that “the system of grammatical rules requires competent speakers for its actualization, whereas the machine regulates itself and has no need of any subject at all.” Habermas determines that “in neither case is the paradigm suited for giving an accurate account of how intersubjectively binding meaning structures are generated” (Habermas, *On the Pragmatics of Social Interaction*, 17). Preoccupied as he is with linguistic meaning, Habermas contradicts his earlier insight by underestimating the revolutionary impact of information theory on social life whose significance lies precisely in the machine's refiguring of sense and nonsense beyond the linguistic paradigm that we have seen in connection with the work of Shannon, McCulloch, Pitts, and Lacan.<sup>15</sup>

In other words, Habermas is right about machines needing no subjects but is shortsighted not to consider cybernetics and information theory as more than an instance of self-regulating systems requiring no further critical attention. The novel philosophical questions raised by the cybernetic machine are completely sidestepped as he proceeds to elaborate a theory of communicative action on the basis of linguistic philosophy, a philosophy that information technology has rendered increasingly irrelevant to the most pressing issues of telecommunication in the postwar decades. To his mind, communicative action is still very much about the “linguistic processes of reaching understanding” or speech acts in social situations where “the participants in interaction agree about the validity claimed for their speech acts—that is, they recognize criticizable validity claims inter- subjectively.”<sup>16</sup> This runs counter to how Lacan understood communication in his psychoanalytical work on the symbolic order.

In *The Theory of Communicative Action*, Habermas considers four models of linguistic function and compares the sociolinguistic interactions among individuals enabled by each of these models. All four are semantic models recognized by his rational criteria, and these are the teleological (based on intentionalist semantics), the normative (based on cultural consensus on meaning), the dramaturgical (based on propositions and speech act), and the communicative

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model of action. The fourth, and the most important, model relies on formal pragmatics and is given the pride of place in his **(p.257)** theoretical construct because “only the communicative model of action presupposes language as a medium of uncurtailed communication whereby speakers and hearers, out of the context of their preinterpreted lifeworld, refer simultaneously to things in the objective, social, and subjective worlds in order to negotiate common definitions of the situation.”<sup>17</sup> To what extent does this view of language distance Habermas's work from Horkheimer and Adorno's logocentric view of language? The distance seems rather negligible when language is understood as a medium of uncurtailed communication between “speakers” and “hearers” in speech act situations, or between what Luhmann terms “alters” and “egos” in his so called communicative action.<sup>18</sup> The premise about communication being a matter of referring to things or negotiating common definitions—in the good old liberal understanding of optimal social contractual relations—adheres to a logocentrism that leaves too many things out of the lifeworld he tries to explain. These include notably telecommunication technologies from telegraph to information technology and satellite communication systems in our own time. This book has argued not only that these technologies have profoundly impacted social communication but that they are pushing the philosophical consideration of sense and nonsense beyond the realms of semantics, speech act theory, theories of meaning, and all other theoretical models that are premised on the face-to-face verbal communication between a human speaker and a human listener. Taken in a cybernetic register—as Lacan has demonstrated to us—communication is fundamentally schizophrenic.

As early as 1844, Samuel Morse's telegraphy introduced a new model of communication that had enormous ramifications for the future human- machine relationship. Chapter 2 discussed how Morse's partner Alfred Vail had envisioned this prospect. Commenting on the first telegraphic line constructed in the United States, Vail said that the presence of the human agent at the receiving end of the line was not absolutely required nor was it necessary even to raise the question *Are you there?*<sup>19</sup> The increased automation of the sending and receiving of instant transmissions over the past 150-odd years has greatly diminished the sociopolitical significance of uncurtailed linguistic communication between speakers and hearers. In telegraphy, as it has been in telephone and information technologies, **(p.258)** language is coded, mediated, messaged, and in constant flight. These technologies raise new philosophical questions about communication that are shifting the mode of address predominantly from verbal speech act to ideographic writing. Again, Lacan understood this when he allegorized the process of communication in his “Seminar on ‘The Purloined Letter’” thus: “Might a letter on which the sender retains certain rights then not quite belong to the person to whom it is addressed? Or might it be that the latter was never the real receiver?”<sup>20</sup> Poe's tale led Lacan to speculate about how the psychic machine can be articulated by the cybernetic machine and vice versa. These two are brought together in a single conceit of the game of odd and even, which is played automatically in all cybernetic machines.

### The Ideology Machine

In fact, the cybernetic machine itself has been brought in to refigure the problem of ideology as an automatic, unconscious process. Let us consider one of the computer simulation programs of the 1960s. Robert R. Abelson's work deserves special mention here because his computer program—the Ideology Machine—is designed to simulate the ideology of the cold warrior. Like Kenneth Colby, Abelson was interested in exploring the structure of belief systems and their predictability and so on, but his Ideology Machine operates within the precise historical parameters of political discourse of the United States rather than making vague analogies and theoretical claims about psychopathology. He started from the assumption that “most of the

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worst inter- and intra-national conflicts of the world are greatly exacerbated by the human penchant for interposing oversimplified symbol systems between themselves and the external world.”<sup>21</sup> Ideology relies on these symbol systems to distort international relations and aggravates dangerous conflicts in highly predictable ways. The symbol systems are thus characterized by *oversimplification*, *automatism*, and *predictability* rather than deception or self-deception.

Abelson points out that there is a tendency for the analyst of human behavior in the study of psychopathology in politics to assume that strong affects and drives push people into drastic misperceptions of their environments. By aligning emotions with irrationality, one often assumes the reverse is also true, namely, that if someone has a sharply inaccurate **(p.259)** symbolic view of the world, he or she must be the subject of strong emotional forces. Abelson contests this view and argues that “there are plenty of ‘cold’ cognitive factors which produce inaccurate world-views, and it is important to understand how these cognitive factors operate in their own right” (Abelson, “The Structure of Belief Systems,” 288). Computers have no emotions—although Marvin Minsky may think otherwise—and can, therefore, serve as a perfect medium for testing how the “cold” cognitive factors operate to produce the right-wing fanaticism about communism.

The Ideology Machine has been set up to simulate responses to foreign policy questions. The computer system stores the language of political ideology in memory and expresses this ideology in typed English text when it is addressed by typed English input. The vocabulary in the computer memory consists of a collection of 500 noun phrases and 100 verb phrases relating to foreign policy, including “Nixon,” “Vietnam,” and “sell-arms-to” and so on. These items are classified under some general conceptual categories: 15 for nouns (such as Communist nations, left-leaning neutrals, Free World nations, and liberal dupes) and 11 for verbs (such as physical attack and material support). These conceptual categories can be combined to specify 300 generic events (such as the physical attack of a neutral nation by a Communist nation) and these in turn are combined to form episodes. The heart of Abelson's simulation program is a subroutine that attempts to “fill molecules.” The input is usually a single sentence (in the simple Subject-Verb-Object form), and the output is either a filled molecule containing the input sentence and the appropriate other sentences needed to complete the molecular set, or a failure signal indicating that the system cannot explicate the input sentence. The master script of the Ideology Machine suggests that the production of ideology is a highly automatic process (Fig. 26). As Abelson and Carol M. Raich put it, “[T]he replies by the automated Senator to the input statements presented him should simulate the replies the real Senator might conceivably make.”<sup>22</sup> The prototype for the automated Senator is the extreme right-wing ideologue Barry Goldwater. Abelson chose him as his model because Goldwater's political convictions as expressed in his speeches are simplistic and predictable.<sup>23</sup>

The above master script presents four main categories of actors in the cold war: Communist powers, Free World, “good Americans,” and Liberals and left-wingers. The struggle takes place between the Free World and the **(p.260)**

forces of Communism as the Communists are expected to pursue their victory until they control the world. Liberal and left-wing dupes who dominate many Free World governments play into the hands of Communist designs. In order to rid the Free World of their influence, the cold warriors must act with determination so that a strong America can establish a cooperative relationship with other free peoples in order to block Communist schemes and bring about a Free World victory.<sup>24</sup> For example, when the input event was “Communists attack Thailand, what will happen?” the Ideology Machine responded: “If Communists attack Thailand, Communists take over unprepared nations unless Thailand ask-aid-from United States and United States give-aid-to

Thailand” (Abelson, “The Structure of Belief

Systems,” 292). The output can sometimes show semantic blind spots due to the machine's lack of historical knowledge and the ability to judge the physical distance between nations. As Boden has pointed out, if required to assess the credibility of the proposition that Red China built the Berlin Wall, the Ideology Machine would decide that this is indeed the sort of (p.261) anti-American activity that one might expect from the evil Chinese, but the real Senator Goldwater is not expected to be so ignorant or so naive.<sup>25</sup> Abelson's master script is semantically driven and presupposes a fundamental relationship between symbol manipulation and the unconscious. While his simulation program yields fascinating insights on the automatism of certain discursive constructs in the cold war, the exact relationship between symbol manipulation and the unconscious remains unexplored and is arbitrarily determined by the belief systems programmed into the machine. These articulate to semantics and linguistic norms that are themselves unquestioned. We have seen in the earlier discussion of Ogden and Richards how the concern with semantics and normative sense has been fraught with ideological battles and with fears of irrationality.

## Our Game with the Little “Letters”

The anxiety about meaning, communicative *adequatio*, and rationality is what prompted Ogden and Richards to write their interwar classic *The Meaning of Meaning*. This book underwent as many as six editions between 1923 and 1943, but its influence was eclipsed as soon as information theory burst upon the scene. In this ambitious work, Ogden and Richards criticize Saussure for focusing his attention exclusively on the sign rather than “on the things for which the signs stand”<sup>26</sup> and propose rational procedures to distinguish “symbol” from “referent” and define “meaning” in its corresponding sign and symbol situations systematically. This theory of meaning aims to resolve, once and for all, the problem of how the mental processes (THOUGHTS) relate scientifically to the symbol (WORDS) on the one hand and to the referent (THINGS) on the other so that we can identify and minimize pathological disturbances in the normal process of sociolinguistic communication (10-23). Curiously, one of the examples Ogden and Richards have brought up for discussion has to do with how one might pin down the referent of the following utterances: “my pipe is out” and “my pipe is alight” (103-5). In the analysis, they resort to a set of normative criteria whereby the mind resolves the correct

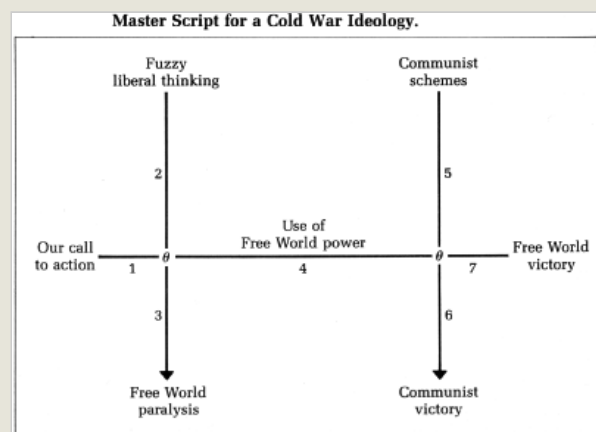


Figure 26. Robert P. Abelson's master script for the Ideology Machine. From Robert P. Abelson, “The Structure of Belief Systems,” in Roger C. Schank and Kenneth Mark Colby, eds., *Computer Models of Thought and Language* (San Francisco: W. H. Freeman and Company, 1973), 291.



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meaning of each utterance in context. Incidentally, even if the Belgian surrealist René Magritte did not have Ogden and Richards or their normative approach to the sign “pipe” in mind when he did the group of paintings bearing the title *Ceci n'est pas une pipe* (this is not a pipe), I would suggest that Foucault's **(p.262)** interpretation of visual and verbal interplay in his *This Is Not a Pipe* serves to bring out the intellectual stakes in the surrealist teasing of all manners of normative assertions about the linguistic and visual sign.<sup>27</sup>

I have mentioned in chapter 3 that the stated goal of *The Meaning of Meaning* is to achieve what the authors term the “eugenics of language.” “When we enter the Enchanted Wood of Words,” write Ogden and Richards, “our Rules of Thumb may enable us to deal not only with such evil genii as the Phonetic, the Hypostatic and the Utraquistic subterfuges, but also with other disturbing apparitions of which Irritants, Mendicants and Nomads are examples” (138). When the authors turned their ethnographic gaze across the vast stretches of the geographical and sociolinguistic landscape from antiquity to present, from the primitive to the civilized, and from East to West, they conclude that the East is the true home of verbal superstition.<sup>28</sup> Even so, in their eyes, verbal superstition is not the prerogative **(p.263)** of the East; it is found everywhere. In *Practical Criticism*, Richards describes some of the protocols he adopted with set texts to test how well or poorly the undergraduate students at the University of Cambridge interpreted the individual poems they read when the authorial and contextual information was removed. The practice of close reading in the New Criticism inspired by this work may be seen as part of a global campaign to exorcise linguistic phantoms and interpretive aberration and to keep psychic disturbances at bay.

One of the reasons that Habermas failed to reflect on the implications of postwar telecommunication technologies in the above light might have to do with the fact that his theory of communicative rationality shares the normative stance of pre-World War II theorists of language and meaning. He restaged the battle against the eruption of irrationality in social interactions by proposing a normative model of communicative action based on a semantic understanding of language. He found himself in a similar position of having to defend society against the breakdown of linguistic communication, or what he termed “communication pathologies,” at the conscious as well as unconscious levels. By the conscious level, Habermas means deliberate deception and manipulation, whereas at the unconscious level the pathology appears as “systematically distorted communication.”<sup>29</sup> The latter is compared to the “unconscious repression of conflicts that the psychoanalyst explains in terms of defense mechanisms” and it causes disturbances of communication on both the “intrapsychic and interpersonal levels” (Habermas, *The Theory of Communicative Action*, 332). In this limited application of Freud, the relationship between the unconscious and language makes sense to him insofar as it concerns the pathological moment of *distorted communication*, but pathology is not otherwise treated as fundamental to communication itself, the latter having been discussed and developed extensively by the psychoanalysts of his time and a good number of cyberneticians. As Alan Liu puts it, “[Irrationality in all its terrible energy is now to be harnessed within the organization as the means of strong, rational management.”<sup>30</sup> This failure to engage with the fundamentals of information theory and the cybernetic model of the mind means that Habermas's communicative model of action is strangely archaic and almost irrelevant to the new intellectual challenges presented by the changing technologies of digital media.

**(p.264)** Weizenbaum has shown that when DOCTOR in the computer program ELIZA doubles as a fortune-teller in its communication with the human interlocutor, irrationality already shadows rationality in the human-machine interaction via the mediation of the mirage of

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“sense.” Is the same true of the earlier moments of telecommunication? For instance, did electromagnetic telegraphy fall on the side of communicative rationality or that of irrationality and magic, or perhaps both? When Yale College conferred the honorary degree of doctor of laws upon Samuel Morse, the latter read his new title LL.D. as “Lightning Line Doctor.”<sup>31</sup> Morse, who was a portrait artist before he became an inventor, saw the coming of electromagnetic telegraphy as an instrument of divine revelation. He exhibited this “thunder and lightning ‘jim crack’” at the House Committee on Commerce to persuade the U.S. government to fund his project. Indeed, the official completion of the first electromagnetic telegraph line between Washington, D.C., and Baltimore on May 24, 1844, has been commemorated by one of the most remarkable telegraphic messages Morse had ever transmitted, a phrase taken from the ancient soothsayer Balaam: “What hath God wrought?”<sup>32</sup> The wonder and the prophetic messages uttered by some of the contemporary witnesses to the telegraphic achievement are duly recorded for the benefit of the future generation: “Time and space are now annihilated” (Mabee, *The American Leonardo*, 207). If pronouncements such as this strike us as embarrassingly trite, it is because they have been repeated so many times over the past 150-odd years down to the latest postmodern reiteration of the compression of time and space. In Morse’s time, however, they conveyed some genuine insights and heralded the beginning of something truly original that just got under way.

Unlike the critical theorists of the Frankfurt School, Lacan heeded both the electromagnetic messages and digital messages and became intensely engaged with the contemporary developments in information technology. He did not dismiss Shannon’s communication machine or Wiener’s cybernetics lightly as an instrumentalization of reason. On the contrary, his psychoanalytic insights were vastly enriched by what he could glean from game theory, cybernetics, and information theory. The latter taught him that the cyberneticians played some fateful games with our little “letters” and as a consequence we ought to be gravely concerned about the unconscious and the symbolic order. Lacan’s intellectual efforts remind us that **(p. 265)** the mastery of computer programming skills is not the precondition for a nonspecialist to learn what I have tried to convey to the readers. Rather, the precondition of such knowledge lies elsewhere: the openness of the mind to the originality of what appears in our world.

Until we learn a few basic things about the discrete alphanumerical symbols in modern communication machines, the *techne* of the unconscious will remain hidden in plain sight. This may well be where the last stand of ideology reveals itself: the framing of the unconscious by digital technology. I have demonstrated how the *techne* of the unconscious in modernity emerged with the pioneering psychophysical and psychoanalytical experiments in word-association games and memory and evolved with the literary and artistic experiments of high modernism in Europe and America. In the immediate postwar years, it resurfaced unexpectedly in Claude Shannon’s calculation of the statistical probability of Printed English. With the invention of the twenty-seventh letter and spacing mechanisms à la Shannon, Turing, and others, Printed English has achieved its ontology in the digital revolution. The recent evolution in the technology of alphabetical writing—especially in the postwar work on neural nets and the psychic machine—has allowed the *techne* of the unconscious to be re-figured as a cybernetic process.

Thus far, this discussion appears to be propelling my concluding remarks toward some kind of ideological criticism for a sense of closure. But is closure possible or necessary? Barring a proper closure on the question of ideology, I think we should first contemplate how to incorporate digital media effectively and rigorously into the social or critical theory of our time.

Rather than continue to work with the inherited philosophical problems of consciousness and anthropocentrism, our critical endeavor needs to confront the ruses of writing and the *techne* of the unconscious, which are thoroughly embedded in the human-machine ecology enabled by digital media. One of the valuable legacies of critical theory has been the intellectual vigilance with which the theorists approached the work of language as a site of philosophical critique. Will future theorists bring the same degree of vigilance to the technology of writing? How far will critical theory aid us in conceptualizing the task of social theory with respect to digital media? What, if any, are the chances of counter-engineering the unconscious, that is, if the Freudian robot is allowed to embody the unconscious of the post human social structure? I suppose that bringing such questions to the fore and into public debate would constitute the first step toward coping with the *techne* of the unconscious in digital media.

**(p.266)** With Printed English, and with the eruption of the discrete symbol upon the scene of writing in the digital revolution, the ideographical movement of the phonetic alphabet can be said to have come full circle. That movement has made all the difference to how we think about language, writing, and the Freudian robot of the future.

### Notes:

- (1.) See Max Horkheimer, "Means and Ends," in *Eclipse of Reason*, 3–57.
- (2.) For the Frankfurt School, see Martin Jay, *The Dialectical Imagination: A History of the Frankfurt School and the Institute of Social Research, 1923–1950*.
- (3.) The publication of *Eclipse of Reason* in 1947 predates Wiener's *Cybernetics* by one year, although the first Macy Conference of cyberneticians convened in New York as early as 1946 in the name of feedback and circular systems.
- (4.) Weizenbaum, *Computer Power and Human Reason*, 16.
- (5.) David Golumbia's discussion of computational linguistics still echoes the Frankfurt School critique of instrumental reason, although he does try to analyze and understand what he calls a "computational view of language" in the cognitive modeling of the mind in the 1960s and beyond. See Golumbia, *The Cultural Logic of Computation*, 83–103.
- (6.) Herbert Marcuse's *Eros and Civilization* (1955) may serve as a painful reminder of how disengaged the critical theorist can be with the technological developments in his world. Not only is Marcuse's discussion of Freud's metapsychology superficial and often wrongheaded—for example, by equating the death instinct with the metaphysics of nonbeing and Eros with the principle of being (125)—his work turns a blind eye to the problem of the psychic machine that was developing in his own time.
- (7.) Max Horkheimer, *Eclipse of Reason*, 179.
- (8.) Habermas, *The Theory of Communicative Action, Volume One, Reason and the Rationalization of Society*, 390.
- (9.) Horkheimer and Adorno, *Dialectic of Enlightenment*, 121.
- (10.) Their metaphysical view of language blinds them to cybernetic breakthroughs.

- (11.) Habermas, *The Theory of Communicative Action, Volume One, Reason and the Rationalization of Society*, 386.
- (12.) Habermas, *Toward a Rational Society*, 118.
- (13.) Habermas, *On the Pragmatics of Social Interaction: Preliminary Studies in the Theory of Communicative Action*, 15.
- (14.) Niklas Luhmann's concept of autopoiesis leans toward Donald MacKay rather than toward Claude Shannon. In *Social Systems*, Luhmann defines communication as a synthesis of three selections in terms of "information," "utterance," and "understanding" between the addressee "ego" and the communicator "alter." See Luhmann, *Social Systems*, 141. If we compare him with Lacan, whose communication circuit is unconscious, involving neither human utterance nor human understanding, it is clear that Luhmann approaches communication predominantly as a linguistic system, which explains why he is so preoccupied with "meaning," "rationality," and "referentiality" in his ambitious work. Unfortunately, Luhmann's semantic approach to communication does not sit well with his notion of autopoiesis, which is borrowed from Humberto Maturana and Francisco Varela, and the latter's work is actually modeled on the cybernetic machine rather than on human linguistic communication.
- (15.) For a critical analysis of the divergences between Luhmann and Kittler in response to information theory and cybernetics, see Geoffrey Winthrop-Young, "Silicon Sociology, or, Two Kings on Hegel's Throne? Kittler, Luhmann, and the Post human Merger of German Media Theory."
- (16.) Habermas, *On the Pragmatics of Communication*, 300.
- (17.) Habermas, *The Theory of Communicative Action, Volume One*, 95.
- (18.) See Luhmann, *Social Systems*, 141–43.
- (19.) Alfred Vail, *Description of the American Electro Magnetic Telegraph: Now in Operation Between the Cities of Washington and Baltimore* (1845), 21.
- (20.) Jacques Lacan, "Seminar on 'The Purloined Letter,'" 19.
- (21.) Robert P. Abelson, "The Structure of Belief Systems," 287.
- (22.) Robert P. Abelson and Carol M. Raich, "Implicational Molecules: A Method for Extracting Meaning from Input Sentences," 643.
- (23.) Abelson, "The Structure of Belief Systems," 288–89.
- (24.) Abelson, "The Structure of Belief Systems," 331.
- (25.) Margaret Boden, *Artificial Intelligence and Natural Man*, 74.
- (26.) C. K. Ogden and I. A. Richards, *The Meaning of Meaning*, 6.
- (27.) See Foucault's beautiful little book *This Is Not a Pipe*. See also Mark Taylor's discussion of the same as self-reflexive circuits in *The Moment of Complexity*, 75–77.

(28.) This may explain the puzzle as to why Richards expended so much energy and time to promote Basic English in China but made very little effort to understand what he had heard or seen in that country. A notable case is found in his description of a situation when he was teaching Thomas Hardy's *Tess of the d'Urbervilles* at Tsinghua University in Beijing. As he read out the final scene depicting the tragic punishment of Tess, Richards heard some applause from his students and was stunned and baffled by their reaction. He rationalized this by thinking that the students read the story as a "Confucian" moral tale and thought that Tess's death was a retribution she deserved for disobeying her father (Russo, *I. A. Richards*, 406). Richards brings up this episode in *Basic in Teaching: East and West* and elsewhere to illustrate the difference or gaps he perceived in the cultural sensibilities between East and West. But the explanation he offers is highly dubious for the following reason. First, traditional Chinese drama and fiction over the past millennium are full of stories about daughters' tragic or successful rebellion against paternal authority and their subversion of so-called Confucian values. *The Peony Pavilion* and *The Dream of the Red Chamber* are notable examples that all educated and uneducated Chinese knew from their early theater exposure if not from reading the works themselves. During the time of Richards's sojourn in Beijing, the sentimental novel *Family* by Ba Jin, which mercilessly attacked Confucian patriarchy and mourned the women who became its victims, was a national best seller. Moreover, the full-fledged feminist movement and nationwide anti-Confucian campaigns in China already led to spectacular social reforms that Richards could not have helped noticing in the 1930s. If Richards had spoken with any of the women students in Beijing, many of whom would have performed in Ibsen's *Doll's House* or read the play, he would not have drawn such a sweeping conclusion about cultural difference. It seems to me that the double blindness to the contemporary gender politics and to the local literary tradition impeded his understanding of the situation with or without the cultural divide. In short, all evidence goes against Richards's suggestion that his students were incapable of empathizing with Tess because of their collective Confucian mentality. We don't know why some students were applauding on that particular occasion; it is impossible to speculate without sufficient evidence. Whatever it was, it could not have been the reason Richards has given his readers in the West. Richards's lack of curiosity about the Chinese students' knowledge of their own literary tradition caused him to make mistaken judgments about cultural difference when it comes to learning the canon of Western literature.

(29.) Habermas, *The Theory of Communicative Action, Volume One*, 332.

(30.) Alan Liu, *The Laws of Cool: Knowledge Work and the Culture of Information*, 50.

(31.) Carleton Mabey, *The American Leonardo: A Life of Samuel F. B. Morse*, 294.

(32.) This phrase was chosen by a young woman named Annie Ellsworth. Mabey, *The American Leonardo*, 275.

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