The Cybernetic Unconscious: Rethinking Lacan, Poe, and French Theory

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A short text comes to our aid, from Edgar Poe, which the cyberneticists, I noticed, make something of. The text is in *The Purloined Letter*, an absolutely sensational short story, which could even be considered as essential for a psychoanalyst.

—JACQUES LACAN[1]

Chance put the text of Edgar Allan Poe's story "The Purloined Letter" at the disposal of Jacques Lacan and his psychoanalytic work, and this work has since made numerous surprising moves and detours through post-structuralist literary criticism. These moves and detours are guarding an open secret as to how Lacan discovered Poe's story for psychoanalysis. The secret—hiding in plain sight, as it were—has inadvertently barred us from knowing more. That is to say, something will remain unseen and unheard until we are prepared to reflect on what we know about Lacan through American literary criticism and, more importantly, what we do not know about American cybernetics in France or in the U.S. for that matter.

Barred from that knowledge, have we been asking the right sort of questions about Lacan's analytical rigor with respect to the symbolic order? For instance, why did his teaching seem so abstruse? Did he get his math right?[2]

Unless otherwise noted, all translations are my own.

1. Jacques Lacan, *The Ego in Freud's Theory and in the Technique of Psychoanalysis, 1954–1955,* vol. 2 of *The Seminar of Jacques Lacan,* trans. Sylvana Tomaselli, ed. Jacques-Alain Miller (New York, 1991), p. 179; hereafter abbreviated *E*.

2. Alan Sokal and Jean Bricmont have attacked Lacan and his use of mathematics in this manner rather than engage in a responsible critique of the shadow figures of game theory, cybernetics, and information theory that lie behind Lacan's exercises in mathematical formalization. See Alan Sokal and Jean Bricmont, *Fashionable Nonsense: Postmodern Intellectuals' Abuse of Science* (New York, 1998). Interestingly, Sokal and Bricmont's own understanding of complex numbers has been called into question. See Arkady Plotnitsky, *The Knowable and the Unknowable: Modern Science, Classical Thought, and the "Two Cultures"* (Ann

If questions like these do not seem particularly conducive to fruitful understanding, is it because the symbolic order that Lacan tried so hard to elucidate with his diagrams and ideographic symbols has been eluding us somehow? For instance, a common mistake is to fetishize Lacan's textual excursions in the "Seminar on 'The Purloined Letter'" as a virtuoso performance in psychoanalytic criticism and turn that criticism into all kinds of navel-gazing exercises. Such exercises have had the unfortunate consequence of thwarting the political decision or intuition that had gone into Lacan's adoption of Poe's text and thereby deflecting his important discoveries concerning the Freudian unconscious. But which unconscious? I believe that Lacan's main contribution in this area—which we must spell out for him since he stopped short of doing so himself—lies in what he can tell us about the cybernetic unconscious of the postwar Euro-American world order. The fact that we have not been able to escape this world order after his passing and the fact that theoretical discourses after the cold war increasingly devolve into descriptive pronouncements about globalization give us a compelling reason to engage once again with Lacan's hard-won insights and make them relevant to future work on literary theory and social theory.[3]

Arbor, Mich., 2002), pp. 112–13. See also Bruce Fink's defense in his *Lacan to the Letter: Reading "Écrits" Closely* (Minneapolis, 2004), pp. 130–32. For an account of the typographical error in Lacan's mathematical explications, see Fink, "The Nature of Unconscious Thought or Why No One Ever Reads Lacan's Postface to the 'Seminar on "The Purloined Letter,"'" in *Reading Seminars I and II: Lacan's Return to Freud*, ed. Richard Feldstein et al. (Albany, N.Y., 1996), pp. 186–87 n. 3.

    3.   The textual history surrounding the transcription, publication, and translation of the "Seminar on 'The Purloined Letter'" raises an interpretive issue insofar as Lacan's notion of the symbolic order is concerned. The authorized 1966 version of this seminar masks the fact that there is more than one text and more than one seminar devoted to the subject. The first printed version appeared as "Le Séminaire sur 'La Lettre volée'" in *La Psychanalyse*, no. 2 (1956): 1–44. It provides a synopsis of the main topics of the seminar in 1954–55, including Lacan's discussion of number sequences, cybernetics, machines, and the problem of repetition automatism. In 1966, an extended version of the essay and synopsis was reissued in *Écrits*. In 1972 a partial English translation of the new version was published as "Seminar on 'The Purloined Letter,'" trans. Jeffrey Mehlman, *Yale French Studies*, no. 48 (1972): 39–72. In 1978, the transcript of the

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In the essay that follows, I argue that Lacan's encounter with American game theory, cybernetics, and information theory was a pivotal moment in his rethinking of Freud. I will focus on his year-long seminar of 1954–55, which both framed his reading of "The Purloined Letter" and marked the beginning of his innovative work on the unconscious. In the first two sections of the essay, I show how Lacan developed a notion of language that brought him closer to the symbolic logic of mathematicians than the alleged affinity with Ferdinand de Saussure or modern linguistics. His symbolic chain, for example, is a very different idea from how Saussure or Roman Jakobson understood linguistic structure, even though the latter also tried to incorporate information theory into linguistic studies in the 1950s.[4] By reworking the Freudian unconscious in this manner, as I explore in the third section of the essay, Lacan directs our attention to what I call a cybernetic unconscious, and we must credit him for having accomplished for psychoanalysis what the mathematicians have done for economic behavior in game theory. My research suggests that the transatlantic negotiation with postwar theoretical imports from the United States is what lies behind Lacan's development of a paradoxically *nonlinguistic* view of language, the symbolic order, and the unconscious.

French Theory or American Theory

As Jacques Derrida has pointed out, Lacan was not the first psychoanalyst to engage Poe. Marie Bonaparte had published a psychobiography of Poe as early as 1933 under the title *The Life and Works of Edgar Allan Poe,* which carries the imprimatur of Freud's foreword.[5] But Lacan makes it

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1954–55 seminar was published under the title *Le Moi dans la théorie de Freud et dans la technique de la psychanalyse, 1954–1955*, ed. Miller (Paris, 1978). The transcript indicates that Lacan discussed "The Purloined Letter" in more than one session between 23 March and 11 May 1955.

4. When Jakobson, Gunnar Fant, and Morris Halle first published *Preliminaries to Speech Analysis* (1951), they recast linguistics explicitly in the language of information theory. Further collaboration between Jakobson and Halle led to another influential study, *Fundamentals of Language* (1956). Noam Chomsky was initially involved in Jakobson's project and participated in an important symposium that led to the publication of *Structure of Language and Its Mathematical Aspects.* In the course of developing his transformational-generative grammar, however, Chomsky noted that "the notion 'grammatical in English' cannot be identified in any way with the notion 'high order of statistical approximation to English'" (Noam Chomsky, *Syntactic Structures* [The Hague, 1957], p. 16). For a recent critical overview of Jakobson and cybernetics as well as information theory, see Jürgen van de Walle, "Roman Jakobson, Cybernetics, and Information Theory: A Critical Assessment," *Folia Linguistica Historica* 29 (Dec. 2008): 87–123.

5. See Jacques Derrida, *The Post Card: From Socrates to Freud and Beyond*, trans. Alan Bass (Chicago, 1987), pp. 403–96.

clear that it was "chance," not Bonaparte, that brought the text of "The Purloined Letter" to his attention. That chance, he further reminds us, has something to do with the cyberneticians whom he acknowledges but never names in several of his seminars.[6] Is he being facetious about the source? Or should we take his word for it? Rather than speculate about the author's intentions one way or the other, I thought it worthwhile to take his word literally and track down the nameless cyberneticians who may or may not have contributed to his reading of Poe. In the course of my research, I have gathered enough evidence to demonstrate that, pace Derrida, Poe's fiction would not have emerged as a privileged site of analysis for Lacan in 1955 if the mathematicians whom he knew or read around that time had not already appropriated Poe, Daniel Defoe, Jonathan Swift, Alexander Pushkin, Arthur Conan Doyle, H. G. Wells, Rudyard Kipling, James Joyce, and other writers in the development of game theory, information theory, and cybernetics. But I am getting slightly ahead of myself.

The goal of my research is not to vindicate Lacan against Derrida but rather to explore how the cybernetic unconscious of the postwar Euro-American world order became a possible object of contemplation for the theorist. To grasp the situation in its proper dimensions, we must consider the role that the transatlantic and translingual fashioning of French structuralism and poststructuralism has played in the process. So much has been written about how Lacan rejected American ego psychology that we have nearly lost sight of how he simultaneously engaged with American game theory and cybernetics. Contrary to common belief, a great deal of what we now call French theory was already a translation of American theory before it landed in America to be reinvented as French theory. For example, it is startling to ponder how the English word *game* from game theory metamorphosed into the noun *play* in literary theory through the round-trip intermediary of the French words *jeu* and *jeux* in translation. As I discuss below, these round-trip translations did more than just demonstrate the play of words between English and French.

French mathematicians rendered *game* as *jeu* and created a heterolinguistic supersign *jeu*/game in the course of introducing John von Neumann and Oskar Morgenstern's mathematical theory of games applicable to economics and nuclear warfare.[7] When this supersign crossed the At-

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6. The original statement is "le hasard nous l'a offerte" (Lacan, *Le Moi dans la théorie de Freud et dans la technique de la psychanalyse*, p. 264). In the preceding seminar on 30 March 1955, he had made the observation I have cited in the epigraph indicating that the chance arrived via cybernetics.

7. I have developed the concept of supersign to designate the invisible bonding of heterolinguistic signs through implicit translation. In contrast to the case of neologisms, which

lantic in the guise of French theory, the English signified of *jeu*/game fell by the wayside and the word *jeu* reentered English as a different supersign, play/*jeu,* to authorize something like a free play of signifiers to the American literary critic. As a verbal choice, *play* is not a wrong English equivalent with respect to *jeu*, but that is precisely where the problem lies. The free play of signifiers becomes a blind play—oblivious to the traces of an earlier heterolinguistic supersign—which renders the sinister, calculating, and competitive ethos of the *jeu*/game of game theory invisible to the critical eye. The blind play has caused the mathematical distinction between *game* and *play* within the English context of von Neumann and Morgenstern's game theory to diminish to semantic insignificance.

It is not as if scholars on either side of the Atlantic have been unaware of how French theory was systematically translated, published, and fashioned by American academia.[8] Some even claim that "'French theory' is an American invention, going back to at least the eighteenth century, and no doubt belongs to the continuity of American reception to all sorts of European imports."[9] An invention indeed it was. But has the flow of indebtedness not gone in the opposite direction or in reciprocal ways as well? If we give but passing attention to what Jean-Paul Sartre was saying when he reacted to the structuralists' call to decenter the subject, we begin to see a somewhat different picture. Sartre argues that one cannot grasp the ideological implications of this structuralist moment until one takes a hard look at "what is going on in the United States" where "a technocratic civilization no longer holds a place for philosophy unless the latter turns itself into technology."[10] Sartre may have perceived something that others had failed to notice, but it seems that the French philosopher was fighting a rearguard battle against the spread of American technocratic civilization. As the entire world was coming under the sway of a militaristic technocratic civilization in the cold war, there was a great deal more at stake than

are often marked by their foreignness, a supersign does not experience morphological changes in speech or writing but is split internally by deferring the signified of a native term to a foreign word or words. For a detailed elaboration of this concept in translingual semiotics, see Lydia H. Liu, *The Clash of Empires: The Invention of China in Modern World Making* (Cambridge, Mass., 2004), pp. 12–13.

8. For an earlier discussion of the play of mirrors between America and France, see Jane Gallop, *Reading Lacan* (Ithaca, N.Y., 1985), pp. 55–73.

9. Sylvère Lotringer and Sande Cohen, "Introduction: A Few Theses on French Theory in America," in *French Theory in America,* ed. Lotringer and Cohen (London, 2001), p. 1.

10. Jean-Paul Sartre, "Jean-Paul Sartre répond," interview with Bernard Pingaud, *L'Arc,* no. 30 (1966): 94. In 1966, *L'Arc* devoted a special issue to Sartre called "Sartre aujourd 'hui." In this interview, the editor Bernard Pingaud specifically asked Sartre to respond to the work of structuralists, including Foucault, Lévi-Strauss, Lacan, and Althusser.

the survival of (European) philosophy.[11] Sartre may not have been aware that certain American intellectual exports were fast becoming French theory to be reimported to American universities where scholars in the humanistic disciplines paid little attention to what their mathematician colleagues were doing in the next building and vice versa. Fredric Jameson was probably the only Marxist critic in American academia who, like Sartre, warned his readers about "the ideology of structuralism" in response to the Lacan fever of the 1970s.[12]

  On this side of the Atlantic, we were not prepared to recognize the American mind behind French theory, much less the convoluted linkages between cybernetics and structuralism (or what Americans term poststructuralism) in the 1950s and 1960s.[13] This strange play of mirrors took place along the migratory and circulatory routes whereby American game theory and cybernetics became progressively *unseen* and *unmarked* through their Frenchness. Of course, it is absurd to give theory any kind of national stamp since we are aware how scientists and theorists collaborate and work across national borders and how they borrow from each other's work all the time. But we must also confront the historical conditions under which scientific research and national military interests have developed close ties and should be examined as such. So when I use the term *American theory* in this limited historical sense, it is not because I endorse the nationalist claims of any scientific community but because the provenance of so-called French theory in literary studies needs to be reopened in light of the growing presence of American hegemony in postwar Europe.[14] If we must raise the question of who invented French theory again, it will make better sense to rephrase the question thus: How did American theory become French theory?[15]

  11.   For example, an early work associated with cybernetic theory is Norbert Wiener's project in 1942 called *Yellow Peril.* It was a 120-page top-secret report on antiaircraft fire control that Wiener submitted to the National Defense Research Committee. See Flo Conway and Jim Siegelman, *Dark Hero of the Information Age: In Search of Norbert Wiener, the Father of Cybernetics* (New York, 2005), pp. 116–18.

  12.   Fredric Jameson, "Imaginary and Symbolic in Lacan: Marxism, Psychoanalytic Criticism, and the Problem of the Subject," in *Literature and Psychoanalysis: The Question of Reading, Otherwise,* ed. Shoshana Felman (Baltimore, 1982), p. 374.

  13.   François Dosse has written an impressive two-volume book on the history of structuralism but gives only passing attention to cybernetics. See François Dosse, *The Rising Sign, 1945–1966,* vol. 1 of *History of Structuralism*, trans. Deborah Glassman (Minneapolis, 1997), p. 220.

  14.   This process parallels the kinds of institutional exports from the United States to Europe that are superbly analyzed by Victoria de Grazia in her book *Irresistible Empire: America's Advance through Twentieth-Century Europe* (Cambridge, Mass., 2005).

  15.   So as not to quibble over terms, *American theory* is my shorthand reference to game theory, cybernetics, and information theory that became hegemonic with the rise of the

American game theory, cybernetics, and information theory made their way to postwar France (and elsewhere) in the late 1940s and 1950s and were avidly studied and translated by French scientists. These new developments—uniformly with close ties to the war efforts in World War II—include some of the most innovative theoretical work across the disciplines and are commonly known by their authorial signatures. Game theory is generally attributed to von Neumann and Morgenstern, whose groundbreaking book *Theory of Games and Economic Behavior* was published in 1944.[16] It deals with decision making in competitive scenarios (the zero-sum game, ruse, bluffing, minimax theorem) and identifies patterns of reasoning to determine their implication for winning strategies. Von Neumann and Morgenstern introduced mathematical rigor into economics within this framework, reinventing the latter as a respectable scientific discipline.[17] Four years later, information theory was created by Claude Elwood Shannon, whose paper "A Mathematical Theory of Communication" laid the theoretical foundation for communication engineering. As early as 1948, information theory was already lumped together with cybernetics by Norbert Wiener, who borrowed the Greek word $\chi\upsilon\beta\epsilon\rho\nu\dot\eta\tau\eta\zeta$ (steersman) to name the new interdisciplinary study of control and communication in the machine and in the animal.[18] One of the hallmarks of cybernetics was its interdisciplinarity, starting with the first Macy Conference in New York in May 1942.[19]

In France, the introduction of these American theories aroused immense curiosity among the intellectual elite and scientists, such as Claude Lévi-Strauss, Jean Hyppolite, Henri Lefebvre, Roger Caillois, Algirdas Julien Greimas, Gilles Deleuze, Jacques Derrida, Michel Foucault, and Ro-

American empire. I do not imply unities among these theories nor do I think the national origin of an individual scientist matters a great deal in this discussion. French and other European scientists certainly contributed to the mathematical foundation of cybernetics, as Wiener has acknowledged, but they did not invent cybernetics as a field nor was their work directly related to U.S. hegemony.

16. For contested claims of priority in the invention of game theory, see William Poundstone, *Prisoner's Dilemma* (New York, 1992), pp. 40–41, and Georges T. Guilbaud, "Leçons sur les éléments principaux de la théorie mathématique des jeux," *Stratégies et Décisions economiques: Études théoriques et applications aux enterprises*, ed. Centre National de la Recherche Scientifique (Paris, 1954), 2.6–2.10:1–29.

17. The crowning moment of its universal recognition was the 1994 Nobel Memorial Prize in Economic Sciences awarded to John Nash, John Harsanyi, and Reinhard Selten.

18. See Norbert Wiener, *Cybernetics, or Control and Communication in the Animal and the Machine* (Cambridge, Mass., 1948), p. 19. For a detailed autobiographical account, see Wiener, *I Am a Mathematician* (New York, 1956), pp. 322–23.

19. For the history of cybernetics, see Steve Joshua Heims, *The Cybernetics Group* (Cambridge, Mass., 1991).

land Barthes. Some of them sought to incorporate the new systems into their own work whereas others tried to critique them.[20] Hyppolite not only attended Lacan's seminar and debated with him but also raised interesting questions about cybernetics with Wiener in person when the latter visited France.[21] Like Lacan's "Seminar on 'The Purloined Letter,'" Hyppolite's much-admired essay "*Le Coup de dés de Stéphane Mallarmé et le message*" (1958) grew out of this intellectual fervor surrounding chance, the message, Maxwell's Demon, entropy, and the other favorite topics of cybernetics and information theory.[22] Elizabeth Roudinesco observes that this period marked "the entry of linguistics into the Freudian domain" for Lacan, pointing out that the dialogue with Hyppolite in 1954 was an important event in Lacan's decision to turn away from Hegelian philosophy in order to gain access to structuralism.[23] But was there more to this familiar story about linguistics?

We know that Lacan and Jakobson met through Lévi-Strauss in 1950 and became friends. Jakobson's speculations about aphasia and structural poetics, especially his discussions of metaphor and metonymy, made an unmistakable imprint on Lacan's work.[24] The exposure to Saussure via Jakobson then led to Lacan's reworking of the model of signifier and signified in the symbolic order. In Saussure's original diagram the signified was placed over and above the signifier, while Lacan chose to reverse them by placing the signifier above the bar. It bears asking, however, what caused him to take that step. Moreover, did Lacan mean the same thing by language or *la langue* as did Saussure or Jakobson?[25]

In his reading of the postface to "The Seminar on 'The Purloined Letter,'" Fink makes an interesting observation, suggesting not only that Lacan ventured "beyond the work on the symbolic order done by structuralists such as Lévi-Strauss and Jakobson" but that "Lacan is not a struc-

20.   For an overview, see Céline Lafontaine, *L'Empire cybernétique: Des machines à penser à la pensée machine* (Paris, 2004).

21.   For the Wiener and Hyppolite exchange on game theory and the future of warfare, see Wiener, "L'Homme et la machine," *Collected Works with Commentaries,* ed. P. Masani, 4 vols. (Cambridge, Mass., 1985), 4:824–42.

22.   See Jean Hyppolite, "*Le Coup de dés de Stéphane Mallarmé et le message,*" *Études philosophiques* 4 (1958): 463–68. Hyppolite attended Lacan's seminar during the period of 1954–55.

23.   Elizabeth Roudinesco, *Jacques Lacan and Co.: A History of Psychoanalysis in France, 1925–1985,* trans. Mehlman (Chicago, 1990), p. 300; hereafter abbreviated *JL.*

24.   See Dosse, *The Rising Sun,* p. 58, and *JL,* pp. 305–7.

25.   For an interesting perspective on Lacan's departure from structural linguistics, see Philippe Lacoue-Labarthe and Jean-Luc Nancy, *The Title of the Letter: A Reading of Lacan*, trans. François Raffoul and David Pettigrew (Albany, N.Y., 1992), pp. 33–50.

turalist."[26] Friedrich Kittler, in his own manner, takes note of the Lacanian "methodological distinction" among the real, the imaginary, and the symbolic as being primarily a matter of differentiation in materiality and technicity that oversteps the bounds of the linguistic.[27] Kittler states simply that the world of the symbolic order is the world of the machine. Fink's and Kittler's insights are worth exploring further, especially in regard to how the machine got into Lacan's symbolic, and which machine? Is it the typewriter or the computer, as Kittler contends, or some other machine? As we will learn in the next section, Lacan's discussion of language throughout the 1954–55 seminar was already permeated by his reflections on chance, homeostasis, circuits, games, probability, feedback, and entropy. And it was in the course of those discussions that he first introduced "The Purloined Letter" and began his famous explication de texte.

Les Jeux: Game and Play in Lacan's Symbolic Chain

"The Purloined Letter" was first brought up by Lacan in connection with the figure of the machine in a session later titled "Odd or Even? Beyond Intersubjectivity" on 23 March 1955. He begins by surveying the latest developments in cybernetics and its novel implications for reading Freud. He then says: "Let us try to consider for a moment what it means for a machine to play the game of even and odd. We couldn't work it all out by ourselves, because it would look a bit heavy-handed in the circumstances. *A short text comes to our aid, from Edgar Poe, which the cyberneticists, I noticed, make something of.* This text is in *The Purloined Letter,* an absolutely sensational short story, which could even be considered as essential for a psychoanalyst" (*E*, p. 179). Then, on 27 April 1955, in a session that would become his "Seminar on 'The Purloined Letter,'" Lacan once again mentioned the game of even and odd: "what is immediately clear is what I have called the inmixing of subjects. I will illustrate it for you, since chance has offered it to us, with the story of *The Purloined Letter,* from which we took the example of the game of even and odd" (*E*, p. 194). Clearly, Lacan was preoccupied with machines and in particular by the machine that can play the game of even and odd.

In Poe's original tale, the game of even and odd makes an appearance after C. Auguste Dupin, the detective, has successfully retrieved the letter

    26.   Fink, "The Nature of Unconscious Thought or Why No One Ever Reads Lacan's Postface to the 'Seminar on "The Purloined Letter,"'" pp. 173–74.
    27.   Friedrich Kittler, *Gramophone, Film, Typewriter*, trans. Geoffrey Winthrop-Young and Michael Wutz (Stanford, Calif., 1999), p. 15. For a recent study of Lacan and cybernetics inspired by Kittler's approach, see John Johnston, *The Allure of Machinic Life: Cybernetics, Artificial Life, and the New AI* (Cambridge, Mass., 2008), pp. 65–103.

that was stolen from the queen and hidden by Minister D. To satisfy the narrator's curiosity about how he has managed to overcome his formidable opponent, Dupin relates a story about the children's game of even and odd. He says that the game is simple and is played with some marbles. One player holds in his hand a number of marbles and asks the other whether the number is even or odd. If the guess is right, the guesser wins one; if the guess is wrong, he loses one. There is an eight-year-old boy who, according to Dupin, wins all the marbles in the school by observing the astuteness of his opponent and always predicting his next move by identifying with the opponent's psyche. Lacan was intrigued by this and encouraged the members of his seminar to play the game of even and odd in class and report back to him.

In Lacan's reading, the symbolic structure of the game in Poe's story frames Dupin's ratiocination or reasoning, and this manner of reasoning—which is associated with Dupin's ability to dissimulate and mirror the mentality of his double Minister D.—is inevitably caught up in the symbolic structure that sets the letter in motion. Lacan shows the letter and the subject to be interchangeable in the sense that no subject who comes into contact with the letter (the queen, the minister, Dupin, and others) can escape being caught up in the same game or machine. The repetition automatism of Poe's human drama thus finds its embodiment in the machine of chance and probability where "the symbol's emergence into the real begins with a wager" (*E*, p. 192). From the viewpoint of game theory, however, there is a further distinction to be made between the game *(l'ensemble-jeu)* and the play *(chaque élément)* that I elaborate in a later section with respect to Dupin's strategic move.[28]

The figure of the cybernetic machine is what mediates Lacan's initial speculations about the relationship between the symbolic and the real and underlies his argument that "the very notion of probability and chance presupposes the introduction of a symbol into the real" (*E*, p. 182). He suggests further that "only in the dimension of truth can something be hidden" like all games of chance (*E*, pp. 201–2). This is an important point because what gets hidden in Poe's game of even and odd is not one or two pieces of marble but numerical symbols, and, by the same token, that which sets things in motion in "The Purloined Letter" is not the physical letter per se but the game of truth initiated by the chain of symbols in the communication machine. Lacan discovers a symbolic order in the game of even and odd that greatly exceeds the innocuous content of Poe's tale. The

28. See Guilbaud, "Leçons sur les éléments principaux de la théorie mathématique des jeux," 2.7:7.

sessions leading up to his discussion of "The Purloined Letter" make it perfectly clear that the game of even and odd does not stand alone in Lacan's analysis when such analysis comes already framed by a series of ongoing discussions on the "adding machines," "thinking machines," and other machines that play the games of even and odd "within the limit of a certain strategy" (*E*, p. 178).

 These machines take us to the mysterious cyberneticians who supposedly brought Poe's story to Lacan's attention, although he preferred to leave us in the dark as to who the cyberneticians were. Lacan, as we know, was in the habit of making oblique references to his sources, fully expecting his disciples and students to work things out on their own, or perhaps showing off a bit of his own erudition. Could it have been Warren McCulloch, Gregory Bateson, Shannon, Wiener, or others? Before we delve into the critical points of connection Lacan tried to establish between cybernetics and the unconscious via the symbolic order, we need to follow the traces of the mathematicians in question to determine the trajectories of their interest in literature.

 My preliminary investigation of the leading mathematicians and theorists of the time indicates that a good number of them expressed an interest in literature. Wiener wrote fiction, corresponded with T. S. Eliot, and he even published his own literary criticism, including a substantial article on Rudyard Kipling. Shannon wrote critically about Poe's essay "Maelzel's Chess-Player" but not much else, although he did bring up James Joyce's *Finnegans Wake* during the experimental work he carried out on information theory.[29] Alan Turing enacted a series of botched hide-and-seek games when he tried to imitate Captain Kidd of "The Gold Bug" to bury his silver bars and banknotes in the countryside during World War II.[30] These men may have read "The Purloined Letter," but none of them commented on the story as far as I can tell. My attention then turned to John Z. Young, Lawrence Kubie, Bateson, and others. By Jean-Pierre Dupuy's account, Lacan was familiar with Young's work, which had been discussed at the ninth Macy Conference in March 1952.[31] Young's work on the neural nets of the octopus occasionally pops up in Lacan's remarks about cybernetics, but there is no evidence that either Young or Bateson took an interest in "The Purloined Letter." Lacan's knowledge of Kubie's work is well documented by Ronan Le Roux in a recent study but in a context unrelated to

    29. For my study of James Joyce and information theory, see Liu, "iSpace: Printed English after Joyce, Shannon, and Derrida," *Critical Inquiry* 32 (Spring 2006): 516–50.

    30. On Turing's quixotic adventure, see Andrew Hodges, *Alan Turing: The Enigma* (New York, 1983), pp. 344–45.

    31. See Jean-Pierre Dupuy, *The Mechanization of the Mind: On the Origins of Cognitive Science,* trans. M. B. DeBevoise (Princeton, N.J., 2000), p. 109.

literature.[32] When we look further, it would seem that von Neumann and Morgenstern would have found Poe's game of even and odd naturally appealing because they discuss similar sorts of games in *Theory of Games and Economic Behavior.*

   From the game of matching pennies to the prisoner's dilemma that Lacan discusses elsewhere,[33] *Theory of Games and Economic Behavior* would have been the most likely place where Lacan encountered his cybernetic Poe, and he almost did except that von Neumann and Morgenstern strangely left the American writer out of their literary repertoire to focus instead on the rational choices made by Robinson Crusoe and Sherlock Holmes. Nevertheless, the game theorists provide some vital clues pointing us to a number of French works that were centrally devoted to introducing and translating game theory. Indeed, as I have discovered, it is in the French translations and explications of game theory that we finally encounter the mysterious cyberneticians to whom Lacan nodded briefly in the 1954–55 seminar sessions.

   In postwar France, the physical sciences were undergoing rapid transformations with the influx of American cybernetic theory.[34] A key figure in the translation and interpretation of game theory and cybernetics in France was the Catholic mathematician Georges Théodule Guilbaud, who became Lacan's close friend in 1950. Their friendship lasted until Lacan's death in 1981 (see *JL*, p. 560). Guilbaud is regarded by distinguished game theorists as an important contributor to game theory, and, not surprisingly, he was also the scientist that introduced game theory, information theory, and cybernetics to the French-speaking world.[35] Between 1950 and 1951, as David Mindell and his coauthors have indicated in their study, two congresses were held on cybernetics in Paris, and by the late 1950s "a kind of normalization of the field took place, which correlated both with the promotion of cybernetics in popular science articles and books and with the institutionalization of cybernetics re-

32. See Ronan Le Roux, "Psychanalyse et cybernétique: Les Machines de Lacan," *L'Evolution Psychiatrique* 72, no. 2 (2007): 346–69.

33. See Lacan, "Logical Time and the Assertion of Anticipated Certainty" (1945), *Écrits*, trans. Fink et al. (New York, 2006), pp. 161–75.

34. For the introduction of cybernetics in France, see David Mindell et al., "From Communications Engineering to Communications Science: Cybernetics and Information Theory in the United States, France, and the Soviet Union," in *Science and Ideology: A Comparative History*, ed. Mark Walker (London, 2003), pp. 66–95.

35. In an interview, the ninety-year-old Guilbaud recalls how he and his colleagues at the Henri Poincaré Institute tried to master the new mathematical work from the United States, Germany, and the Soviet Union. See Guilbaud, "La Mathématique et le social," interview by Bernard Colasse and Francis Pavé, *Gérer et Comprendre* 67 (Mar. 2002): 72.

search in Western Europe."[36] The Cercle d'Études Cybernétiques was formed around this time with two of Lacan's close friends, Guilbaud and Jacques Riguet, being the core members.[37]

Riguet was a mathematician and a regular member of Lacan's seminar, and it would be reasonable to assume that these two men were the "cyberneticians" in question. Roudinesco informs us that in 1951 Lacan, Émile Benveniste, Guilbaud, and Lévi-Strauss met frequently to establish links between the social sciences and mathematics and that "Guilbaud is essential for understanding the use he [Lacan] made of topological figures," such as the Moebius strip, strings, inflatable buoys, the torus, and so on (*JL*, p. 560).[38] Curiously, Roudinesco's biography overlooks the story of game theory and cybernetics and their centrality in Lacan's relationship with Guilbaud. This may partially explain why most studies have heretofore focused on Lacan's interest in topology rather than in cybernetics.[39]

The leading American game theorist Harold W. Kuhn singles Guilbaud out as one of the few contemporary French scientists who was engaged with the material, not only writing a forty-five-page review of *Theory of Games and Economic Behavior* in 1949 but also contributing to the theory. Kuhn mentions that "Guilbaud's seminar in Paris in 1950–51 was attended by such mathematical economists as Allais, Mailnvaud, Boiteux, and myself."[40] It would have been interesting to know if Lacan attended one of Guilbaud's seminars, but even if he had not he was certainly familiar with his friend's work.

In 1954, Guilbaud published his popular book *What Is Cybernetics?* just a few months before Lacan's seminar on "The Purloined Letter." That year also saw the publication of Guilbaud's important article on game theory entitled "Lectures on the Principal Elements in the Mathematical Theory of Games" ("Leçons sur les éléments principaux de la théorie mathématique des jeux"). In this latter work—a long essay in five chapters—Guilbaud makes an explicit reference to Poe's story by situating it in a historical

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36. Mindell et al., "From Communications Engineering to Communications Science," pp. 74–75.

37. See Le Roux, "Psychanalyse et cybernétique," p. 355.

38. See Guilbaud's seminal contribution to the field of game theory, "La Théorie des jeux: Contributions critiques à la théorie de la valeur," *Économie Appliquée* 2 (1949): 275–319; trans. A. L. Minkes under the title "The Theory of Games: Critical Contributions to the Theory of Value," in *The Foundations of Game Theory*, ed. Mary Ann Dimand and Robert W. Dimand, 3 vols. (Cheltenham, 1997), 1:348–76; hereafter abbreviated "TG." See also his *La Cybernétique* (Paris, 1954) and *Eléments de la théorie mathématique des jeux* (Paris, 1968).

39. See *Lacan: Topologically Speaking*, ed. Ellie Ragland and Dragan Milovanovic (New York, 2004).

40. Harold W. Kuhn, introduction to John von Neumann and Oskar Morgenstern, *Theory of Games and Economic Behavior* (Princeton, N.J., 2004), p. x.

context in which the game of even and odd should be understood. From antiquity, he suggests, this game has been looked down upon as a children's game although adults have continued to play it, especially in gambling situations where players risk losing huge amounts of money. He points out that this game of even and odd has been "honored by a famous analysis given by Edgar Poe (The Purloined Letter)" and that "an equivalent form is suggested and studied by von Neumann and Morgenstern under the name of "matching pennies."[41] This reference to Poe is not, however, the first time that Poe appears in Guilbaud's discussion of von Neumann and Morgenstern.

Le Roux has examined an earlier lecture Guilbaud presented at the Richelieu amphitheater of the Sorbonne on 24 March 1953. In his study he mentions that half of that lecture was devoted to discussing the mathematical theory of games, and portions of it would eventually find their way into the third part of Guilbaud's book *What Is Cybernetics?* In the original lecture, entitled "Pilots, Planners, and Gamblers: Toward a Theory of Human Control," though not in the book itself, Guilbaud brings up Poe's story, pointing out that "The Purloined Letter" deals with one of the mathematicians' old controversies in a literary register and suggests the possibility of a "pure game" *(jeu pur)*.[42] Interestingly, Guilbaud's lecture cites Lacan's earlier essay "Logical Time and the Assertion of Anticipated Certainty" to challenge the kinds of psychologism one finds in the work of the Belgian doyen of letters Denis Marion (pseudonym of Marcel Defosse), who had just published a book called *The Intellectual Method of Edgar Poe* (1952). Firmly aligning himself with Lacan to oppose the fallacies of psychologism, Guilbaud points out that Marion "appears to have neglected the fundamental problem which is not just a matter of 'reading the thought' of others. What matters is logic, not 'psychology.' Dr. J. Lacan has given an in-depth analysis of this problem in 'Logical Time.'"[43] Judged from the evidence provided by "Logical Time and the Assertion of Anticipated Certainty," Lacan's engagement with the prisoner's dilemma and game theory appears to predate his acquaintance with Guilbaud because the essay first appeared in March 1945 (within the year of the publication of *Theory of Games and Economic Behavior*). This happened before his trip to

41. Guilbaud, "Leçons sur les éléments principaux de la théorie mathématique des jeux," 3.13:18.
42. Le Roux, "Psychanalyse et cybernétique," p. 352.
43. Quoted in Le Roux, "Psychanalyse et cybernétique," p. 353.

England in September 1945 to visit the Hartfield rehabilitation center for returned ex-prisoners of war and overseas veterans.[44]

In game theory, von Neumann and Morgenstern consider a full gamut of two-person, three-person, or *n*-person games and the winning strategies under various conditions of uncertainty. This mathematical work inspired similar experimental work carried out by the mathematicians at the RAND Corporation in the 1950s.[45] Interestingly, the premise of that work is to not take human beings as rational animals. William Poundstone suggests that "Merrill Flood was one of the first to analyze that irrationality with game theory," and this assessment is based on the fact that both the Flood-Dresher experiment at the RAND Corporation and Albert W. Tucker's coinage of the term *prisoner's dilemma* happened in 1950.[46] Lacan's essay "Logical Time and the Assertion of Anticipated Certainty," however, was published five years earlier and anticipated the Flood-Dresher experiment by playing on the fictional scenarios of logical reasoning that game theorists at the time were obsessing over. This essay was followed soon afterwards by another piece on the subject called "Number Thirteen and the Logical Form of Suspicion" in a 1946 issue of *Les Cahiers d'art* that continued his reflections on the problem of number. Even though his interest in game theory did not originate with Guilbaud, Lacan's reading of Poe clearly took its inspiration from his important work on von Neumann and Morgenstern. The central piece in question is Guilbaud's forty-five-page review article on *Theory of Games and Economic Behavior*, to which we now turn.

First published in *Economie Appliquée* in 1949, Guilbaud's review article is one of the little known sources for Lacan's reading of "The Purloined Letter." This essay provides what seems to be Guilbaud's first treatment of Poe's story and is much more elaborate and critical than his 1953 lecture at the Sorbonne or even his 1954 article on game theory. Kuhn has pointed out that Guilbaud's essay is not just a review of von Neumann and Morgenstern but contains some genuine contributions to game theory itself. "The Purloined Letter" is introduced toward the end of the essay to help

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44. The essay was first published in *Les Cahiers d'Art.* See Roudinesco, *Jacques Lacan,* trans. Barbara Bray (New York, 1997), p. 176.

45. RAND was founded by the U.S. Air Force in 1946 as a joint venture with Douglas Aircraft. Its mandate was to study the techniques of air warfare. See Martin J. Collins, *Cold War Laboratory: RAND, the Air Force, and the American State, 1945–1950* (Washington, D.C., 2002), and S. M. Amadae, *Rationalizing Capitalist Democracy: The Cold War Origins of Rational Choice Liberalism* (Chicago, 2003). For a detailed analysis of game theory at RAND, see also Paul N. Edwards, *The Closed World: Computers and the Politics of Discourse in Cold War America* (Cambridge, Mass., 1996), pp. 113–45.

46. Poundstone, *Prisoner's Dilemma*, p. 101.

the author speculate on "the theory of ruse." In it, Guilbaud suggests that a ruse plays a double role: Player 1 tries to guess his opponent's intentions and arranges things so that Player 2 cannot figure out his intentions. Guilbaud calls this "positive and negative ruse." It follows that if the strategy thus employed is rigidly applied, the ruse can be discovered and will become valueless. This, Guilbaud points out, is the origin of bluff, "which is by definition a flexible strategy or, as we shall see, a stochastic choice" ("TG," 1:372). He then considers a two-player scenario in which the players are limited to two possible choices. Player 1 chooses between *a* and *b* whereas Player 2 chooses between *c* and *d,* so the following situations result:

$$(ac) \ (bc)$$

$$(ad) \ (bd)$$

There are several different ways of ranking these four situations according to each player's system of preference.[47] How does a game of this type work? Guilbaud explains that "there is the game of 'even or odd' described by Edgar Allan Poe in 'The Purloined Letter' which mirrors the situation Morgenstern describes using one of Sherlock Holmes' adventures. Let us recall that Holmes wants to get to Dover and thence to the Continent in order to escape from Moriarty. When boarding the train he sees Moriarty on the platform. Between London and Dover there is only one stop, Canterbury" ("TG," 1:372). Holmes is thus faced with some hard decisions. He will get killed if he gets off the train at the same time as Moriarty, so we are presented with four scenarios:

$$a = \text{Holmes gets off at Dover}$$

$$b = \text{Holmes gets off at Canterbury}$$

$$c = \text{Moriarty gets off at Canterbury}$$

$$d = \text{Moriarty gets off at Dover}$$

From Holmes's point of view, which is the converse of Moriarty's, *ac* (success) and *bd* (failure) are preferable to *ad* (death) and *bc* (death). Will each be able to imagine the other's thoughts and decide on a course of action to his own best advantage? Von Neumann and Morgenstern conclude that Moriarty would go to Dover with a probability of 60 percent whereas

    47. Like the game of matching pennies, the Sherlock Holmes tale is treated by von Neumann and Morgenstern as an example of zero-sum two-person games. See von Neumann and Morgenstern, *Theory of Games and Economic Behavior*, pp. 176–78.

Holmes would stop at the intermediate station also with a probability of 60 percent. The remaining 40 percent should account for the other alternatives in each case.[48] At this point, Guilbaud introduces Dupin's treatment of the game of even and odd in "The Purloined Letter" and believes that Poe's solution is too facile from the viewpoint of game theory:

> Poe supposes that one of the two players is much more intelligent than his opponent and the analysis is therefore easy. But if we suppose that the two players have been playing together for rather a long time we may ask what happens when, with experience, they marshal equal powers of reflection. The only solution, obviously, is for each to choose at random, taking care, of course, to profit by his opponent's least error. Random choice thus plays the part of a defensive position, of a base for an attack which will develop when the opponent makes mistakes. Random choice plays the part of a saddle point. ["TG," 1:373]

Guilbaud's critique is based on von Neumann and Morgenstern's mathematical formalization of random choices between two players of equal intelligence. It proves to be a more satisfying solution because it is a solution based on probability and shows that equilibrium can be reached by stochastic choices.[49]

Von Neumann and Morgenstern introduce a fundamental distinction in English between a *game,* which consists of a set of rules that define it, and a *play,* which indicates a particular instance in which a game is played from beginning to end. From this distinction follows yet another one between a *move* and a *choice*, as Kuhn puts it: "A similar distinction is drawn between the occasion of the selection of one among several alternatives, to be made by one of the players or by some chance device, which is called a *move* and the actual selection in a particular play which is called a *choice*. Thus, a game consists of a set of moves in some order (not necessarily linear!), while a play consists of a sequence of choices."[50] It was Guilbaud who translated these fundamental distinctions into French. Guilbaud writes:

> Une premiere distinction est fondamentale: celle du jeu tel qu'il est défini par sa règle—et d'une realization particulière conforme à la règle. Ou encore en termes equivalents: le jeu avant qui'l ne soit

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48.   See von Neumann and Morgenstern, *Theory of Games and Economic Behavior*, p. 178.

49.   The stochastic process is a sequence of random series that can be analyzed or formalized by mathematical procedure.

50.   Kuhn, "Extensive Games," *Proceedings of the National Academy of Sciences of the United States of America* 36 (Oct. 1950): 571.

joué—et le jeu une fois qui'il a été joué. Dans le Traité de von Neu-
mann et Morgenstern, ces notions correspondent respectivement aux
vocables: *game*, *play*, adoptés ensuite par la plupart des théoriciens de
langue anglaise (bien que la langue littéraire ne fasse pas toujours la
même distinction). *Game* désigne le Jeu à Jouer, *Play* un Jeu joué.
[Italics indicate English words in the original]

[A first distinction is fundamental: the distinction between the
jeu as defined by the rules and a particular realization of the *jeu*
that follows those rules. In other words, it is between the *jeu* that is
yet to be played and the *jeu* once it has been played. In the treatise
of von Neumann and Morgenstern, these concepts correspond to
the terms *game* and *play* respectively, which have been adopted by
the majority of English-language theorists (although literary lan-
guage does not always make the same distinction). *Game* refers to
the *jeu* to be played whereas *play* refers to a *jeu* that has been
made.][51]

Guilbaud is well aware that literary language does not make a clear distinc-
tion between *game* and *play*. Sure enough, when *le Jeu à Jouer* is rendered
back into English as a French concept, it becomes *play* and nothing else
despite the fact that the distinction between *game* and *play* is already well-
established in English. This blind play of signifiers is partly responsible for
obscuring the crucial linkages between American game theory and Lacan's
reading of Poe.[52]

One need not be fully conversant with game theory to understand that
the game of even and odd in "The Purloined Letter" privileges play and
choice over the game and moves when the clever boy and Dupin are al-
lowed to win all the marbles or the letter contest. The preference for the
imaginary order (identifying with your opponent) obscures the narrator's
engagement with stochastic processes at the level of the symbolic order
(weighing the probability of the game). Is this the reason that Poe is not

51. Guilbaud, "Leçons sur les éléments principaux de la théorie mathématique des jeux," 2:6.
52. The round-trip translation of the mathematical concept of stochastic into the French
aleatory via cybernetic studies provides another interesting example of a similar lack of
understanding. The word *aleatory* is seldom rendered back into *stochastic* when it returns to
English via Derrida or Lacan in English translation. In fact, *aleatory* is often left untranslated,
probably due to the English translator's unfamiliarity with cybernetic terminology or
probability theory in English. Thus the round-trip movement of the Greek-derived English
word *stochastic* into the Latin-derived French word *aleatory* and back into English generates a
Latin-derived English word *aleatory*. The process has created a certain mystique and confusion
surrounding the idea of the aleatory, as if this could stand alone as a philosophical concept,
whereas the stochastic process in probability theory is never confusing to mathematicians in
English or other languages.

counted among the literary examples adopted by von Neumann and Morgenstern in *Theory of Games and Economic Behavior*? Perhaps, but we can only speculate. What we do know is that Lacan's analysis closely echoes Guilbaud's critique of Dupin insofar as the latter's ruse is pitted against the game of even or odd. The game then cannot but escape Dupin's cleverness, as Dupin pretends to overcome the law of chance but only ends up in the same place as everyone else. In his reading of "The Purloined Letter," Lacan emphasizes the importance of structure and repetition automatism that make sense insofar as they are addressed to the exigencies of chance, randomness, and stochastic processes in a cybernetic sense. He writes:

> By itself, the play of the symbol represents and organizes, independently of the peculiarities of its human support, this something which is called a subject. The human subject doesn't foment this game, he takes his place in it, and plays the role of the little *pluses* and *minuses* in it. He is himself an element in this chain which, as soon as it is unwound, organizes itself in accordance with laws. Hence the subject is always on several levels, caught up in crisscrossing networks. [*E*, pp. 192–93]

The little pluses and minuses and the diagrams Lacan mobilizes for his reading of Poe are not mystifying because these correspond to the combinatorial possibilities already analyzed by von Neumann, Morgenstern, and Guilbaud. The "crisscrossing networks" in the above quote refers not so much to linguistic networks as to communication networks as understood by information theorists. If this is what Lacan is getting at with his binary notion of the "symbolic chain," the symbolic order certainly precedes linguistic considerations (*E*, p. 192).

For example, Lacan demonstrates in his reading of "The Purloined Letter" how the symbolic chain emerges from the real by arranging eight trigrams in three sets:
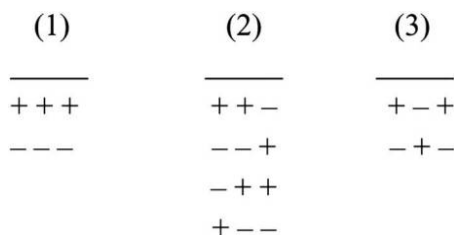

(1)	(2)	(3)
──────	──────	──────
+ + +	+ + −	+ − +
− − −	− − +	− + −
	− + +	
	+ − −	

FIGURE 1.   Lacan's symbolic chain in "Seminar on 'The Purloined Letter'" (*E*, p. 193).

Following the symbolic logic of the game of even and odd and von Neumann and Morgenstern's game of matching pennies, Lacan's chain of pluses and minuses suggests that no pure game of chance exists from the viewpoint of probability.[53] Compare how Guilbaud illustrates the stochastic possibilities with the eight numerical trigrams in binary code, using slightly different symbols, and the parallel with Lacan's diagram in figure 1 can hardly escape our notice:

There are eight messages of three signs

000
00+
0+0
0++
+00
+0+
++0
+++

FIGURE 2.   Guilbaud's demonstration of the eight trigrams in *La Cybernétique.*[54]

Lacan relies on minimal binary symbols of plus and minus to generate random combinations and shows that the trigram sequences thus generated obey certain rules in the game of chance.[55] The same logic is extended to the realm of ordinary speech situations. "You can play heads or tails by yourself," says Lacan, "but if from the point of view of speech, you aren't playing by yourself—there is already the articulation of three signs, comprising a win or a loss, and this articulation prefigures the very meaning of the result. In other

53. It is well known that Jakobson's earlier collaboration with Nikolai Trubetzkoy had brought the principle of binary opposition into phonology and phonemic analysis. The linguist's use of + and − symbols marks the presence or absence of distinctive phonemic traits, but this use should not be confused with Lacan's experiment with stochastic groupings of symbols. The latter's game of chance is not just about the marking or unmarking of distinctive features that interested Jakobson and other linguists. See Roman Jakobson et al., *Preliminaries to Speech Analysis: The Distinctive Features and Their Correlates* (1952; Cambridge, Mass., 1967), pp. 43–45. Instead, Lacan is interested in how a sequence of random series, such as trigrams, may be formalized by probability analysis. See note 55.
54. Guilbaud, *What Is Cybernetics?* trans. Valerie McKay (New York, 1959), pp. 53–54.
55. This is not the place to explain how the sequences are generated. Fink's step-by-step explication of Lacan's trigram groups provides the most lucid and accessible account to date. See Fink, "The Nature of Unconscious Thought or Why No One Ever Reads Lacan's Postface to the 'Seminar on "The Purloined Letter."'"

words, if there is no question, there is no game, if there is no structure there is no question. The question is constituted, organized, by the structure" (*E*, p. 192). This is what I was referring to when I stated at the outset that Lacan developed a paradoxically *nonlinguistic* view of language and the symbolic order.

In fact, this novel view of language began to assert itself in Lacan's critique of J. H. Masserman's discourses on language and speech in "The Function and Field of Speech in Psychoanalysis," commonly known as the Rome Discourse. Lacan delivered the famous manifesto of the new Société Française de Psychanalytique at the Rome Congress in 1953. In it, he explains how for Freud "a symptom is itself structured like a language" and how "a symptom is language from which speech must be delivered." Out of a justified concern that "those who had not studied language in any depth" might misunderstand what he means by "language," Lacan suggests that numerical associations should help make things a little easier to grasp as the audience can recognize in the combinatory power of numbers the "very mainspring of the unconscious."[56] The combinatory power is not reducible to what people commonly take as grammatical order but anticipates the game of even and odd to be encountered in the seminar on "The Purloined Letter." Lacan states:

> If—from the numbers obtained by breaking up the series of digits *[chiffres]* in the chosen number, from their combination by all the operations of the arithmetic, and even from the repeated division of the original number by one of the numbers split off from it—the resulting numbers prove symbolic among all the numbers in the subject's own history, it is because they were already latent in the initial choice. And thus if the idea that these very numbers *[chiffres]* determined the subject's fate is refuted as superstitious, we must nevertheless admit that everything analysis reveals to the subject as his unconscious lies in the existing order of their combinations—that is, in the concrete language they represent.[57]

This explains how the symbolic chain Lacan discussed in his 1955 seminar on "The Purloined Letter" came to be represented by three sets of trigrams or what he terms the *chiffre* that is associated with both *cipher* and *numerical digit*. It is interesting to speculate further why Lacan dwells on the series of eight trigrams (and divination technology) in his seminar. Are they alluding to yet another set of hidden ciphers?

It seems that the game of even and odd is not the only story that has

56. Lacan, "The Function and Field of Speech and Language in Psychoanalysis," *Écrits*, p. 223.
57. Ibid.

escaped most critics' attention when they interpret Lacan's seminar on "The Purloined Letter." No one, so far as I can tell, has remotely suspected that Lacan's eight trigrams contain a coded reference and mathematical allusion to an archaic cipher called the *koua*. That cipher is obliquely mentioned, not in the seminar but rather in the above-mentioned Rome Discourse, in which Lacan makes a curious reference: "from this articulated couple of presence and absence—also sufficiently constituted by the drawing in the sand of a simple line and a broken line of the *koua* mantics of China—a language's *[langue]* world of meaning is born, in which the world of things will situate itself."[58] Unfortunately, Lacan did not spell out at the time how a simple line and a broken line of the *koua* can generate a language's world of meaning. And what is the *koua*?

The *koua* (卦 or *gua* in Pinyin Romanization) is often called *bagua* (八卦), which refers to the eight trigrams from the ancient Chinese *Book of Change*s dating from at least three thousand years ago.[59] The *koua* expresses the binary code in exactly the same logical order as when the *yin* (– –) and the *yang* (—) symbols are substituted for the pluses and minuses in Lacan's symbolic chain in his seminar on "The Purloined Letter." Below I provide both the original *yin* and the *yang* expression and their Hindu-Arabic equivalent if we let numeral 1 stand for the plus or *yang* symbol:
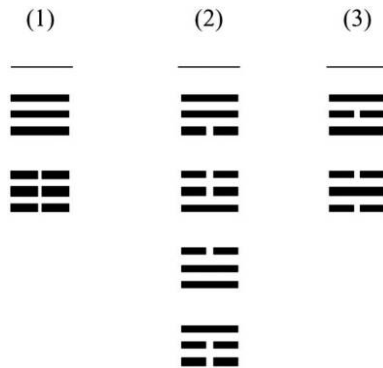

FIGURE 3.   The eight trigram Sequences in the *yin* and *yang*.

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58. Ibid., p. 228.
59. The archaeological studies conducted by Chen Jiujing and Zhang Zhenguo date the appearance of the *bagua* arithmetic to five thousand years ago. See Chen Jiujing and Zhang Zhenguo, "Hanshan chutu yupian tuxing shikao" [A Formal Analysis of Jade Fragments from the Excavation Site in Hanshan], *Wenwu* 4 (1989): 14–17.

(1)	(2)	(3)
_____	_____	_____
111	110	101
000	001	010
	011	
	100	

FIGURE 4.   The eight trigram sequences in familiar binary code.

Roudinesco informs us that Lacan had studied Chinese during World War II and even obtained a degree at the École des Langues Orientales (see *JL*, p. 147). This knowledge may have helped him overcome the typical mental block that we encounter in most nonmathematicians in Western academia, who have difficulty grasping the concept of the ideographic (always confusing it with pictographs!) when that concept is applied to the numeral symbol and to the written symbol. Extensive knowledge of the Chinese language is not required, however, to comprehend the mathematical significance of binary code.[60] This is what Gottfried Wilhelm Leibniz did when he was made aware of the existence of the eight trigrams and their combinatorial principles through the mediation of the Jesuit missionaries who traveled to China in the seventeenth century. Leibniz did not know Chinese and believed that he had invented binary code. When he was confronted with the evidence of the eight trigrams brought back to Europe by Father Bouvet in November 1700 he began to adopt the position that binary arithmetic was not his invention but a "rediscovery" of the Fu Xi principles.[61] When Bouvet spoke of the trigrams "as universal symbols invented by some extraordinary genius of antiquity . . . in order to present the most abstract principles in all the sciences," he may well be anticipating the universal discrete machine of Turing, Shannon, and Wiener, to whom Leibniz was the patron saint of cybernetics.[62] Guilbaud prefers a different patron saint and often evokes Pascal out of patriotic sentiment. That does not prevent him from acknowledging Leibniz as the patron saint of Wiener's cybernetics or from discussing trigram combinations in binary code

60. The use of mathematical symbols for divination purposes is not unique in China and is very common throughout world civilizations. Lacan does not dismiss the belief in chance, number, and randomness as superstition but rather sees it as the path toward the unconscious.

61. Donald F. Lach, "Leibniz and China," *Journal of the History of Ideas* 6 (Oct. 1945): 446. The invention of the trigrams and writing in China is attributed to Fu Xi, the legendary emperor of the twenty-ninth century BCE.

62. Quoted in Wiener, *Cybernetics, or Control and Communication in the Animal and the Machine,* pp. 52–53.

as shown in figure 2.[63] As for Lacan, he did not adopt a cybernetic patron saint of his own—unless Freud counted as one—but his universal language project (the symbolic order) was programmed by similar recourse to thinking mathematically or cybernetically, and he never tried to hide this fact.[64]

The Cybernetic Unconscious

There is no doubt that Lacan's notion of language underwent several changes in his lifetime and must be allowed its full scope of fluctuation and metamorphosis in historical time. I have adopted a narrow focus on one slice of that time, namely, his year-long seminar series in 1954–55 that framed his reading of "The Purloined Letter." My goal is to demonstrate that, instead of embracing structural linguistics, Lacan developed a new theory of language and that his privileging of letters, numbers, spaces, the minus and plus signs, and other ideographic symbols were all part of this new understanding. It remains to be seen how this new understanding of language and the symbolic order is articulated in relation to his rethinking of Freud and further to his discovery of the cybernetic unconscious.

On 15 December 1954, Lacan posed a question: "When does the individual in his subjective function take himself into account—if not in the unconscious? One of the most obvious phenomena discovered by the Freudian experience is exactly that." And what is the specific Freudian experience to which he alludes? Lacan explains:

> Think of that very strange game Freud mentions at the end of *The Psychopathology of Everyday Life*, which consists in inviting the subject to say numbers at random. The associations which then come to him bring to light significations which reverberate so neatly with his remembrance, his destiny, that, from the point of view of probabilities, what he chose goes well beyond anything we might expect from pure chance. [*E*, p. 56]

Saying numbers at random suggests an association with the unconscious through probability. This stochastic analysis of the Freudian experience is followed immediately by a critique of Hegel, who "did not abandon the central function of consciousness, although he does allow us to free ourselves from it" (*E*, p. 56). The critique appears to mark the turning point of what some scholars have identified as Lacan's transition from a Hegelian phase to a linguistic phase, but I would substitute *cybernetic* for *linguistic*.

63. See Guilbaud, "Divagations cybernétiques," *Esprit*, no. 171 (Sept. 1950): 283.

64. Following Guilbaud, Lacan would later reconstruct the genealogy of cybernetics by tracing its origin to Pascal and Condorcet; see *E,* p. 296.

The distinction I emphasize is crucial here because evidence suggests that, unlike Jakobson, Lacan paid lip service to linguistics, along with its preoccupation with phonemes and sounds, while concentrating all his energy on the symbolic order that is assigned to a very different level of abstraction than the Saussurian or Jakobsonian notion of language. In other words, cybernetics, not linguistics, is what enables Lacan to launch his critique of Hegel, Maurice Merleau-Ponty, and phenomenology in general.

What Lacan would later call the "rendezvous" with the real is first and foremost a comment on the game of chance that scientists play with their symbols. For Shannon and Wiener as well as Guilbaud and the other "cyberneticians," the stochastic processes of written letters presuppose a set of combinatorial rules in the machine or in the unconscious mind that equally produce gibberish or make sense.[65] In Guilbaud's comprehensive digest of cybernetic theory in *What Is Cybernetics?* the author devotes a good number of chapters to discussing the relationship between language and machine in view of symbolic logic. These include "circuits and networks," "feedback and purposive activity," "signals and messages," "information and probability," "communication," and so on. Guilbaud argues that the task of the cybernetician is to apply a rigorous mathematical method to the analysis of stochastic processes of language while acknowledging that language in the ordinary sense of the word "makes use of only a small fraction of the combinatorial fabric which serves as its support" among the other symbolic systems such as numerals and binary code. What cybernetics or information theory can offer us is the possibility of analyzing "actual linguistic processes . . . [and] reveal the structures implicit in the apparatus which produces it, whether this is a machine in the usual sense, or a subconscious human mechanism *[un subconcient humain]*."[66] As I discuss below, Guilbaud's machine and the human subconscious would be translated as the machine and the unconscious in Lacan's rereading of Freud.

There is indisputable evidence that, beyond the seminar on "The Purloined Letter," the Freudian topics that Lacan covered in the 1954–55 seminar are all connected one way or another to Guilbaud's treatment of the same in *What Is Cybernetics?* and in "The Theory of Games" as well as in "Lectures on the Principal Elements in Mathematical Game Theory." The striking parallels and instances of shared technical idiom are too numerous for me to carry out a systematic comparison within the limited scope of my essay. A more fruitful approach, I believe, lies in identifying those

65. Concerning Lacan's reiteration of nonsense or nonmeaning, Mark Taylor suggests that the real for Lacan recognizes radical heterogeneity and is fundamentally theological. See Mark C. Taylor, *Altarity* (Chicago, 1987), pp. 93–94.

66. Guilbaud, *What Is Cybernetics?* p. 70.

strands of thought that are central to Lacan's elaboration of the concept of language and speech from a cybernetic viewpoint, namely, the questions of the communication circuit, the message, and logical time that he undertook to examine systematically in the 1954–55 seminar. That flurry of activities eventually culminated in a lecture he delivered on 22 June 1955 entitled "Psychoanalysis and Cybernetics, or On the Nature of Language."

Let us recall that in his analysis of Poe's story Lacan warns us not to take the stolen letter or the marbles literally. "The letter itself, this phrase written on a piece of paper," says Lacan as he reflects back on the earlier seminar, "in so far as it wanders about, is the unconscious" (*E*, p. 209). The marbles, too, figure the unconscious as they move from hand to hand in the game of even and odd. In the course of working toward a generalized theory of the symbolic circuit, Lacan draws on the telegraph to reflect further on the unconscious:

> Suppose that I send a telegram from here to Le Mans, with the request that Le Mans send it back to Tours, from there to Sens, from there to Fontainebleau, and from there to Paris, and so on indefinitely. What's needed is that when I reach the tail of my message, the head should not yet have arrived back. The message must have time to turn around. It turns quickly, it doesn't stop turning, it turns around in circles. It's funny, this thing turning back on itself. It's called *feedback* [English in the original], and it's related to the homeostat. You know that that is how the admission of steam into a steam-engine is controlled. If it heats up too quickly, a governor registers it, two things are forced apart by the centrifugal force, and the admission of steam is regulated. We have oscillation about a point of equilibrium. [*E*, p. 88]

Negative feedback and the homeostat are two of Wiener's central theoretical concepts, which equally informed McCulloch and Pitt's important contribution to the study of neural networks in the human brain.[67] That which binds the steam engine to the telegraph is the idea of the message in the feedback system, but the message has nothing to do with content or meaning. From the standpoint of information theory, "the message is a discrete or continuous sequences of measurable events distributed in time."[68] The structure of this movement is determined by the feedback and the homeostat mechanisms central to cybernetics. Lacan's punning on the tails and heads of the message turns on the figure of coin-flipping in the game

67. See Wiener, *Cybernetics, or Control and Communication in the Animal and the Machine,* pp. 19, 55.

68. Ibid., p. 16.

of chance as popularized by game theory. This is a familiar game of hunt-the-slipper in which the slipper or the message moves, but, like Poe's letter, the message bears no linguistic meaning as it moves through the circuits.

  The evocation of the telegraph is not fortuitous because Morse's telegraphy was the starting point of Shannon's mathematical analysis when he founded information theory.[69] One wonders if the inclusion of the telephone and telegraphy might not significantly revise Kittler's earlier association of the Lacanian symbolic order with the typewriter. Conceptually, the three technologies are interconnected, but it seems that Shannon's work clearly privileges Morse code for good reason. In Morse's telegraph code, Shannon discovers a concept of the message relating to uncertainty and probability (that is, which message to choose out of x number of messages) and to the ways in which communication systems should be designed to work with the statistical pattern (which he calls "redundancy") and randomness of information (which he calls "entropy").[70] Lacan grasps this novel conceptualization of the telegraphic message and its relevance to his own work, and from this understanding he derives a notion of language that gives absolute priority to the signifier (or the letter) while banishing linguistic meaning and semantics from the sign. The following diagram illustrates the combinatory possibilities of groups of three that Lacan derives from the same mathematical principle underlying Shannon's earlier analysis of Morse code:
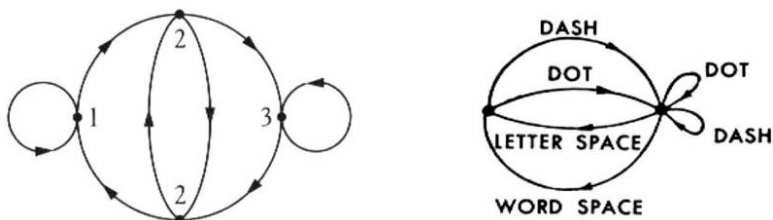

FIGURE 5.

Lacan's 1-3 Network in the presentation of   Shannon's graphic representation of the suite
"Seminar on 'The Purloined Letter.'"[71]   in the constraints on telegraphic symbols.[72]

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69.   Shannon did most of his pathbreaking work at Bell Telephone Laboratories in 1941–58 and continued to be affiliated with Bell Labs until 1972. He became a professor at MIT in 1958 and taught there until his retirement in 1978.

70.   Claude E. Shannon and Warren Weaver, *The Mathematical Theory of Communication* (Urbana, Ill., 1963), p. 39.

71.   Lacan, "Seminar on 'The Purloined Letter,'" *Écrits*, p. 35.

72.   Shannon's illustration is based on his analysis of the dot-dash-space principle in Morse code that he then applies to information theory. The "space" letter was Shannon's invention. See Shannon and Weaver, *The Mathematical Theory of Communication,* p. 38.

On at least one occasion, 19 January 1955, with Hyppolite in attendance at the seminar, Lacan referred directly to Shannon's work at Bell Labs in an extended foray into the scientific research on communication engineering, although he does not mention Shannon by name:

> The Bell Telephone Company needed to economise, that is to say, to pass the greatest possible number of communications down one single wire. In a country as vast as the United States, it is very important to save on a few wires, and to get the inanities which generally travel by this kind of transmission apparatus to pass down the smallest possible number of wires. That is where the quantification of communication started. So a start was made, as you can see, by dealing with *something very far removed from what we here call speech. It had nothing to do with knowing whether what people tell each other makes any sense.* Besides, what is said on the telephone, you must know from experience, never does. But one communicates, one recognizes the modulation of a human voice, and as a result one has that appearance of understanding which comes with the fact that one recognizes words one already knows. It is a matter of knowing what are the most economical conditions which enable one to transmit the words people recognise. No one cares about the meaning. Doesn't this underline rather well the point which I am emphasizing, which one always forgets, namely that language, this language which is the instrument of speech, is something material? [*E*, p. 82; emphasis added]

It seems that the Saussurian notion of speech *(parole)* passes down the wire of Shannon's information theory and reemerges as something radically transformed. With the sole caveat of preferring *channel* to *wire*, Shannon would have been in agreement with Lacan about the "quantification of communication," the need to "economise," the irrelevance of "sense" or meaning to the message, and so on. Furthermore, Shannon would have concurred that his idea of communication deals with "something very far removed from what we here call speech." This last point could not have been more explicit about what Lacan was doing with his reversed model of signifier and signified and also about how he would further conceptualize the unconscious in relation to the symbolic order. But the difficulty that this concept of language presents is how language can be both far removed from speech and serve as the instrument of speech. Does the mind behave like a telephone exchange system or is it also a machine? Wiener, McCulloch, and

Guilbaud answered yes, for cybernetics was premised on the idea that communication networks and neural pathways corresponded to each other in more than analogical ways. Lacan came very close to answering yes as he speculated further about the nature of language and of the unconscious by reference to the cybernetic machine.

If one were to judge from the transcripts of the first few months of 1955, most members of Lacan's seminar were evidently thrown into confusion by his subversion of their familiar notion of language. They seemed hesitant at times and were generally slow in grasping his train of thought whenever numbers were brought up to think through the question of language (I believe this is still the case today in the teaching of Lacan's "Saussurian" notion of language in the U.S. and other parts of the world). At one point, Lacan lost patience and complained: "we won't go into these arcana. You can bring a horse to water, but you can't make him drink, and so as not to instill too great an aversion in you to this exercise" (*E*, p. 178). This strange lack of understanding concerning his novel notion of language caused Lacan to devote one of the final sessions of his seminar to the topic of "Where is speech? Where is language?" on 15 June 1955, according to the transcription prepared by Jacques-Alain Miller. After a lively exchange with the members of his seminar who seem genuinely confused about what the teacher was doing with the ideas of speech and language, Lacan gives an explanation as follows:

> when one illustrates the phenomenon of language with something as formally purified as mathematical symbols—and that is one of the reasons for putting cybernetics on the agenda—when one gives a mathematical notation of the *verbum*, one demonstrates in the simplest possible way that language exists completely independently of us. Numbers have properties which are absolute. . . . *All this can circulate in all manner of ways in the universal machine, which is more universal than anything you could imagine.* One can imagine an indefinite number of levels, where all this turns around and circulates. The world of signs functions, and it has no signification whatsoever. What gives it its signification is the moment when we stop the machine. These are the temporal breaks which we make in it. If they are faulty, we will see ambiguities emerge, which are sometimes difficult to resolve, but which one will always end up giving a signification to. [*E*, p. 284]

This is followed by a series of fascinating exchanges with Riguet, the only mathematician in the seminar room, about what machines can do or cannot do, whether machines share universal symbols, and so on. Lacan points to the binary numbers 1 and 0 as exemplifying a universal system of

signs and opposes this system to historically embodied individual languages such as the French language, which some members of his seminar insist on using as their frame of reference. He argues that "the circulation of binary signs in a machine enables us, if we give it the right programme, to discover a previously unpublished prime number. The prime number circulating in the machine has got nothing to do with thought" (*E*, p. 286).[73] On previous occasions, Lacan demonstrated how the unconscious, instead of the speaking subject, does the thinking and plays the game of chance according to given combinatory rules. Like the prime number, whatever comes out of the thinking machine merely reflects on how the game is played.

Lacan defines language as a system of signs in this programmable sense, and the question for him is to know "what minimum number of signs is needed to make a language" (*E*, p. 287). There are two signs, 0 and 1, whose binary logic applies equally to the cybernetic machine as it does to the neural networks of McCulloch and Pitts. Lacan's psychic machine closely replicates that of the cyberneticians's neural nets, and this is where Freud's repetition automatism begins to make sense:

> What is a message inside a machine? Something which proceeds by opening and not opening, the way an electronic lamp does, by yes or no. It's something articulated, of the same order as the fundamental oppositions of the symbolic register. At any given moment, this something which turns has to, or doesn't, come back into play. It is always ready to give a reply, and be completed by this selfsame act of replying, that is to say by ceasing to function as an isolated and closed circuit, by entering into the general run of things. Now this comes very close to what we can conceive of as *Zwang*, the compulsion to repeat. [*E*, p. 89]

The *Zwang* refers to Freud's repetition automatism *(Wiederholungszwang)*, with which Lacan would begin his 1966 version of the "Seminar on 'The Purloined Letter,'" which is the version most American critics have read and commented on. In the transcript itself, however, that discussion occurred on 19 January 1955 and draws attention to the work of the central players in American cybernetics. Again, Lacan does not mention them by name.

McCulloch and Pitts's groundbreaking paper "A Logical Calculus of the Ideas Immanent in Nervous Activity" (1943) helped define the work of the

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73. The quote reflects Lacan's awareness that computers began to accelerate the discovery of ever greater prime numbers after 1951.

first generation of American cyberneticians by hypothesizing that the human brain is a cybernetic machine.[74] In that paper, the authors show the activity of neurons to be inherently propositional and apply the mathematical calculus to the construction of formal neural nets isomorphic to the relations of propositional logic. McCulloch and Pitts believe that all psychic events have a semiotic character and that "the 'all-or-none' law of these activities, and the conformity of their relations to those of the logic of propositions, insure that the relations of psychons are those of the two-valued logic of propositions. Thus in psychology, introspective, behavioristic or physiological, the fundamental relations are those of two-valued logic."[75] Lacan's fascination with the eruption of "signification" and "ambiguities" as a result of "temporal breaks" and "faulty" moments of the circuit suggests that he was familiar with this cybernetic approach to neurological studies. He spoke of the memory apparatus as "this message circulating between Paris and Paris, on the tiny points of the nervous system" and refers at one point to the work of an anonymous "neurologist"—English neurophysiologist John Z. Young?—who conducted experiments on the nervous system of octopuses (*E*, p. 89). Of course, electronic and biological systems can be jammed and the circuit can break down. Lacan is careful to point out that the circulation of information does not mean "that fundamental things happen between human beings. It concerns what goes down the wires, and what can be measured. Except, one then begins to wonder where it does go, or whether it doesn't, when it deteriorates, when it is no longer communication" (*E*, p. 83). Lacan then adds that there is a name for this breakdown, called "in psychology, *the jam* [English in original], an American word. It is the first time that confusion as such—this tendency there is in communication to cease being a communication, that is to say, of no longer communicating anything at all—appears as a fundamental concept. That makes for one more symbol" (*E*, p. 83). Shannon has named this tendency entropy, of which Lacan is fully aware, but the latter is developing a notion of the symbolic order that strives to reframe the meaning of communication and noncommunication with respect to what he would call "man's waiting" in the temporal movement of civilization (*E*, p. 300).

Conclusion

I began this essay by suggesting that Lacan's seminar on "The Purloined Letter" has played a game of *hiding in plain sight* with literary critics on

74. See Heims, *The Cybernetics Group*, pp. 31–51.

75. Warren McCulloch and Walter Pitts, "A Logical Calculus of the Ideas Immanent in Nervous Activity," *Bulletin of Mathematical Biophysics* 5 (1943): 114.

both sides of the Atlantic. To help explain this self-imposed blindness in the English-speaking world, John Forrester believes that Jeffrey Mehlman's incomplete translation of the 1966 version in *Yale French Studies* may have "allowed the 'Seminar' to be read in Britain and America out of the context of Lacan's discussion of repetition, of the machine and cybernetics."[76] His account is largely accurate because the translingual interpretations of Lacan have indeed erased the traces of American game theory and cybernetics. The only problem with this reading is that the majority of poststructuralist scholars of Lacan in British and American academia are bilingual speakers who would have consulted one of the three published French versions of the "Seminar." How do we explain, for instance, that Derrida, who offers a lengthy critique of Lacan in "The Purveyor of Truth," and Barbara Johnson, who gives a brilliant rebuttal of Derrida's critique in "The Frame of Reference," have both missed the ubiquitous cybernetic machine in Lacan? What does this blind play of mirrors across the Atlantic tell us about the political unconscious of theory itself? Does it have something to do with the reproduction and policing of the boundaries of academic disciplines in the United States and elsewhere?

It is true that Lacan did not reveal the names of the cyberneticians who directed his attention to Poe's story, but he never tried to hide the centrality of cybernetics in his reworking of Freud. On 22 June 1955, he gave a public lecture titled "Psychoanalysis and Cybernetics, or On the Nature of Language" to summarize his year-long seminar that I have analyzed in my essay. In this lecture, Lacan begins to reflect on the sinister aspect of cybernetics and game theory and the political implications of these (American) inventions:

> In keeping on this frontier the originality of what appears in our world in the form of cybernetics, I am tying it to man's waiting. If the science of the combinations of the scanned encounter has come to the attention of man, it is because it deeply concerns him. And it is not for nothing that it comes out of games of chance. And it is not for nothing that game theory is concerned with all the functions of our economic life, the theory of coalitions, of monopolies, the theory of war. Yes, war itself, considered in its aspect as game, detached from anything which might be real. It is not for nothing that the same word designates such diverse fields as well as the game of chance. . . . Here we come very close to the central question with which I began, namely—

76. John Forrester, *The Seductions of Psychoanalysis: Freud, Lacan, and Derrida* (Cambridge, 1990), p. 339 n. 72.

> what is the chance of the unconscious, which in some way lies behind man? [*E*, p. 300]

Lacan's characterization of game theory is almost a coded description of American empire in the cold war. The terrible truth that cybernetics can tell us about the Freudian unconscious comes in the form of "combinations of the scanned encounter." With cybernetics, the symbol is embodied in an apparatus that supposedly ties the real to a syntax for Lacan; however, this syntax has nothing to do with ordinary grammar but rather is the combinatory logic of 0 and 1. "The human being isn't master of this primordial, primitive language," says Lacan, parodying Martin Heidegger, "he has been thrown into it, committed, caught up in its gears" (*E*, p. 307).

Time and chance—the true meaning of historicity, or "man's waiting" —are absolutely fundamental to how the mind, language, and the machine can be thought or rethought. But there is a question here: Will the theory of language and the theory of the unconscious be the same after the arrival of cybernetics? Lacan's answer is no, and he is right. The originality of his work lies precisely in its radical openness toward the temporality of "what appears in our world."