

U M B R *a*
S C I E N C E
A N D T R U T H

UMBR(a): A JOURNAL OF THE UNCONSCIOUS 2000

ISSN 1087-0830

ISBN 0-9666452-4-3

EDITOR:

Theresa Giron

MANAGING EDITOR:

Sue Feldman

EDITORIAL COMMITTEE:

Sue Feldman
Theresa Giron
Kyunghoon Jung
Aranya Maritime
Mikko Tuhkanen
Andres Zlotzky

ART DIRECTOR:

Sam Gillespie

FACULTY ADVISOR:

Joan Copjec

WEBMASTER:

Julia Dzwonkoski

ADDRESS FOR EDITORIAL AND SUBSCRIPTION ENQUIRIES:

UMBR(a)

CENTER FOR THE STUDY OF PSYCHOANALYSIS AND CULTURE

409 CLEMENS HALL

BUFFALO, N.Y. 14260-4610

<http://wings.buffalo.edu/student-life/graduate/gsa/lacan/lacan.html>

UMBR(a) is published with the help of grants from the following organizations and individuals at the State University of New York at Buffalo:

The Graduate Student Association, Sub Board 1, Inc.,
The Center for the Study of Psychoanalysis and Culture,
The Group for the Discussion of the Freudian Field, The English Department,
The English Graduate Student Association. The Samuel Clemens Chair (Leslie Fiedler),
The Melodia Jones Chair (Gerard Bucher), The McNulty Chair (Dennis Tedlock),
The Julian Park Chair (Elizabeth Grosz), The Gray Chair (Charles Bernstein)

ERRATA

The following are corrections to Robert Groome's article "Towards a Topology of the Subject," which appeared in UMBR(a) 1999:

- 1) On page 87, the second formula in the middle of the page should read: $((x^2 \text{ and } x^3) \emptyset \neg x^1)$. The implies sign " \emptyset " has been left out, leaving the formula ungrammatical.
- 2) There are 17 endnotes indicated in the body of the text, yet there are only 16 actual notes. The reason for this is that endnote 14 has been left out, rendering the endnotes from 14 to 17 out of synch with the text in which they appear. The absent endnote, which addresses the mathematical development of the pleasure principle, should read: "For example, at the level of its mathematics, if it is readily admitted that Descartes discovered the reflex arc, the origins of a properly psycho-physical conception of the reflex only emerges with Fechner's admission of transcendental numbers — in this case logarithms — into physics. Needless to say, what is most often neglected in such a genealogy is that this mathematical formulation is opened up in the treatment of Kant's unpleasure principle and in the field of aesthetics, not psychology. See Fechner's *Vorschule der Aesthetik*, 1869."

Special thanks to Éditions du Seuil for granting permission to publish excerpts from the books of Alain Badiou and Jean-Claude Milner

Alain Badiou, *Le Nombre et les nombres*.
© Éditions du Seuil, 1990.

Jean-Claude Milner, *L'Oeuvre claire: Lacan, la science, la philosophie*
© Éditions du Seuil, 1995.

CONTENTS

PSYCHOANALYSIS IS A SCIENCE FICTION

THERESA GIRON 4

LACAN BETWEEN CULTURAL STUDIES AND COGNITIVISM

SLAVOJ ŽIŽEK 9

THE DOCTRINE OF SCIENCE

JEAN-CLAUDE MILNER 33

SCIENCE AND PSYCHOANALYSIS

GENEVIÈVE MOREL 65

THE BODY AND PSYCHO; OR, OF "FARTHER USES OF THE DEAD TO THE LIVING"

MIRAN BOŽOVIČ 8

FREGE/ON A CONTEMPORARY USAGE OF FREGE

ALAIN BADIOU 99

THE PHANTOM OF FREUD IN CLASSICAL LOGIC

ROBERT GROOME 117

*unavailable in electronic format

PSYCHOANALYSIS IS A SCIENCE FICTION

THERESA GIRON

HOW CAN WE EXPLAIN THE RECENT INTEREST CRITICAL THEORY HAS TAKEN IN THE VARIOUS FIELDS OF SCIENCE? WHAT DOES SCIENCE OFFER THEORY THAT THEORY CANNOT FIND IN ITSELF? IN THE PAST 30 YEARS, MOST AREAS OF THEORY HAVE LABORED LONG AND HARD TO QUESTION ANY GIVEN ASSUMPTIONS OF KNOWLEDGE, TO MAKE IT CLEAR THAT WE KNOW WHAT WE KNOW ABOUT THE WORLD ONLY VIA CATEGORIES THAT CAN BE PROVEN TO BE UNSTABLE, A LANGUAGE THAT WE DO NOT CONTROL, AND INDIVIDUAL PERSPECTIVES AND EXPERIENCES THAT ARE SO RADICALLY RELATIVE AS TO BE SOLIP-SISTIC. IN A CLIMATE SO DEVOTED TO UNCERTAINTY AND RELATIVISM, IT'S NO SURPRISE TO FIND A CORRESPONDING SUSPICION, IF NOT UTTER REJECTION, OF SCIENCE. IT IS PROBABLY EVEN LESS OF A SURPRISE THEN TO FIND THE FLIP-SIDE OF THIS REJECTION IN THE EVENTUAL UPSURGE OF INTEREST IN SCIENCE. THIS "TURNING TOWARD" SCIENCE CAN BE EXPLAINED IN TWO WAYS: FIRST, AND MOST SIMPLY, IS THE FACT THAT VERY FEW CAN LIVE FOR LONG IN A STATE OF UNCERTAINTY OR RELATIVISM THAT CONSTANTLY THROWS ANY KNOWLEDGE ABOUT THE WORLD INTO QUESTION. SECOND, IF THEORY WILL HAVE IT THAT EITHER ANY ASSUMPTION OF KNOWLEDGE IS IN ERROR (AT WORST) OR THAT THE ASSUMPTION OF KNOWLEDGE CAN BE MADE ONLY FOR THAT INDIVIDUAL (AT BEST), THEN WE ARE BOUND TO FIND A RETURN OF THE QUESTION OF CERTAINTY. AFTER EVERYTHING HAS BEEN DOUBTED, QUESTIONED AND PUT INTO PERSPECTIVE, THE PROBLEM OF CERTAINTY RETURNS: EVEN NOW, IS THERE ANYTHING LEFT OF WHICH WE CAN BE CERTAIN?

WITH THIS QUESTION OF CERTAINTY, AND HAVING TO LOOK BEYOND ITSELF FOR AN ANSWER, THEORY TURNS TOWARD SCIENCE. AND SCIENCE IS ABLE TO OFFER THE POSSIBILITY OF CERTAINTY, AS IT TRADITIONALLY DOES, IN THE DOMAIN OF KNOWLEDGE. FOR SCIENCE IS BASED ON THE POSSIBILITY OF FORMALIZATION; THAT IS TO SAY, FOR SCIENCE, THINGS IN THE REAL ARE VALU-ABLE TO THE PRECISE DEGREE THAT THEY CAN BE SYMBOLIZED. THIS MEANS THAT FROM THE REALM OF REAL OBJECTS, SCIENCE CREATES A UNIVERSE OF KNOWABLE (AND FORMALIZABLE) THINGS. IN THIS WAY, SCIENCE GIVES CERTAINTY BY EXCLUDING ANYTHING THAT CANNOT BE RENDERED KNOWABLE THROUGH FORMALIZATION AND THUS, SCIENCE SECURES CERTAINTY IN THE FIELD OF KNOWLEDGE. THE QUESTION THEN BECOMES: IS THERE ANOTHER WAY OF BEING CERTAIN THAT IS

NOT THE WAY OF SCIENCE? THAT IS, IS THERE ANOTHER POSSIBLE DIRECTION FOR THEORY'S SEARCH FOR CERTAINTY?

FOR PSYCHOANALYSIS, CERTAINTY CAN BE LOCATED NOT IN THE DOMAIN OF KNOWLEDGE (AS PER SCIENCE), BUT RATHER, IN THE DOMAIN OF TRUTH; IT THEN BASES ITS CERTAINTY IN TRUTH ON THE VERY GROUND OF THE EXCLUSION ORIGINALLY MADE BY SCIENCE. THIS IS NOT TO SAY THAT SCIENCE EXCLUDES THE IDEA OF TRUTH, BUT RATHER THAT IT EXCLUDES THE PLACE OF TRUTH INsofar AS THIS PLACE OFFERS THE POSSIBILITY OF ACCESS TO A MODE OF CERTAINTY THAT IS NOT THAT MODE ALREADY CHARACTERIZED AS PROPER TO SCIENCE: THAT MODE THAT IS LINKED TO KNOWLEDGE. FOR, IF SCIENCE OFFERS A MODE OF TRUTH, AND UNDOUBTEDLY IT DOES, THIS TRUTH DOES NOT OFFER ANOTHER MODE OF CERTAINTY; SCIENCE'S TRUTH REMAINS TIED TO CERTAINTY IN THE FIELD OF KNOWLEDGE. FOR SCIENCE, TRUTH IS THE SUPERLATIVE OF KNOWLEDGE: TRUTH IS THE BUILD-UP OF KNOWLEDGE IN ONE PLACE, THE ACCUMULATION OF CERTAINTY AROUND A HYPOTHESIS. THUS, NEWTON'S LAW, THE "BEST CORROBORATED LAW IN HISTORY" RISES TO THE LEVEL OF SCIENTIFIC TRUTH NOT BECAUSE IT SUGGESTS A CERTAINTY THAT IS NOT THAT OF KNOWLEDGE, BUT

BECAUSE THE LAW BECOMES THE VERY SITE OF THE COAGULATION OF KNOWLEDGE (AS EVIDENCE, CORROBORATED PROOF). THUS, TRUTH FOR SCIENCE IS ALWAYS ONLY ADDITIVE, OR CUMULATIVE; WHEREAS, FOR PSYCHOANALYSIS, TRUTH IS FIRST AND FOREMOST SUBTRACTIVE. IN PSYCHOANALYSIS, TRUTH CAN NOT BE BASED ON THE ACCUMULATION OF KNOWLEDGE BECAUSE TRUTH IS THAT WHICH MAKES A HOLE IN KNOWLEDGE, AND IT IS ON THE BASIS OF THIS HOLE IN KNOWLEDGE (AND THE MARKING OF IT AS ABSENCE), AS WE WILL SEE, THAT A DIFFERENT MODE OF CERTAINTY MAY EXIST.

THE CONSTRUCTION OF THE SCIENTIFIC UNIVERSE ON THE BASIS OF AN EXCLUSION CREATES NOT ONE DOMAIN BUT TWO: THE DOMAIN OF KNOWABLE (INCLUDED) THINGS AND THAT OF UNKNOWABLE (EXCLUDED) THINGS. IN THE SAME MOMENT AND WITH THE SAME GESTURE, SCIENCE CREATES TWO DOMAINS, TAKING ONLY ONE AS ITS OBJECT OF STUDY (AND CERTAINTY) AND LEAVING THE OTHER OPEN, TO BE FINALLY TAKEN UP BY PSYCHOANALYSIS. FOR PSYCHOANALYSIS HOWEVER, THE DOMAIN CREATED ONLY IN ORDER TO BE EXCLUDED BY SCIENCE, IS NOTHING LESS THAN THE VERY OBJECT OF PSYCHOANALYSIS, AND THOUGH THIS DOMAIN MAY BE THE PLACE IN WHICH

KNOWLEDGE FAILS, IT IS NEVERTHELESS THE BASIS ON WHICH PSYCHOANALYSIS OFFERS A DIFFERENT NOTION OF CERTAINTY. IT IS IMPORTANT TO RECOGNIZE THAT, IN TAKING UP THIS DIFFERENT NOTION OF CERTAINTY — A CERTAINTY IN THE DOMAIN OF TRUTH RATHER THAN KNOWLEDGE — PSYCHOANALYSIS IS NOT BREAKING WITH SCIENCE, BUT TAKING UP THE VERY TASK OF SCIENCE IN THE ONE PLACE FROM WHICH SCIENCE, IN ITS MOMENT OF CONSTITUTION, EXCLUDED ITSELF.

PSYCHOANALYSIS THEN HAS AS ITS OBJECT THE ONE OBJECT, CREATED BY SCIENCE, WHICH SCIENCE NEVERTHELESS COULD NOT TAKE AS ITS OWN OBJECT OF ENQUIRY INsofar AS IT WAS CREATED AS EXCLUDED BECAUSE THE OBJECT ITSELF MARKS THE LIMIT OF SCIENCE, THE PLACE IN WHICH THERE IS NOTHING TO KNOW. FOR PSYCHOANALYSIS, THIS OBJECT BECOMES NOT MERELY THE FAILURE OF KNOWLEDGE (WHICH WOULD LEAVE US RIGHT BACK AT THE RADICAL UNCERTAINTY WHICH THEORY WAS LOOKING TO ESCAPE) BUT ALSO THE PLACE OF A NEW CERTAINTY, THE CERTAINTY OF TRUTH. WHAT IS THIS OBJECT THAT PSYCHOANALYSIS TAKES UP IN THE DOMAIN OF TRUTH? PERHAPS IT IS OBVIOUS BY NOW THAT THE OBJECT OF PSYCHOANALYSIS IS THAT CERTAIN ASPECT

OF THE SUBJECT THAT WE CAN CALL THE SUBJECT OF SCIENCE. IF SCIENCE SHORES UP CERTAINTY IN THE DOMAIN OF KNOWLEDGE BY SHUTTING DOWN THE PLACE OF TRUTH, PSYCHOANALYSIS ALLOWS ANOTHER CERTAINTY PRECISELY BY OPENING THE PLACE OF TRUTH UP TO SCIENCE.

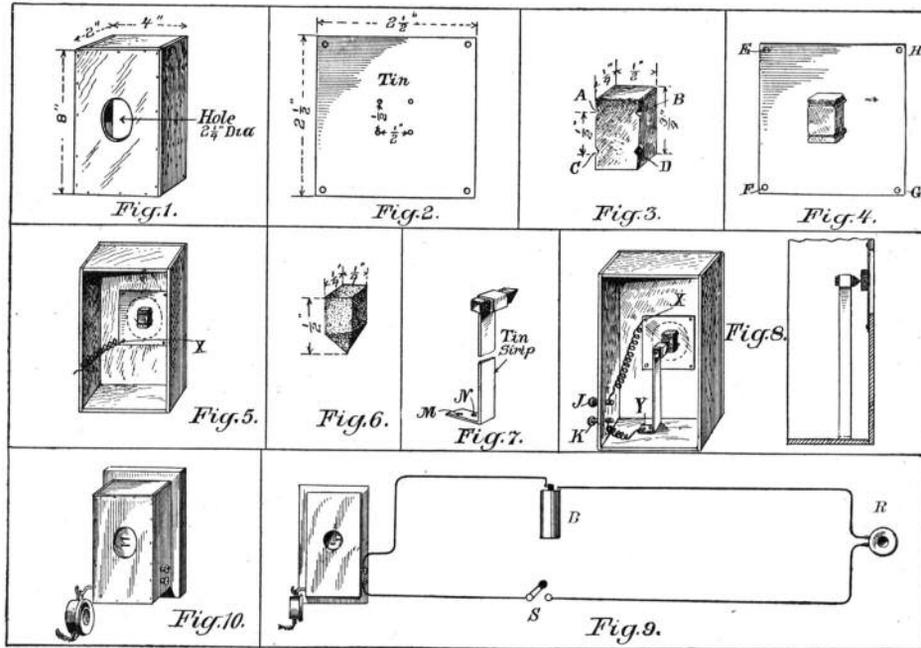
PSYCHOANALYSIS THEN NAMES THE SCIENCE OF TRUTH. IT ALLOWS THE PLACE OF TRUTH TO BE MARKED, THAT IS, TO BE FORMALIZED OR SYMBOLIZED; THIS PLACE WILL ALWAYS BE MARKED AS AN IMPOSSIBILITY BUT WHAT PSYCHOANALYSIS CONTEMPLATES IS NEVERTHELESS THE POSSIBILITY OF THIS MARKING. IF, FOR SCIENCE, THE DOMAIN OF TRUTH IS SIMPLY IMPOSSIBLE (THE PLACE WHERE THERE IS NOTHING TO KNOW), THEN FOR PSYCHOANALYSIS, THE DOMAIN OF TRUTH IS FORMALIZED AS IMPOSSIBLE (THE MARK OF THE ABSENCE OF KNOWLEDGE). (PERHAPS IT CAN BE BEST THOUGHT OF AS THE DIFFERENCE BETWEEN A MERE ABSENCE OR EXCLUSION (SCIENCE) AND THE MARK OR TRACE OF THAT ABSENCE (PSYCHOANALYSIS).) THUS, WHAT IS SYMBOLIZED IN PSYCHOANALYSIS IS THE PLACE OF TRUTH INsofar AS THAT PLACE CAN ONLY BE MARKED AS AN EMPTY PLACE. ONCE THE PLACE OF TRUTH THEN IS HELD OPEN — THAT IS TO SAY, MARKED IN THE SYMBOLIC — IT CAN BE VARIOUSLY OCCUPIED FROM

MOMENT TO MOMENT BY DIFFERENT OBJECTS. PSYCHOANALYSIS DOES NOT FIX TRUTH ITSELF; IT FIXES THE PLACE OF TRUTH.

HOW DOES THE PLACE OF TRUTH COME TO BE, HOWEVER BRIEFLY, OCCUPIED BY AN OBJECT IN PSYCHOANALYSIS? IN ANSWERING THIS QUESTION, WE CANNOT POSSIBLY RELY ON PSYCHOANALYSIS' DIFFERENTIATION FROM SCIENCE; FOR, THE FIELD OF TRUTH AS CERTAINTY IS SIMPLY NOT A STRUCTURAL CONSIDERATION FOR SCIENCE. WE MIGHT, HOWEVER, TURN TOWARD SCIENCE'S BASTARD CHILD, SCIENCE FICTION. SCIENCE FICTION, LIKE PSYCHOANALYSIS, HOLDS OPEN THE PLACE OF TRUTH AS A HOLE IN KNOWLEDGE AND THUS DOES NOT SUBSUME CERTAINTY UNDER THE CATEGORY OF KNOWLEDGE. LIKEWISE BOTH SCIENCE FICTION AND PSYCHOANALYSIS ARE SUBJECT TO A CERTAIN FANTASY OF SCIENTIFICITY AND YET BOTH AT THE SAME TIME GO BEYOND SCIENCE. THE EARLIER QUESTION THEN BECOMES: HOW DOES SOME OBJECT COME TO OCCUPY THE PLACE OF TRUTH IN SCIENCE FICTION? THE ANSWER IS PRESENT RIGHT IN THE NAME ITSELF: THE PLACE OF TRUTH IS TAKEN UP ON THE BASIS OF A FICTION. SCIENCE FICTION, BY DEFINITION, CAN NEVER ASSUME THE TRUTH OF ITS WORLD AS MERELY GIVEN; IN EVERY

INSTANCE THAT TRUTH MUST BE CREATED, AND CREATED ANEW. IN SCIENCE FICTION, UNLIKE MOST OTHER LITERARY GENRES, THE BEGINNING OF ANY STORY REQUIRES THAT THE WRITER INVENT THE TRUTH OF THAT STORY'S REALITY, THAT IS, THAT THE WRITER DETERMINE THE FICTIONAL CONSTRUCT THAT WILL SERVE AS THE STRUCTURING PRINCIPLE FOR THE WORLD. IN ADDITION, THE SCIENCE FICTION WRITER CREATES THIS OBJECT (THIS CONSTRUCT) OVER AND OVER AGAIN EACH TIME HE OR SHE BEGINS A NEW STORY.

DOES NOT PSYCHOANALYSIS WORK IN PRECISELY THE SAME WAY? IN OTHER WORDS, IS NOT THE PLACE OF TRUTH TAKEN UP IN PSYCHOANALYSIS PRECISELY ON THE BASIS OF A FICTION? IF PSYCHOANALYSIS OFFERS A CERTAINTY IN TRUTH, IT IS INsofar AS THE EMPTY PLACE OF TRUTH, MARKED IN THE SYMBOLIC, CAN ACCOMMODATE AN OBJECT ON THE BASIS OF A FICTION, THAT IS, ON THE BASIS OF FANTASY. THE ESSAYS IN THIS ISSUE TAKE UP THIS VERY PROBLEM OF HOW THIS EMPTY PLACE OF PSYCHOANALYTIC TRUTH, THE TRUTH THAT MAKES A HOLE IN KNOWLEDGE, CAN BE MARKED IN ANY SCIENTIFIC SYSTEM.



HOW TO MAKE A TELEPHONE.

Fig. 1. Cigar-box, with hole in bottom; Fig. 2. Piece of tin, punched for carbon; Fig. 3. Carbon block; Fig. 4. How the carbon block is bound to the tin; Fig. 5. The diaphragm in place, showing contact-wire at X; Fig. 6. The carbon point; Fig. 7. The carbon point in its tin holder; Fig. 8. Showing how the transmitter is assembled. Figure at the right shows detail of contact between carbon block and point; Fig. 9. Showing electrical connections for a "one-way" system. Two sets are needed for talking back and forth. A switch may be arranged at S for shutting off the battery when telephone is not in use; Fig. 10. Showing how the transmitter may be mounted.

LACAN BETWEEN CULTURAL STUDIES AND COGNITIVISM

SLAVOJ ŽIŽEK

I. CULTURAL STUDIES VERSUS THE “THIRD CULTURE”

THE STRUGGLE FOR INTELLECTUAL HEGEMONY

We are witnessing today the struggle for intellectual hegemony — for who will occupy the universal place of the “public intellectual” — between postmodern-deconstructionist cultural studies and the cognitivist popularizers of “hard” sciences, that is, the proponents of the so-called “third culture.” This struggle, which caught the attention of the general public first through the so-called “de Man affair” (where opponents endeavored to prove the proto-Fascist irrationalist tendencies of deconstruction), reached its peak in the Sokal-*Social Text* affair. In cultural studies, “theory” usually refers to a mixture of literary/cinema criticism, mass culture, ideology, queer studies, and so on. It is worth quoting here the surprised reaction of Dawkins:

I noticed, the other day, an article by a literary critic called “Theory: What Is It?” Would you believe it? “Theory” turned out to mean “theory in literary criticism.”...The very word “theory” has been hijacked for some extremely narrow parochial literary purpose — as though Einstein didn’t have theories; as though Darwin didn’t have theories.¹

Dawkins is here in deep solidarity with his great opponent Stephen Jay Gould, who also complains that “there’s something of a conspiracy among literary intellectuals to think they own the intellectual landscape and the reviewing sources, when in fact there are a group of nonfiction writers, largely from sciences, who have a whole host of fascinating ideas that people want to read about.”² These quotes clearly stake the terms of the debate as the fight for ideological hegemony in the precise sense this term acquired in Ernesto Laclau’s writings: the fight over a particular content that always “hegemonizes” the apparently neutral universal term. The third culture comprises the vast field that reaches from the evolutionary theory debate (Dawkins and Dennett versus Gould) through physicists dealing

with quantum physics and cosmology (Hawking, Weinberg, Capra), cognitive scientists (Dennett again, Marvin Minsky), neurologists (Sacks), the theorists of chaos (Mandelbrot, Stewart), authors dealing with the cognitive and general social impact of the digitalization of our daily lives, up to the theorists of auto-poetic systems who endeavor to develop a universal formal notion of self-organizing emerging systems that can be applied to “natural” living organisms and species as well as social “organisms” (the behavior of markets and other large groups of interacting social agents). Three things should be noted here: (1) as a rule, we are not dealing with scientists themselves (although they are often the same individuals), but with authors who address a large public in such a way that their success outdoes by far the public appeal of cultural studies (suffice it to recall the big bestsellers of Sacks, Hawking, Dawkins and Gould); (2) as in the case of cultural studies, we are not dealing with a homogenized field, but with a rhizomatic multitude connected through “family resemblances,” within which authors are often engaged in violent polemics, but where interdisciplinary connections also flourish (between evolutionary biology and cognitive sciences, and so on); (3) as a rule, authors active in this domain are sustained by a kind of missionary zeal, by a shared awareness that they all participate in a unique shift in the global paradigm of knowledge.

As a kind of manifesto of this orientation, one could quote the “Introduction” to *The Third Culture: Beyond the Scientific Revolution*, in which the editor (John Brockman) nicely presents the large narrative that sustains the collective identification of the various scientists interviewed in the book.³ According to Brockman, back in the ‘40s and ‘50s, the idea of a public intellectual was identified with an academic versed in “soft” human (or social) sciences who addressed issues of common interest, took a stance on the great issues of the day and thus triggered or participated in large and passionate public debates. What then occurred, with the onslaught of “French” postmodern deconstructionist theory, was the passing of that generation of public thinkers and their replacement by “bloodless academics,” that is, by cultural scientists whose pseudo-radical stance against “power” or “hegemonic discourse” effectively involves the growing disappearance of direct and actual political engagements outside the narrow confines of academia, as well as the increasing self-enclosure in an elitist jargon that precludes the very possibility of functioning as an intellectual engaged in public debates. Happily, however, this retreat of the “public intellectual” was counteracted by the surge of the third culture, by the emergence of a new type of public intellectual, the third culture author, who, in the eyes of the general public, more and more stands for the one “supposed to know,” trusted to reveal the keys to the great secrets that concern us all. The problem is here again the gap between effective “hard” sciences and their third culture ideological proponents who elevate scien-

tists into subjects supposed to know, not only for ordinary people who buy these volumes in masses, but also for postmodern theorists themselves who are intrigued by it, “in love with it,” and suppose that these scientists “really know something about the ultimate mystery of being.” The encounter here is failed. No, popular third-culturalists do *not* possess the solution that would solve the crisis of cultural studies; they do not have what cultural studies is lacking. The love encounter is thus failed: the beloved does not stretch his or her hand back and return love.

THE “THIRD CULTURE” AS IDEOLOGY

It is thus crucial to distinguish here between science itself and its inherent ideologization, its sometimes subtle transformation into a new holistic “paradigm” (the new code name for “world view”). A series of notions (complementarity, anthropic principle, and so on) are here doubly inscribed, functioning as scientific *and* ideological terms. It is difficult to effectively estimate the extent to which the third culture is infested with ideology. Among its obvious ideological appropriations (but are they merely secondary appropriations?) one should, again, note at least two obvious cases: first, the often present New Age inscription, in which the shift in paradigm is interpreted as an advance beyond the Cartesian mechanistic-materialist paradigm toward a new holistic approach that brings us back to the wisdom of ancient Oriental thought (the Tao of physics, and so on). Sometimes, this is even radicalized into the assertion that the scientific shift in the predominant paradigm is an epiphenomenon of the fact that humanity is on the verge of the biggest spiritual shift in its entire history, that we are entering a new epoch in which egoistic individualism will be replaced by a transindividual cosmic awareness. The second case is the “naturalization” of certain specific social phenomena, clearly discernible in so-called cyber-revolutionism, that relies on the notion of cyberspace (or the Internet) as a self-evolving “natural” organism; the “naturalization of culture” (market, society, and so on as living organisms) overlaps here with the “culturalization of nature” (life itself is conceived as a set of self-reproducing information — “genes are memes”). This new notion of life is thus neutral with respect to the distinction between natural and cultural (or “artificial”) processes — the Earth (as Gaia) as well as the global market both appear as gigantic self-regulated living systems whose basic structure is defined in terms of the process of coding and decoding, of passing information, and so on. So, while cyberspace ideologists can dream about the next step of evolution in which we will no longer be mechanically interacting “Cartesian” individuals, in which individuals will cut their substantial links to their bodies and conceive of themselves as part of the new holistic mind that lives and acts through them, what is obfuscated in such direct “naturalization”

of the Internet or market is the set of power relations — of political decisions, of institutional conditions — within which “organisms” like the Internet (or the market, or capitalism) can only thrive. We are dealing here with an all too fast metaphoric transposition of certain biological-evolutionist concepts to the study of the history of human civilization, like the jump from “genes” to “memes,” that is, the idea that not only do human beings use language to reproduce themselves, multiply their power and knowledge, and so on, but also, at perhaps a more fundamental level, language itself uses human beings to replicate and expand itself, to gain a new wealth of meanings, and so on.

The standard counter-argument cultural studies’ proponents make to third culture criticism is that the loss of the public intellectual bemoaned in these complaints is effectively the loss of the traditional type (usually white and male) of modernist intellectual. In our postmodernist era, that intellectual was replaced by the proliferation of theoreticians who operate in a different mode (replacing concern with one big issue with a series of localized strategic interventions) and who effectively do address issues that concern the public at large (racism and multiculturalism, sexism, how to overcome the Eurocentrist curriculum, and so on) and thus trigger public debates (like the “political correctness” or sexual harassment controversies). Although this answer is all too easy, the fact remains that themes addressed by cultural studies do stand at the center of public politico-ideological debates (hybrid multiculturalism versus the need for a close community identification, abortion and queer rights versus Moral Majority fundamentalism, and so on), while the first thing that strikes one apropos of the third culture is how their proponents, busy as they are clarifying the ultimate enigmas (“reading the mind of God,” as Hawking was once designated), silently pass over the burning questions that effectively occupy the center stage of current politico-ideological debates.

Finally, one should note that, in spite of the necessary distinction between science and ideology, the obscurantist New Age ideology is *an immanent outgrowth of modern science itself* — from David Bohm to Fritjof Capra, examples abound of different versions of “dancing Wu Li masters,” teaching us about the Tao of physics, the “end of the Cartesian paradigm,” the significance of the anthropic principle and holistic approach, and so on.⁴ To avoid any misunderstanding, as an old-fashioned dialectical materialist, I am ferociously opposed to these obscurantist appropriations of quantum physics and astronomy. These obscurantist sprouts, I believe, are not simply imposed from outside, but function as what Louis Althusser would have called a “spontaneous ideology” among scientists themselves, as a kind of spiritualist supplement to the predominant reductionist-proceduralist attitude of “only what can be precisely defined and measured counts.” What is much more worrying than cultural studies’ “excesses” are the New Age obscurantist

appropriations of today's "hard" sciences that, in order to legitimize their position, invoke the authority of science itself ("today's science has outgrown the mechanistic materialism and points toward a new spiritual holistic stance..."). Significantly, the defenders of scientific realism (like Brichmont and Sokal) only briefly refer to some "subjectivist" formulations of Heisenberg and Bohr that can give rise to relativist/historicist misappropriations, qualifying them as the expression of their author's philosophy, not part of the scientific edifice of quantum physics itself. Here, however, problems begin: Bohr's and Heisenberg's "subjectivist" formulations are not a marginal phenomenon, but were canonized as "Copenhagen orthodoxy," that is, as the "official" interpretation of the ontological consequences of quantum physics. The fact is, the moment one wants to provide an ontological account of quantum physics (which notion of reality fits its results), paradoxes emerge that undermine standard common sense scientific objectivism. This fact is constantly emphasized by scientists themselves, who oscillate between the simple suspension of the ontological question (quantum physics functions, so do not try to understand it, just do the calculations...) and different ways out of the deadlock (Copenhagen orthodoxy, the Many Worlds Interpretation, some version of the "hidden variable" theory that would save the notion of a singular and unique objective reality, like the one proposed by David Bohm, which nonetheless involves paradoxes of its own, like the notion of causality that runs backwards in time).

The more fundamental problem beneath these perplexities is: can we simply renounce the ontological question and limit ourselves to the mere functioning of the scientific apparatus, its calculations and measurements? A further impasse concerns the necessity to somehow relate scientific discoveries to everyday language, to translate them into it. It can be argued that problems emerge only when we try to translate the results of quantum physics back into our common sense notions of reality. But is it possible to resist this temptation? All these topics are widely discussed in the literature on quantum physics, so they have nothing to do with cultural studies' (mis)appropriation of sciences. It was Richard Feynman himself who, in his famous statement, claimed that "nobody really understands quantum physics," implying that one can no longer translate its mathematical-theoretical edifice into the terms of our everyday notions of reality. The impact of modern physics *was* the shattering of the traditional naïve-realist epistemological edifice: sciences themselves opened up a gap in which obscurantist sprouts were able to grow. So, instead of putting all the scorn on poor cultural studies, it would be much more productive to approach anew the old topic of the precise epistemological and ontological implications of the shifts in the "hard" sciences themselves.

THE IMPASSE OF HISTORICISM

On the other hand, the problem with cultural studies, at least in its predominant form, is that it *does* involve a kind of cognitive suspension (the abandonment of the consideration of the inherent truth-value of the theory under consideration) characteristic of historicist relativism. When a typical cultural theorist deals with a philosophical or psychoanalytic edifice, the analysis focuses exclusively on unearthing its hidden patriarchal, Eurocentrist, identitarian “bias,” without even asking the naïve, but nonetheless necessary questions: “OK, but what *is* the structure of the universe? How *is* the human psyche “really” working?” Such questions are not even taken seriously in cultural studies, since it simply tends to reduce them to the historicist reflection upon conditions in which certain notions emerged as the result of historically specific power relations. Furthermore, in a typically rhetorical move, cultural studies denounces the very attempt to draw a clear line of distinction between, say, true science and pre-scientific mythology, as part of the Eurocentrist procedure to impose its own hegemony by devaluating the Other as not-yet-scientific. In this way, we end up arranging and analyzing science proper, premodern “wisdom,” and other forms of knowledge as different discursive formations evaluated not with regard to their inherent truth-value, but with regard to their socio-political status and impact (a native “holistic” wisdom can thus be considered much more “progressive” than the “mechanistic” Western science responsible for the forms of modern domination). The problem with such a procedure of historicist relativism is that it continues to rely on a set of silent (non-thematized) ontological and epistemological presuppositions about the nature of human knowledge and reality — usually a proto-Nietzschean notion that knowledge is not only embedded in, but also generated by, a complex set of discursive strategies of power (re)production. So it is crucial to emphasize that, at this point, Lacan parts with cultural studies’ historicism. For Lacan, modern science is resolutely *not* one of the “narratives” comparable in principle to other modes of “cognitive mapping.” Modern science touches the real in a way totally absent in premodern discourses.

Cultural studies here needs to be put in its proper context. After the demise of the great philosophical schools in the late ‘70s, European academic philosophy itself, with its basic hermeneutical-historical stance, paradoxically shares with cultural studies the stance of cognitive suspension. Excellent studies have recently been produced on great past authors, yet they focus on the correct reading of the author in question, while mostly ignoring the naïve, but unavoidable question of truth-value — not only questions such as “Is this the right reading of Descartes’ notion of the body? Is this what Descartes’ notion of the body has to repress in order to retain its consistency?” and so on, but also “Which, then, *is* the true status of the body? How do *we* stand towards Descartes’ notion of the

body?" And it seems as if these prohibited "ontological" questions are returning with a vengeance in today's third culture. What signals the recent rise of quantum physics and cosmology if not a violent and aggressive rehabilitation of the most fundamental metaphysical questions (e.g., what is the origin and putative end of the universe)? The explicit goal of people like Hawking is a version of TOE (Theory Of Everything), that is, the endeavor to discover the basic formula of the structure of the universe that one could print and wear on a T-shirt (or, for a human being, the genome that identifies what I objectively am). So, in clear contrast to cultural studies' strict prohibition of direct "ontological" questions, third culture proponents unabashedly approach the most fundamental pre-Kantian metaphysical issues — the ultimate constituents of reality, the origins and end of the universe, what consciousness is, how life emerged, and so on — as if the old dream, which died with the demise of Hegelianism, of a large synthesis of metaphysics and science, the dream of a global theory of *all* grounded in exact scientific insights, is coming alive again.

In contrast to these two versions of cognitive suspension, the cognitivist approach opts for a naïve, direct inquiry into "the nature of things" (What is perception? How did language emerge?). However, to use a worn-out phrase, by throwing out the bath water, it also loses the baby, that is, the dimension of proper philosophico-transcendental reflection. That is to say, is historicist relativism (which ultimately leads to the untenable position of solipsism) really the only alternative to the naïve scientific realism (according to which, in sciences and in our knowledge in general, we are gradually approaching the proper image of the way things really are out there, independently of our consciousness of them)? From the standpoint of a proper philosophical reflection, it can easily be shown that both of these positions miss the properly transcendental-hermeneutical level. Where does this level reside? Let us take the classical line of realist reasoning, which claims that the passage from premodern mythical thought to the modern scientific approach to reality cannot simply be interpreted as the replacement of one predominant "narrative" with another, in that the modern scientific approach definitely brings us closer to what "reality" (the "hard" reality existing independently of the scientific researcher) effectively is. A hermeneutic philosopher's basic response to this stance would be to insist that, with the passage from the premodern mythic universe to the universe of modern science, *the very notion of what "reality" (or "effectively to exist") means or what "counts" as reality has also changed*, so that we cannot simply presuppose a neutral external measure that allows us to judge that, with modern science, we come closer to the "same" reality as that with which premodern mythology was dealing. As Hegel would have put it, with the passage from the premodern mythical universe to the modern scientific universe, the measure, the

standard that we implicitly use or apply in order to measure how “real” what we are dealing with is, has itself undergone a fundamental change. The modern scientific outlook involves a series of distinctions (between “objective” reality and “subjective” ideas/impressions of it; between hard neutral facts and “values” that we, the judging subjects, impose onto the facts; and so on) which are *stricto sensu* meaningless in the premodern universe. Of course, a realist can retort that this is the whole point: only with the passage to the modern scientific universe did we get an appropriate notion of what “objective reality” is, in contrast to the premodern outlook that confused “facts” and “values.” Against this, the transcendental-hermeneutic philosopher would be fully justified to insist that, nonetheless, we cannot get out of the vicious circle of presupposing our result: the most fundamental way reality “appears” to us, the most fundamental way we experience what “really counts as effectively existing,” is always already presupposed in our judgments of what “really exists.” This transcendental level was very nicely indicated by Kuhn himself when, in his *Structure of Scientific Revolutions*, he claimed that the shift in a scientific paradigm is *more* than a mere shift in our (external) perspective on/perception of reality, but nonetheless *less* than our effectively “creating” another new reality. For that reason, the standard distinction between the social or psychological contingent conditions of a scientific invention and its objective truth-value falls short here: the very distinction between the (empirical, contingent socio-psychological) genesis of a certain scientific formation and its objective truth-value, independent of the conditions of this genesis, already presupposes a set of distinctions (e.g., between genesis and truth-value) that are by no means self-evident. So, again, one should insist here that the hermeneutic-transcendental questioning of the implicit presuppositions in no way endorses the historicist relativism typical of cultural studies.

KNOWLEDGE AND TRUTH

In what, then, does the ultimate difference between cognitivism and cultural studies consist? On the one hand, there is neutral objective knowledge, that is, the patient empirical examination of reality. Cognitivists like to emphasize that, politically, they are not against the Left — their aim is precisely to liberate the Left from the irrationalist-relativist-elitist postmodern imposter; nonetheless, they accept the distinction between the neutral theoretical (scientific) insight and the eventual ideologico-political bias of the author. In contrast, cultural studies involves the properly dialectical paradox of a truth that relies on an engaged subjective position. This distinction between knowledge inherent to the academic institution, defined by the standards of “professionalism,” and, on the other hand, the truth of a (collective) subject engaged in a struggle (elaborated, among others, by

philosophers from Theodor Adorno to Alain Badiou), enables us to explain how the difference between cognitivists and proponents of cultural studies functions as a shibboleth: it is properly visible only from the side of cultural studies. So, on the one hand, one should fully acknowledge the solid scholarly status of much of the cognitivist endeavor — often, it is academia at its best; on the other hand, there is a dimension that simply eludes its grasp. Let me elaborate this relationship between truth and the accuracy of knowledge by means of a marvelous thought experiment evoked by Daniel Dennett in his *Darwin's Dangerous Idea*: You and your best friend are about to be captured by hostile forces, who know English but do not know much about your world. You both know Morse code, and hit upon the following impromptu encryption scheme: for a dash, speak a truth; for a dot, speak a falsehood. Your captors, of course, listen to you two speak: “Birds lay eggs, and toads fly. Chicago is a city, and my feet are not made of tin, and baseball is played in August,” you say, answering “No” (dash-dot; dash-dash-dash) to whatever your friend has just asked. Even if your captors know Morse code, unless they can determine the truth and falsity of these sentences, they cannot detect the properties that stand for the dot and dash.⁵ Dennett himself uses this example to make the point that meaning cannot be accounted for in purely syntactic inherent terms: the only way to ultimately gain access to the meaning of a statement is to situate it in its life-world context, that is, to take into account its semantic dimension, the objects and processes to which it refers. My point is rather different. As Dennett himself puts it, the two prisoners, in this case, use the world itself as a “one-time pad.” Although the truth-value of their statements is not indifferent but crucial, it is not this truth-value as such, in itself, that matters; what matters is the translation of truth-value into a differential series of pluses and minuses (dashes and dots) that delivers the true message in Morse code. And is something similar not going on in the psychoanalytic process? Although the truth-value of the patient's statements is not indifferent, what really matters is not this truth-value as such, but the way the very alternation of truths and lies discloses the patient's desire — a patient also uses reality itself (the way [s]he relates to it) as a “one-time pad” to encrypt his or her desire. And, in the same way, theory uses the very truth-value (accuracy) of post-theoretical knowledge as a medium to articulate its own truth-message.

On the other hand, politically correct proponents of cultural studies often pay for their arrogance and lack of a serious approach by confusing truth (the engaged subjective position) and knowledge, that is, by disavowing the gap that separates them, by directly subordinating knowledge to truth (say, a quick socio-critical dismissal of a specific science like quantum physics or biology without proper acquaintance with the inherent conceptual structure of this field of knowledge). Essentially, the problem of cultural studies is often the

lack of specific disciplinary skills: a literary theorist without proper knowledge of philosophy can write disparaging remarks on Hegel's phallogocentrism, on film, and so on. What we are dealing with here is a kind of false universal critical capacity to pass judgments on everything without proper knowledge. With all its criticism of traditional philosophical universalism, cultural studies effectively functions as a kind of *ersatz*-philosophy, and notions are thus transformed into ideological universals. In postcolonial studies, for instance, the notion of "colonization" starts to function as a hegemonic notion and is elevated to a universal paradigm, so that in relations between the sexes, the male sex colonizes the female sex, the upper classes colonize the lower classes, and so on. Especially with some "progressive" interpreters of contemporary biology, it is popular to focus on the way the opposing positions are overdetermined by the politico-ideological stance of their authors. Does Dawkins' "Chicago gangster theory of life," this reductionist determinist theory about "selfish genes" caught in a deadly struggle for survival, not express the stance of a competitive, bourgeois individualist society? Is Gould's emphasis on sudden genetic change and ex-aptation not a sign of the more supple, dialectical and "revolutionary" Leftist stance of its author? Do those who emphasize spontaneous cooperation and emerging order (like Lynn Margulis) not express the longing for a stable organic order, for a society that functions as a "corporate body"? Do we thus not have here the scientific expression of the basic triad of Right, Center and Left — of the organicist conservative notion of society as a whole, of the bourgeois individualist notion of society as the space of competition between individuals, and of the revolutionary theorist notion of sudden change? (Of course, the insistence on a holistic approach and emerging order can be given a different accent: it can display the conservative longing for a stable order, or the progressive utopian belief in a new society of solidary cooperation where order grows spontaneously from below and is not imposed from above.) The standard form of the opposition is the one between the "cold" mechanist probing into causality, displaying the attitude of the scientific manipulator in the service of the exploitative domination of nature, and the new "holistic" approach focused on spontaneously emerging order and cooperation, pointing toward what Andrew Ross called a "kinder, gentler science." The mistake here is the same as that of Stalinist Marxism, which opposed "bourgeois" to "proletarian" science, or that of pseudo-radical feminism, which opposes "masculine" to "feminine" discourse as two self-enclosed wholes engaged in warfare. We do not have *two* sciences, but *one* universal science split from within, that is, caught in the battle for hegemony.⁶

THEORETICAL STATE APPARATUSES

The academically-recognized “radical thought” in the liberal West does not operate in a void, but is indeed a part of power relations. Apropos of cultural studies, one has to ask again the old Benjaminian question: not “How does one explicitly *relate* to power?” but “How is one *situated within* predominant power relations?” Does cultural studies not also function as a discourse that pretends to be critically self-reflective, to render visible the predominant power relations, while it effectively obfuscates its own mode of participating in them? So it would be productive to apply to cultural studies itself the Foucauldian notion of productive “bio-power” as opposed to “repressive”/prohibitory legal power: what if the field of cultural studies, far from effectively threatening today’s global relations of domination, fits within this framework perfectly, in the same way that sexuality and the “repressive” discourses that regulate it are fully complementary? What if the criticism of patriarchal/identitarian ideology betrays an ambiguous fascination with it, rather than a will committed to undermining it? There is a way to *avoid* responsibility and/or guilt precisely by emphasizing one’s responsibility or too readily assuming guilt in an exaggerated way, as in the case of the politically correct white male academic who emphasizes the guilt of racist phallogocentrism, and uses this admission of guilt as a stratagem *not* to confront the way he, as a “radical” intellectual, perfectly fits the existing power relations of which he pretends to be thoroughly critical. Crucial here is the shift from British to American cultural studies. Even if we find the same themes and notions in both, the socio-ideological functioning is thoroughly different: we shift from the effective engagement with working class culture to the academic radical chic.

However, despite these critical remarks, the very fact that there is resistance to cultural studies proves that it remains a foreign body unable to fit fully into the existing academy. Cognitivism is ultimately the attempt to get rid of this intruder, to re-establish the standard functioning of academic knowledge — “professional,” rational, empirical, problem-solving, and so on. The distinction between cognitivism and cultural studies is thus not simply the distinction between two doctrines or two theoretical approaches; it is ultimately a much more radical distinction between two totally different modalities or, rather, *practices* of knowledge, inclusive of two different institutional apparatuses of knowledge. This dimension of “theoretical state apparatuses,” to use the Althusserian formulation, is crucial: if we do not take it into account, we simply miss the point of the antagonism between cognitivism and cultural studies. It is no wonder that cognitivists like to emphasize their opposition to psychoanalysis: two exemplary cases of such non-academic knowledge are, of course, Marxism and psychoanalysis. Psychoanalysis differs from cognitivist psychology and psychotherapy in at least three crucial features: (1) since it does not present itself as empir-

ically-tested objective knowledge, there is the perennial problem (in the United States, where psychiatric care is sometimes covered by medical insurance) of the extent to which the state or insurance will reimburse the patient; (2) for the same reason, psychoanalysis has inherent difficulties in integrating itself into the academic edifice of psychology or medical psychiatry departments, so it usually functions as a parasitic entity that attaches itself to cultural studies, comparative literature or psychology departments; (3) as to their inherent organization, psychoanalytic communities do not function as “normal” academic societies (like sociological, mathematical or other societies). From the standpoint of “normal” academic societies, the psychoanalytic society cannot but appear as a “dogmatic” discipline engaged in eternal factional struggles between sub-groups dominated by a strong authoritarian or charismatic leader; conflicts within psychoanalytic communities are not resolved through rational argumentation and empirical testing, but rather resemble sectarian religious struggles. In short, the phenomenon of (personal) transference functions here in an entirely different way than in the “standard” academic community. (The dynamics in Marxist communities are somewhat similar.) In the same way that Marxism interprets the resistance against its insights as the “result of the class struggle in theory,” as accounted for by its very object, psychoanalysis also interprets the resistance against itself to be the result of the very unconscious processes that are its topic. In both cases, theory is caught in a self-referential loop: it is in a way *the theory about the resistance against itself*. Concerning this crucial point, the situation today is entirely different than, almost the opposite of, that of the ‘60s and early ‘70s when “marginal” disciplines (like the cultural studies’ version of psychoanalysis) were perceived as “anarchic,” as liberating us from the “repressive” authoritarian regime of the standard academic discipline. What cognitivist critics of cultural studies play upon is the common perception that, today, (what remains of) the cultural studies’ version of psychoanalysis is perceived as sectarian, Stalinist, authoritarian, engaged in ridiculous pseudo-theological factional struggles in which problems over the party line prevail over open empirical research and rational argumentation. Cognitivists present themselves as the fresh air that does away with this close and stuffy atmosphere — finally, one is free to formulate and test different hypotheses, no longer “terrorized” by some dogmatically imposed global party line. We are thus far from the anti-academic/establishment logic of the ‘60s: today, academia presents itself as the place of open, free discussion, as liberating us from the stuffy constraints of “subversive” cultural studies. And although, of course, the “regression” into authoritarian prophetic discourse is one of the dangers that threatens cultural studies, its inherent temptation, one should nonetheless focus attention on how the cognitivist stance succeeds in unproblematically presenting the framework of the institutional academic university discourse as the very locus of intellectual freedom.

II. IS FREEDOM NOTHING BUT A CONCEIVED NECESSITY?

YOU CANNOT, BECAUSE YOU SHOULD NOT!

So, how does Lacanian theory enable us to avoid the impasse of cultural studies and to confront the challenge of the cognitivist and/or evolutionary naturalization of the human subject? In Andrew Niccol's futuristic thriller *Gattaca* (1998), Ethan Hawke and Uma Thurman prove their love for each other by throwing away the hair each partner provides to be analyzed in order to establish his or her genetic quality. In this futuristic society, authority (access to the privileged elite) is established "objectively," through genetic analysis of the newborn — we no longer have symbolic authority proper, since authority is directly grounded in the real of the genome. As such, *Gattaca* merely extrapolates the prospect, opened up today, of the direct legitimization of social authority and power in the real of the genetic code: "by eliminating artificial forms of inequality, founded on power and culture, socially egalitarian programs could eventually highlight and crystallize natural forms of inequality far more dramatically than ever before, in a new hierarchical order founded on the genetic code." Against this prospect, it is not enough to insist that the democratic principle of what Etienne Balibar calls *egaliberté* has nothing to do with the genetic-biological similarity of human individuals, but aims instead at the principal equality of subjects qua participants in the symbolic space. *Gattaca* confronts us with the following dilemma: is the only way to retain our dignity as humans by way of accepting some limitation, of stopping short of full insight into our genome, short of our full naturalization, that is, by way of a gesture of "I do not want to know what you objectively/really are, I accept you for what you are"?

Among the modern philosophers, it was Kant who most forcefully confronted this predicament, constraining our knowledge of the causal interconnection of objects to the domain of phenomena in order to make a place for noumenal freedom, which is why the hidden truth of Kant's "*You can, therefore you must!*" is its reversal: *You cannot, because you should not!* The ethical problems of cloning seem to point in this direction. Those who oppose cloning argue that we *should not* pursue it, at least not on human beings, because it is *not possible* to reduce a human being to a positive entity whose innermost psychic properties can be manipulated — biogenetic manipulation *cannot* touch the core of human personality, so we should prohibit it. Is this not another variation on Wittgenstein's paradox of *prohibiting the impossible*: "What we cannot speak about we must pass over in silence"? The underlying fear that gains expression in this prohibition, of course, is that the order of reason is actually inverted, that is, that the ontological impossibility is grounded in ethics: we should claim that we cannot do it, because otherwise *we may well*

do it, with catastrophic ethical consequences. If conservative Catholics effectively believe in the immortality of the human soul and the uniqueness of human personality, if they insist we are not just the result of the interaction between our genetic code and our environs, then why do they oppose cloning and genetic manipulations? In other words, is it not that *these Christian opponents of cloning themselves secretly believe in the power of scientific manipulation, in its capacity to stir up the very core of our personality?* Of course, their answer would be that human beings, by treating themselves as just the result of the interaction between their genetic codes and their environs, freely renounce their dignity: the problem is not genetic manipulation as such, but the fact that its acceptance signals how human beings conceive of themselves as just another biological machine and thus rob themselves of their unique spirituality. However, the answer to this is, again: but why should we not endorse genetic manipulation *and* simultaneously insist that human beings are free responsible agents, since we accept the proviso that these manipulations do not really affect the core of our soul? Why do Christians still talk about the “unfathomable mystery of conception” that man should not meddle with, as if, nonetheless, by pursuing our biogenetic explorations, we may touch some secret better left in shadow — in short, as if, by cloning our bodies, we *at the same time also clone our immortal souls?*

So, again, we are back at the well-known conservative wisdom that claims that the only way to save human freedom and ethical dignity is to restrain our cognitive capacities and renounce probing too deeply into the nature of things. Today’s sciences themselves seem to point toward a way out of this predicament. Does contemporary cognitivism not often produce formulations that sound uncannily familiar to those acquainted with different versions of ancient and modern philosophy, from the Buddhist notion of Void and the German Idealist notion of reflexivity as constitutive of the subject up to the Heideggerian notion of “being-in-the-world” or the deconstructionist one of *différance*? The temptation arises here to fill in the gap by either reducing philosophy to science, claiming that modern naturalizing cognitivism “realizes” philosophical insights, translating them into acceptable scientific form, or, on the contrary, by claiming that, with these insights, post-modern science breaks out of the “Cartesian paradigm” and approaches the level of authentic philosophical thought. This short-circuit between science and philosophy appears today in a multitude of guises: Heideggerian cognitivism (Hubert Dreyfuss), cognitivist Buddhism (Francisco Varela), the combination of Oriental thought with quantum physics (Capra’s “Tao of physics”), up to deconstructionist evolutionism. Let’s take a brief look at the two main versions of this short-circuit.

I. DECONSTRUCTIONIST EVOLUTIONISM

There are obvious parallels between the recent popularized readings of Darwin (from Gould to Dawkins and Dennett) and Derridean deconstruction. Does Darwinism not practice a kind of “deconstruction,” not only of natural teleology, but also of the very idea of nature as a well-ordered positive system of species? Does the strict Darwinian notion of “adaptation” not claim that, precisely, *organisms do not directly “adapt,”* that there is *stricto sensu* no “adaptation” in the teleological sense of the term? Contingent genetic changes occur, and some of them enable some organisms to function better and survive in an environment that is itself fluctuating and articulated in a complex way, but there is no linear adaptation to a stable environment: when something unexpectedly changes in the environment, a feature which hitherto prevented full “adaptation” can suddenly become crucial for the organism’s survival. So Darwinism effectively prefigures a version of Derridean *différance* or of the Freudian *Nachträglichkeit*, according to which contingent and meaningless genetic changes are retroactively used (or “exapted,” as Gould would have put it) in a manner appropriate for survival. In other words, what Darwin provides is a model explanation of how a state of things which appears to involve a well-ordered teleological economy (animals doing things “in order to...”), is effectively the outcome of a series of meaningless changes. The temporality here is future anterior, that is, “adaptation” is something that always and by definition “will have been.” And is this enigma of how (the semblance of) teleological and meaningful order can emerge from contingent and meaningless occurrences not also central to deconstruction?

One can thus effectively claim that Darwinism (of course, in its true radical dimension, not as a vulgarized evolutionism) “deconstructs” not only teleology or divine intervention in nature, but also the very notion of nature as a stable positive order — this makes the silence of deconstruction about Darwinism, the absence of deconstructionist attempts to “appropriate” it, all the more enigmatic. Dennett, the great proponent of cognitivist evolutionism, himself acknowledges (ironically, no doubt, but nonetheless with an underlying serious intent) the closeness of his “pandemonium” theory of human mind to cultural studies deconstructionism in his *Consciousness Explained*: “Imagine my mixed emotions when I discovered that before I could get my version of the idea of ‘the self as the center of narrative gravity’ properly published in a book, it had already been satirized in a novel, David Lodge’s *Nice World*. It is apparently a hot theme among the deconstructionists.”⁸ Furthermore, a whole school of cyberspace theorists (the best known among them is Sherry Turkle) advocate the notion that cyberspace-phenomena render palpable in our everyday experience the deconstructionist “decentered subject.” According to these theorists, one should endorse the “dissemination” of the unique self into a multiplicity of

competing agents, into a “collective mind,” a plurality of self-images without a global coordinating center, that is operative in cyberspace and disconnect it from pathological trauma — playing in virtual spaces enables individuals to discover new aspects of “self,” a wealth of shifting identities, and thus to experience the ideological mechanism of the production of self, the immanent violence and arbitrariness of this production/construction.

However, the temptation to be avoided here is precisely the hasty conclusion that Dennett is a kind of deconstructionist wolf in the sheep’s clothing of empirical science. There is a gap that forever separates Dennett’s evolutionary naturalization of consciousness from the deconstructionist “meta-transcendental” probing into the conditions of (im)possibility of philosophical discourse. As Derrida argues exemplarily in his “White Mythology,” it is insufficient to claim that “all concepts are metaphors,” that there is no pure epistemological cut, since the umbilical cord connecting abstract concepts with everyday metaphors is irreducible. First, the point is not simply that “all concepts are metaphors,” but that the very difference between a concept and a metaphor is always minimally metaphorical, relying on some metaphor. Even more important is the opposite conclusion, that the very reduction of a concept to a bundle of metaphors already has to rely on some implicit *philosophical, conceptual* determination of the difference between concept and metaphor, that is to say, on the very opposition it tries to undermine.⁹ We are thus forever caught in a vicious circle: true, it is impossible to adopt a philosophical stance freed from the constraints of naïve, everyday life-world attitudes and notions; however, although *impossible*, this philosophical stance is at the same time *unavoidable*. Derrida makes the same point apropos of the well-known historicist thesis that the entire Aristotelian ontology of the ten modes of being is an effect/expression of Greek grammar. The problem is that *this reduction of ontology (of ontological categories) to an effect of grammar presupposes a certain notion (categorical determination) of the relationship between grammar and ontological concepts which is itself already metaphysical-Greek.*¹⁰

We should always bear in mind this delicate Derridean stance, through which the twin pitfalls of naïve realism and direct philosophical foundationalism are avoided: “philosophical foundation” for our experience is *impossible*, and yet *necessary* — although all we perceive, understand and articulate, is, of course, overdetermined by a horizon of pre-understanding, this horizon itself remains ultimately impenetrable. Derrida is thus a kind of metatranscendentalist, in search of the conditions of possibility of this very philosophical discourse. If we miss this precise way in which Derrida undermines philosophical discourse *from within*, we reduce deconstruction to just another naïve historicist relativism. Derrida’s position here is thus the opposite of Foucault’s. In answer to a criticism that he speaks from a position whose possibility is not accounted for within the frame-

work of his theory, Foucault cheerfully retorted: “These kinds of questions do not concern me: they belong to the police discourse with its files constructing the subject’s identity!” In other words, the ultimate lesson of deconstruction seems to be that one cannot postpone *ad infinitum* the *ontological* question, and what is deeply symptomatic in Derrida is his oscillation between, on the one hand, the hyper-self-reflective approach that denounces in advance the question of “how things really are” and limits itself to third-level deconstructive comments on the inconsistencies of philosopher B’s reading of philosopher A, and, on the other hand, direct “ontological” assertions about how *différance* and arche-trace designate the structure of all living things and are, as such, already operative in animal nature. One should not miss here the paradoxical interconnection between these two levels: the very feature that prevents us from forever directly grasping our intended object (the fact that our grasping is always refracted, “mediated,” by a decentered otherness) is the feature that connects us with the basic proto-ontological structure of the universe.

Deconstructionism thus involves two prohibitions: it prohibits the “naïve” empiricist approach (“let us examine carefully the material in question and then generalize hypotheses about it...”), as well as global ahistorical metaphysical theses about the origin and structure of the universe. This double prohibition that defines deconstructionism clearly and unambiguously bears witness to its Kantian transcendental origins. Is not the same double prohibition characteristic of Kant’s philosophical revolution? On the one hand, the notion of the transcendental constitution of reality involves the loss of a direct naïve empiricist approach to reality; on the other hand, it involves the prohibition of metaphysics, that is, of an all-encompassing world-view providing the noumenal structure of the universe as a whole. In other words, one should always bear in mind that, far from simply expressing a belief in the constitutive power of the (transcendental) subject, Kant introduces the notion of the transcendental dimension in order to answer the fundamental and insurpassable deadlock of human existence: a human being compulsorily strives toward a global notion of truth, of a universal and necessary cognition, yet this cognition is simultaneously forever inaccessible to him or her.

2. COGNITIVIST BUDDHISM

Is the outcome any better in the emerging alliance between the cognitivist approach to mind and the proponents of Buddhist thought, where the point is not to naturalize philosophy, but rather the opposite, that is, to use the results of cognitivism in order to (re)gain access to ancient wisdom? The contemporary cognitivist denial of a unitary, stable, self-identical self — that is, the notion of the human mind as a pandemonic playground of

multiple agencies, that some authors (most notably Francisco Varela)¹¹ link to the Buddhist denial of the self as the permanent substance underlying our mental acts/events — seems persuasive in its critical rejection of the substantial notion of self. The paradox upon which cognitivists and neo-Buddhists build is the gap between our common experience that automatically relies on and/or involves a reference to some notion of self as the underlying substance that “has” feelings and volitions and to which these mental states and acts “happen,” and the fact, well known even in Europe at least from Hume onwards, that, no matter how deeply and carefully we search our self-experience, we encounter only passing, elusive mental events, and never the self as such (that is, a substance to which these events could be attributed). The conclusion drawn by cognitivists and Buddhists alike is, of course, that the notion of self is the result of an epistemological (or, in the case of Buddhism, ethico-epistemological) mistake inherent to human nature as such. The thing to do is to get rid of this delusive notion and to fully assume that there is no self, that “I” am nothing but that groundless bundle of elusive and heterogeneous (mental) events.

Is, however, this conclusion really unavoidable? Varela also rejects the Kantian solution of the self, the subject of pure apperception, as the transcendental subject nowhere to be found in our empirical experience. Here, though, one should introduce the distinction between egoless/selfless mind events or aggregates and the subject as identical to this void, to this lack of substance, itself. What if the conclusion that there is no self is too quickly drawn from the fact that there is no representation or positive idea of self? What if self is precisely the “I of the storm,” the void in the center of the incessant vortex/whirlpool of elusive mental events, something like the “vacuola” in biology, the void that is nothing in itself, that has no substantial positive identity, but which nonetheless serves as the irrepresentable point of reference, as the “I” to which mental events are attributed. In Lacanian terms, one has to distinguish between the “self” as the pattern of behavioral and other imaginary and symbolic identifications (as the “self-image,” as that what I perceive myself to be) and the empty point of pure negativity, the “barred” subject ($\$$). Varela himself comes close to this when he distinguishes among: (1) the self qua the series of mental and bodily formations that has a certain degree of causal coherence and integrity through time; (2) the capitalized Self qua the hidden substantial kernel of the subject’s identity (the “ego-self”), and, finally; (3) the desperate craving/grasping of the human mind for/to the self, for/to some kind of firm bedrock. From the Lacanian perspective, however, is this “endless craving” not *the subject itself*, the void that “is” subjectivity?

Neo-Buddhists are justified in criticizing cognitivist proponents of the “society of mind” notion for endorsing the irreducible split between our scientific cognition (which

tells us that there is no self or free will) and the everyday experience in which we simply cannot function without presupposing a consistent self endowed with free will. Cognitivists have thus condemned themselves to a nihilistic stance of endorsing beliefs they know are wrong. The effort of neo-Buddhists is to bridge this gap by translating/transposing the very insight that there is no substantial self into our daily human experience (this is ultimately what Buddhist meditative reflection is about). When Ray Jackendoff, author of one of the ultimate cognitivist attempts to explain consciousness, suggests that our awareness-consciousness emerges from the fact that we are, precisely, *not* aware of the way awareness-consciousness itself is generated by worldly processes — that there is consciousness only insofar as its biological-organic origins remain opaque¹² — he comes very close to the Kantian insight that there is self-consciousness, that I think, only insofar as “*das Ich oder Er oder Es (das Ding), welches denkt*”¹³ remains impenetrable for me. Varela’s counter-argument that Jackendoff’s reasoning is confused, that these processes we are unaware of are just that — processes that are not part of our daily human experience but totally beyond it, hypostatized by the cognitivist scientific practice¹⁴ — thus misses the point. This inaccessibility of the substantial-natural self (or, rather, of the substantial-natural base to my self) *is* part of our daily non-scientific experience, precisely in the guise of our ultimate failure to find a positive element in our experience that would directly “be” our self (the experience, formulated already by Hume, that no matter how deeply we analyze our mental processes, we never find anything that would be our self). So what if one should here apply to Varela the joke about the madman who was looking for his lost key under a street light and not in the dark corner where he effectively lost it, because it was easier to search under the light? What if we are looking for the self in the wrong place, in the false evidence of positive empirical facts?

THE INACCESSIBLE PHENOMENON

Our result is thus that there is effectively no way to overcome the abyss that separates the transcendental *a priori* horizon from the domain of positive scientific discoveries. On the one hand, the standard “philosophical reflection of science” (positive sciences “do not think”; they are unable to reflect on their horizon of pre-understanding accessible only to philosophy) more and more resembles an old automatic trick losing its efficiency; on the other hand, the idea that some “postmodern” science will attain the level of philosophical reflection (say, that quantum physics, by including the observer in the observed material objectivity, breaks out of the frame of scientific objectivism/naturalism and reaches the level of the transcendental constitution of reality) clearly misses the proper level of transcendental *a priori*.

It is true that modern philosophy is in a way “on the defensive” against the onslaught of science. Kant’s transcendental turn is linked to the rise of modern science not only in the obvious way (providing the *a priori* of Newtonian physics), but in the more radical way of taking into account how, with the rise of modern empirical science, a direct metaphysical “theory of everything” is no longer viable and cannot be combined with science. So the only thing philosophy can do is to “phenomenalize” scientific knowledge and then to provide its *a priori* hermeneutic horizon, given the ultimate inscrutability of the universe and man. It was Adorno who had already emphasized the thorough ambiguity of Kant’s notion of transcendental constitution: far from simply asserting the subject’s constitutive power, it can also be read as the resigned acceptance of the *a priori* limitation of our approach to the real. And it is our contention that, if we think to the end the consequences of this notion of the transcendental subject, we can nonetheless avoid this debilitating deadlock and “save freedom.” How? By reading this deadlock as its own solution, that is, by yet again displacing the epistemological obstacle into a positive ontological condition.

To avoid any misunderstanding: we are not aiming here at illegitimate short-circuits in the style of “the ontological undecidability of the quantum fluctuation grounds human freedom,” but at a much more radical pre-ontological openness/gap, a “bar” of impossibility in the midst of “reality” itself. What if *there is no “universe”* in the sense of an ontologically fully-constituted cosmos? That is to say, the mistake of identifying (self)consciousness with misrecognition, with an epistemological obstacle, is that it stealthily (re)introduces the standard, premodern, “cosmological” notion of reality as a positive order of being. In such a fully-constituted, positive “chain of being,” there is, of course, no place for the subject, so the dimension of subjectivity can only be conceived of as something which is strictly codependent with the epistemological misrecognition of the true positivity of being. Consequently, the only way to effectively account for the status of (self)consciousness is to assert *the ontological incompleteness of “reality” itself*: there is “reality” only insofar as there is an ontological gap, a crack, in its very heart. It is only this gap that accounts for the mysterious “fact” of transcendental freedom, that is, for a (self)consciousness that is effectively “spontaneous” and whose spontaneity is not an effect of the misrecognition of some “objective” causal process, no matter how complex and chaotic this process is. And where does *psychoanalysis* stand with regard to this deadlock? In a first approach, it may seem that psychoanalysis is the ultimate attempt to fill in the gap, to re-establish the complete causal chain that generated the “inexplicable” symptom. However, does Lacan’s strict opposition between cause and the law (of causality) not point in a wholly different

direction? Lacan states:

Cause is to be distinguished from that which is determinate in a chain, in other words from the law. By way of example, think of what is pictured in the law of action and reaction. There is here, one might say, a single principle. One does not go without the other....There is no gap here....Whenever we speak of cause, on the other hand, there is always something anti-conceptual, something indefinite....In short, there is a cause only in something that doesn't work.... The Freudian unconscious is situated at that point, where, between cause and that which it affects, there is always something wrong. The important thing is not that the unconscious determines neurosis — of that one Freud can quite happily, like Pontius Pilate, wash his hands. Sooner or later, something would have been found, humoral determinates, for example — for Freud, it would be quite immaterial. For what the unconscious does is to show the gap through which neurosis recreates a harmony with a real — a real that may well not be determined.¹⁵

The unconscious intervenes when something “goes wrong” in the order of causality that encompasses our daily activity: a slip of the tongue introduces a gap in the connection between intention-to-signify and words, a failed gesture frustrates my act. However, Lacan's point is, precisely, that psychoanalytic interpretation does not simply fill in this gap by way of providing the hidden complete network of causality that “explains” the slip: the cause whose “insistence” interrupts the normal functioning of the order of causality is not another positive entity. As Lacan emphasizes, it belongs rather to the order of the *nonrealized* or *thwarted*, that is, it is *in itself structured as a gap*, a void insisting indefinitely on its fulfillment. (The psychoanalytic name for this gap, of course, is the death drive, while its philosophical name in German Idealism is “abstract negativity,” the point of absolute self-contraction that constitutes the subject as the void of pure self-relating.)

And the psychoanalytic notion of fantasy accounts precisely for the illusory/failed attempt to fill in this ontological gap. The basic paradox of the Freudian notion of fantasy resides in the fact that it subverts the standard opposition of “subjective” and “objective.” Of course, fantasy is by definition not “objective” (in the naïve sense of “existing” independently of the subject's perceptions); however, it is also not “subjective” (in the sense of being reducible to the subject's consciously experienced intuitions). Fantasy rather belongs to the “bizarre category of the objectively subjective — the way things actually, objectively seem to you even if they don't seem that way to you.”¹⁶ When, for example, the subject actually experiences a series of fantasmatic formations that interrelate as so many permutations of each other, this series is never complete; rather, it is always as if the actually experienced series presents so many variations of some underlying “fundamental” fantasy that is never actually experienced by the subject. (In Freud's “A Child Is Being Beaten,” the two consciously experienced fantasies presuppose, and thus relate to, a third one, “My father is beating me,” which was never actually experienced and can only be

retroactively reconstructed as the presupposed reference of — or, in this case, the intermediate term between — the other two fantasies.) One can go even further and claim that, in this sense, the Freudian unconscious itself is “objectively subjective.” When, for example, we claim that someone who is consciously well-disposed toward Jews nonetheless harbors profound anti-Semitic prejudices he is not consciously aware of, do we not claim that (insofar as these prejudices do not render the way Jews really are, but the way they appear to him) *he is not aware how Jews really seem to him?*

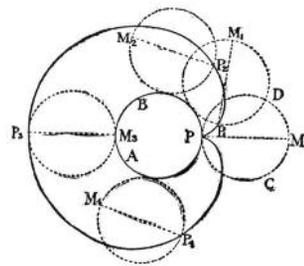
Furthermore, does this not allow us to throw a new light on the mystery of Marxian commodity fetishism? What the fetish objectivizes is “my true belief,” the way things “truly seem to me,” although I never effectively experience them this way — Marx himself here uses the term “*objektiv-notwendiges Schein*” (a necessarily objective appearance). So, when a critical Marxist encounters a bourgeois subject immersed in commodity fetishism, the Marxist’s reproach to him is not, “A commodity may seem to you a magical object endowed with special powers, but it really is just a reified expression of relations between people”; the Marxist’s actual reproach is rather, “You may think that the commodity appears to you as a simple embodiment of social relations (that, for example, money is just a kind of voucher entitling you to a part of the social product), but *this is not how things really seem to you* — in your social reality, by means of your participation in social exchange, you bear witness to the uncanny fact that a commodity really appears to you as a magical object endowed with special powers.”

This is also one of the ways of specifying the meaning of Lacan’s assertion of the subject’s constitutive “decenterment.” The point is not that my subjective experience is regulated by objective unconscious mechanisms that are “decentered” with regard to my self-experience and, as such, beyond my control (a point asserted by every materialist), but rather something much more unsettling: I am deprived of even my most intimate “subjective” experience, of the way things “really seem to me,” of the fundamental fantasy that constitutes and guarantees the core of my being, since I can never consciously experience it and assume it. According to the standard view, the dimension that is constitutive of subjectivity is that of the phenomenal (self)experience. In other words, I am a subject the moment I can say to myself: “No matter what unknown mechanism governs my acts, perceptions and thoughts, nobody can take from me what I see and feel now.” Say, when I am passionately in love, and a biochemist informs me that all my intense sentiments are just the result of biochemical processes in my body, I can answer him by clinging to the appearance: “All you’re saying may be true, but, nonetheless, nothing can take from me the intensity of the passion that I am experiencing now....” Lacan’s point, however, is that the psychoanalyst is the one who, precisely, *can* take this from the subject,

insofar as his or her ultimate aim is to deprive the subject of the very fundamental fantasy that regulates the universe of the subject's (self)experience. The Freudian subject of the unconscious emerges only when a key aspect of the subject's *phenomenal* (self)experience (his or her fundamental fantasy), becomes *inaccessible* (that is, is primordially repressed). At its most radical, the unconscious is the *inaccessible phenomenon*, not the objective mechanism, that regulates my phenomenal experience. So, in contrast to the commonplace that we are dealing with a subject the moment an entity displays signs of "inner life" — that is, of a fantasmatic self-experience that cannot be reduced to external behavior — one should claim that what characterizes human subjectivity proper is rather the gap that separates the two, that is, the fact that fantasy, at its most elementary, becomes inaccessible to the subject; it is this inaccessibility that makes the subject "empty" (§). We thus obtain a relationship that totally subverts the standard notion of the subject who directly experiences him or herself, and his or her "inner states": an "impossible" relationship between the *empty, nonphenomenal subject* and the *phenomena that remain inaccessible to the subject* — the very relation registered by Lacan's formula of fantasy, $\S\Diamond$ a.

Geneticists predict that in about ten to fifteen years, they will be able to identify and manipulate each individual's exact genome. Potentially, at least, each individual will thus have at his or her disposal the complete formula of what (s)he "objectively is." How will this "knowledge in the real," the fact that I will be able to locate and identify myself completely as an object in reality, affect the status of subjectivity? Will it lead to the end of human subjectivity? Lacan's answer is negative: what will continue to elude the geneticist is not my phenomenal self-experience (say, the experience of a love passion that no knowledge of the genetic and other material mechanisms determining it can take from me), but the "objectively subjective" fundamental fantasy, the fantasmatic core inaccessible to my conscious experience. Even if science formulates the genetic formula of what I objectively am, it will still be unable to formulate my "objectively subjective" fantasmatic identity, this objectal counterpoint to my subjectivity, which is neither subjective (experienced) nor objective.

1. John Brockman, *The Third Culture: Beyond the Scientific Revolution* (New York: Simon and Schuster, 1996), 23.
2. *Ibid.*, 21.
3. *Ibid.*, "Introduction."
4. See, as one among the thousand paradigmatic passages: "Is there, as David Bohm says, an 'implicate order' to matter that is beyond our present comprehension and presumes a 'wholeness' to all things? Can we conceive of a 'Tao of physics,' as Fritjof Capra's million-selling book terms it, in which Eastern philosophies parallel the mind-wrenching paradoxes of the quantum world?" (Pat Kane, "There's Method in the Magic," in *The Politics of Risk Society*, ed. Jane Franklin [Oxford: Polity Press, 1998], 78-79.)
5. See Daniel C. Dennett, *Darwin's Dangerous Idea* (New York: Simon and Schuster, 1995), 421.
6. It is interesting to note how the opposition of "hard" science, whose conceptual structure embodies the stance of domination, and "gentle" science bent on collaboration and so on, comes dangerously close to the New Age ideology of two mental universes, masculine and feminine, competitive and cooperative, rational-dissecting and intuitive-encompassing. In short, we come dangerously close to the premodern sexualization of the universe, which is conceived of as the tension between the two principles, Masculine and Feminine.
7. Perry Anderson, "A Sense of the Left," *New Left Review* 231 (September/October 1998): 76.
8. Daniel C. Dennett, *Consciousness Explained* (New York: Little, Brown and Company, 1991), 410.
9. See Jacques Derrida, "La mythologie blanche," *Poétique* 5 (1971): 1-52.
10. See Jacques Derrida, "Le supplement de la copule" in *Marges de la philosophie* (Paris: Minuit, 1972).
11. See Francisco Varela, Evan Thompson, and Eleanor Rosch, *The Embodied Mind* (Cambridge: MIT Press, 1993).
12. See Ray Jackendoff, *Consciousness and the Computational Mind* (Cambridge: MIT Press, 1987).
13. "The I/Ego or He or It (the Thing), which thinks."
14. See Varela, *op. cit.*, 126.
15. Jacques Lacan, *The Four Fundamental Concepts of Psycho-Analysis*, trans. Alan Sheridan (New York: Norton, 1978), 22.
16. Dennett, *Consciousness Explained*, 132. (Dennett, of course, evokes this concept in a purely negative way, as a nonsensical *contradictio in adjecto*.)



THE DOCTRINE OF SCIENCE

JEAN-CLAUDE MILNER

I. THE EQUATION OF SUBJECTS AND SCIENCE¹

Lacan poses an equation: “the subject upon which we operate in psychoanalysis can only be the subject of science.”² This equation of subjects is based on three affirmations: (1) that psychoanalysis operates on a subject (and not for example on an ego); (2) that there is a subject of science; (3) that these two subjects are one and the same. What is common to the three affirmations is that they speak of the *subject* and what is understood by this depends on what can be termed the *axiom of the subject*:

- There is some subject distinct from any form of empirical individuality.³

This axiom of existence makes use of a term and a distinction that are entirely homologous with propositions arising from Kantian and post-Kantian metaphysics; whether they are synonymous is a question that for the moment will remain in suspense.

The third affirmation constitutes the equation as such; it is based on historical correlations but not founded upon them. The first affirmation concerns analytic practice (this is what the verb *to operate* indicates). This is in no way trivial; its validity is conferred by the authority of an enunciator supposed to know at what point he is in relation to psychoanalysis, and specifically in relation to what Freud made of it. The second affirmation sets a concept to work, that of the “subject of science,” which Lacan uses in a precise sense but which is only in part Lacanian. The definition of science that is invoked is not Lacan’s — he excuses himself sufficiently there — but what is credited to Lacan is rather the affirmation that this definition of science induces a particular figure of the subject (the existence of which is posed by the axiom of the subject). And what one has there, strictly speaking, is a hypothesis.

Therefore one can and must consider that the equation of subjects depends on this hypothesis, which from now on will be termed *the hypothesis of the subject of science*:

- Modern science, as modern and as science, determines a mode of constitution of the subject.

From this the definition of the subject of science is drawn:

- The subject of science is nothing outside the name of the subject insofar as, by hypothesis, modern science determines a mode of its constitution.

Note that the equation of subjects says nothing about psychoanalysis as *theory*. In particular, it is in no way affirmed that psychoanalysis itself is a science. Lacan is explicit on this point: the fact that “its *praxis* implies no other subject than that of science” is “to be distinguished from the question of knowing whether psychoanalysis is a science (i.e., whether its field is scientific).”⁴ The word *praxis* is explicit. It ineluctably invokes the figure of *theoria*. It then appears remarkable that Lacan does not say that the equation of subjects concerns the *theoria* of psychoanalysis. This does not mean that the equation is not a proposition of *theoria*; it means that it is situated at the point of passage from *praxis* to *theoria*. It could be said that it articulates a *theoria* in a nascent state, grasped in the movement of a reflection initiated on *praxis*. On this basis one would conclude that all the propositions of the Lacanian *theoria* suppose the equation of subjects because they suppose the accomplishment of the movement of reflection on *praxis*. The equation thus ensures a seminal function.

This highlights how important it is that the equation is not void. And it only escapes being void on one condition: that the hypothesis of the subject of science itself is not void. This supposes two things: that the notion of science is the object of a sufficiently determined theory and, once this theory is admitted, that one can link to it a certain constitution of the subject.

There is effectively a theory of science in Lacan’s work. It is quite complete and not trivial.⁵ To reconstitute its coherency, one can first establish what it isn’t, starting from the difference that separates Freud from Lacan. For in Freud’s work there is also a theory of science. It is very brief and if one asks why it is there the answer is simple. It resides in what is called Freud’s scientism and, in his work, is nothing other than a consent to the ideal of science.⁶ This ideal is enough to found the wish that psychoanalysis be a science. I must emphasize *ideal of science*. What is at stake is an ideal point — exterior or infinitely distant — toward which the plan’s lines all tend and which at the same time belongs to all yet never meets up with any of them. This is not the *ideal science*, which “incarnates” in a

variable manner the ideal of science: a strictly imaginary determination, required for representations to be possible.⁷

It is true that humanity has always had need of representations. In particular, when claiming the ideal of science as one's own (as Freud did), it is difficult to avoid giving a representation of what science *must* be, and that is the ideal science. In general, characteristics are borrowed from a science that is constituted at the time of speaking and then one asks, "what must psychoanalysis be in order to be a science in conformity with the model?" From that moment the characteristics have been transformed into criteria. At the same time the way is opened to another scientism, not that of the ideal of science but that of the ideal science. Freud gave himself over to this, taking up a physiognomy of the ideal science generated by others, more qualified in his eyes than Freud himself: Helmholtz, Mach and Boltzmann can be cited, to name merely the greats.⁸

It is true that there is also a transversal theory of science that can be reconstituted from the thread of the Freudian texts, which is not only a theory of what science should be, but an answer to the question, "Why is there some science rather than no science at all?" But this theory remains dispersed and it is not evident that Freud would have consented to its being reassembled as he did regarding his theory of religion.

On the question of the why of science, Lacan did nothing other than repeat Freud's aphorisms, which he summarized in this way: science, at its birth, is a sexual technique.⁹ He proceeds with some caution in this matter just as he does in responding to the question "Why is there some psychoanalysis rather than no psychoanalysis at all?" In any case, one does not find a fully constituted body of doctrine on these questions about origins. The Lacanian theory of science is concerned with other things.

Faithful to Freud on the previous point, Lacan goes his own way on the question of the ideal of science: he does not believe in it. To be exact, he doesn't believe in it *for psychoanalysis*. Contrary to what may be supposed, this is what ensues from the foundational equation. With regard to the analytic operation, science does not play the role of an ideal — possibly infinitely distant — point; strictly speaking, science is not exterior to psychoanalysis, it structures in an internal manner the very matter of the object of psychoanalysis. If one sticks with the language of geometry, the field of psychoanalysis can be conceived of as a plane determined by the lines of its propositions (after all, this would be to take up, by means of a calculable displacement, the interpretation Queneau gave of Hilbert); if the point of science is not exterior to this plane, it cannot structure it in a regulatory manner. There is therefore no sense in asking under what conditions psychoanalysis would be a science. There is no more sense in presenting some well-made science as a model that psychoanalysis would have to imitate. In other words, since there is no ideal

of science with regard to psychoanalysis, there is no ideal science for it. Psychoanalysis will find in itself the foundations of its principles and methods.

Still better, psychoanalysis will discover itself to be confident enough to be able to question science. “What is a science that includes psychoanalysis?” asks Lacan in 1965,¹⁰ such that science itself could turn out to be the most consistent form of an activity that would be named *analysis*, which would be found, both diversified and still self-identical, in all regions of knowledge. Psychoanalysis would propose the ideal of this analysis, organizing the epistemological field and enabling orientation within it (witness the theme of the “Lacanian orientation”). Far from psychoanalysis consenting to an ideal of science, it would be the very responsibility of psychoanalysis to construct an ideal of analysis for science.

In its time, *Cahiers pour l’analyse* determined such a point, adding solely that Marxism both could and should be ordered accordingly. One can understand how in the very same gesture they laid claim to both psychoanalysis and epistemology. On the basis of the ideal of analysis, it is quite easy to end up with the ideal analysis, whose mannequin the little Lacanians set about dressing up — refashioning mathematics, logic, physics, biology and so on to measure. But that is of no concern, except socially.

2. THE THEORY OF THE MODERN

The first recognizable characteristic of the Lacanian theory of science can be explained in the following way: it must render apparent the singular connection by which science is essential to the existence of psychoanalysis, yet for this very reason is not posed in front of it like some ideal. The most fitting relation for this task is presented in terms homologous with the historical operators, succession and break. Also, Koyré is used as a base, read in the light of the historicizing Kojève.

For purposes of clarity, it is permissible to adopt here the habits of geometers, who reason by means of axioms and theorems. Here are the most important:

Kojève’s theorems:

- (i) There is a break between the ancient world and the modern universe.
- (ii) This break is tied to Christianity.

Koyré’s theorems:

- (i) There is a break between the ancient *episteme* and modern science.
- (ii) Modern science is Galilean science, whose type is mathematized physics.
- (iii) In mathematizing its object, Galilean science strips it of its sensible qualities.

Lacan's hypothesis:

Koyré's theorems are a particular case of Kojève's theorems.¹¹

Lacan's lemmas:

- (i) Modern science is constituted by Christianity insofar as the latter is distinguished from the ancient world.
- (ii) Because the point of distinction between Christianity and the ancient world results from Judaism, modern science is constituted by the Judaism that remains in Christianity.¹²
- (iii) Everything that is modern is synchronous with Galilean science and there is no modern except that which is synchronous with Galilean science.

Conforming equally to this theme is the treatment of the hypothesis of the subject of science, which passes via Descartes. It is well known that Lacan endlessly analyzed and commented upon the Cartesian *cogito*.¹³ This insistence, in the final analysis, is based on the thesis that Descartes is the first modern philosopher qua modern.

This proposition has certainly been advanced several times, most notably by Hegel. Yet one still has to agree upon what is meant by *modern*. In the strict sense that Lacan gives this term (see lemma [iii]), it can only mean the following: Descartes is supposed to show, by the internal order of his *oeuvre*, what is required of thought by the birth of modern science. Yet the Cartesian edifice is built upon the *cogito*. The thought of science therefore has needs, of which the *cogito* is the testimony. The fact that the author of the *Meditations* is also the creator of analytic geometry and the author of a *Dioptics* certainly constitutes weighty proof. But it is also necessary that this is not merely a contingent fact. This is what is supported by a set of propositions that articulate what could be termed Lacan's *radical Cartesianism*:

- If Descartes is the first modern philosopher it is because of the *cogito*.
- Descartes invents the modern subject.
- Descartes invents the subject of science.
- The Freudian subject, insofar as Freudian psychoanalysis is intrinsically modern, can be none other than the Cartesian subject.

Of course, this is not solely a matter of chronological correlation; a discursive kinship is also supposed. The sales pitch runs as follows: physics eliminates every quality from existents, therefore a theory of the subject that wishes to respond to such a physics must also strip the subject of every quality. This subject, constituted following the characteris-

tic determinations of science, is the subject of science as defined in section one. The qualitative markings of the empirical individual are not appropriate to the subject, whether they are somatic or psychic, nor are the qualitative properties of a soul. The subject is neither mortal nor immortal, neither pure nor impure, neither just nor unjust, neither sinner nor saint, neither damned nor saved. Even the properties that for a long time have been believed to constitute subjectivity as such are not appropriate: this subject has neither self, nor reflexivity, nor consciousness.

Such is precisely the existent that the *cogito* causes to emerge, if at least the order of reasons is taken seriously. At the very instant when this subject is pronounced as certain it is disjoint, by hypothesis, from every quality, the latter being at that moment collectively and distributively put into doubt. The very thought by which one defines the subject is strictly non-specific; it is the minimum common to all possible thought, because all thought, whatever it is (true or false, empirical or not, reasonable or absurd, affirmed or denied or put in doubt), can give me occasion to conclude that "I am." One can see in what sense this existent, a correlate without qualities supposed of a thought without qualities — named subject by Lacan, not by Descartes — responds to the gesture of modern science.

It is true that Descartes did not stop there; he passed on without delay, as if in haste, to consciousness and thought with qualities. For it is clearly a matter of thought with qualities once the synonymy is posed: "A thing which thinks. What is that? A thing that doubts, understands, affirms, denies, is willing, is unwilling, and also imagines and has sensory perceptions."¹⁴ One then understands why Lacan only ever lays claim to what can be called the extreme point of the *cogito*, and employs every effort in trying to suspend the passage from the first moment to the second. To this end he confines the *cogito* to its strict enunciation; moreover, he buckles this enunciation back upon itself, making the conclusion ("therefore, I am") the pure *pronuntiatum* of the premise ("I think"): "writing: *I think: 'therefore, I am,'* with quotes around the second clause."¹⁵ In this manner, the insistence of thought without qualities is assured before it diversifies into doubt, conception, affirmation, negation and so on.¹⁶

Yet thought without qualities is not only appropriate to modern science. Lacan demonstrates that it is also necessary for the Freudian unconscious. The very pivot of Freud's program resides in this acknowledgement, which the fact of the dream (*factum somnii*) appears to impose: "there is thought in the dream." From whence the reasoning: if there is thought in the dream (in the joke, in the parapraxes of everyday life, and so on), then thought is not what the philosophical tradition has said it to be: namely, it is not a corollary of self-consciousness. Now, if there is thought in the dream (in the joke, in the

parapraxes of everyday life, and so on; this is what the *Traumdeutung* and the later works established); therefore, and so on.

If one allows that the name *unconscious* is shorthand for the negative proposition “self-consciousness is not a constitutive property of thought,” then the following theorem is obtained:

- If there is thought in the dream, there is an unconscious.

By the same token the following lemma is obtained:

- The dream is the royal road of the unconscious.

And the definition that is deduced from the theorem and the lemma:

- To affirm that there is an unconscious is equivalent to affirming *it thinks*.

Lacan adds solely the proposition drawn from Descartes and extended to Freud:

- If there is thinking, there is some subject.

However this reasoning is only correct on two conditions. First, it is necessary that it be possible for there to be a subject while there is neither consciousness nor self — this would require a nontrivial theory of the subject. Second, it is necessary that the thought that makes up the material of the dream and the parapraxis is disjoint from any quality. In this manner the phenomena will be saved.¹⁷

Being Freudian, according to Lacan, consists in a triple affirmation: that there is some unconscious, that it is not foreign to thinking, and on that basis, that it is not foreign to a thinking subject. If it were, psychoanalysis would be illegitimate in principle and doubtlessly impossible in practice. An unconscious foreign to the subject that thinks is actually somatic, but the somatic has nothing to do with either truth or speech; yet psychoanalysis has to do with both truth and speech. The unconscious, insofar as psychoanalysis has something to do with it, is therefore neither foreign to the subject nor to thought. By way of consequence, neither the subject nor thought requires consciousness.

But to say that self-consciousness is not a constitutive property of the subject is to correct the philosophical tradition and notably Descartes, that is, the Descartes of the second moment, who is in as much of a hurry to leave the extreme point of the *cogito* as certain prisoners are to leave their prison. In light of Freud, self-consciousness becomes solely a mark of empirical individuality, unduly introduced by philosophy into the subject, however meticulous its filtering in other regards. Psychoanalysis therefore understands the axiom of the subject more strictly than any other doctrine. With an unparalleled precision, it separates two entities: in one, self-consciousness can be supposed to be

non-essential without contradiction; and in the other, self-consciousness cannot be supposed to be non-essential without contradiction. The first alone responds exactly to the requirements of science, and it alone falls within the limits fixed by the axiom of the subject; it will then be termed, in all legitimacy, the subject of science. It is at this moment that one understands why it is just as much a Cartesian subject as a Freudian subject.¹⁸ As for the second entity, the name *ego* suits it as much as any other.

The theory of science is derived from Koyré and Kojève; the unitarian interpretation of Descartes, the scientist and Descartes, the metaphysician is based on Koyré; the interpretation of the *cogito* is dependent upon Gueroult; the axiom of the subject is taken up, in homonymy or synonymy, from the post-Kantian tradition; but the hypothesis of the subject of science, the equation of subjects, the interpretation that this implies of Freud, and the articulation of the ensemble are all specific to Lacan. This is why, concerning Lacan, it is fair to speak not of a theory of science nor even of an epistemology, but of a veritable *doctrine of science*. What is specifically designated by this is the conjunction of the propositions on science and the propositions on the subject.

3. THE HISTORICIST STYLISTICS

At first sight, the doctrine of science is fundamentally historicizing in each of its parts. It historicizes that which concerns the hypothesis of the subject of science: "...a certain moment of the subject that I consider to be an essential correlate of science, a historically defined moment...the moment Descartes inaugurates, which goes by the name of the *cogito*."¹⁹ It is historicizing in what concerns science: "the decisive change which, with physics paving the way, founded *science* in the modern sense..."²⁰ It is historicizing in what concerns the articulation of science and the subject: "In this situation what seems radical to me is a modification in our subject position, in a double sense: that it is inaugural therein and that science continually reinforces it. Koyré is our guide here..."²¹

The historicism is all the more accentuated if one follows Koyré in more detail. He drew two discriminatives from his own theorems, suitable, according to him, for distinguishing a Galilean science from among an ensemble of discourses that present themselves as science. The first states:

A science is Galilean if it combines two traits: mathematization and empiricity.

- This first discriminative, it's true, could be interpreted in non-historicist terms; all that is needed for that would be a general interpretation of the term "empiricity" and a response to the question, "by what mark is a proposition recognized as empirical?" But Koyré himself said nothing of the sort. In order

to clarify the first discriminative he added a second, just as historicizing:

- Given that all empirical existents can be treated by a technique and that mathematization is the paradigm of all theory, Galilean science is a theory of technique and technique is a practical application of science.

The value of this discriminative is apparently entirely dependent upon its capacity to describe and explain exhaustively what everyone can observe today: “the galloping form of [science’s] inmixing in our world,” “the chain reactions which characterize what one might call the expansions of its energetics.”²² Thus, Lacan gave the lunar expeditions the value of a sign (“the lunar landing vehicle, being Newton’s formula realized in a machine...”²³). Yet these are the proofs of a historian of the present, in the same sense that the first discriminative is in fact based upon the proofs of a historian of the past.

One can draw some consequences from the first discriminative: science has as its object the set of what exists empirically — which can be called the universe — and science treats this set with as much precision as the literal disciplines treat theirs.²⁴ In other words, science made literal, as such, is a precise science. But this can also be interpreted in historical terms.

Take Galileo’s aphorism, “the great book of the universe is written in mathematical language and its characters are triangles, circles, and other geometric figures.”²⁵ It can only be completely understood if referred to humanism (Florence had been the latter’s capital for a long time, and Galileo was Tuscan). To speak of the book of nature or of the world or of the universe, is in itself an extremely ancient figure of style, but it acquired a new range once printed editions became a scholarly art and once the editing of texts became subject to constraining rules. To speak of the characters of this book was to rediscover Democritus, Epicurus and Lucretius (Redondi has marked the importance, perhaps revelatory, of this alliance), but it was also to say something different, once typography, as such, was submitted to geometric forms and it was revealed that corrections could depend upon the form of a letter.²⁶

In other words, literality clarified the hold of mathematization, which, when it was a matter of nature, was both its sign and its means; but it also immediately became something more: a demand for precision. This is because, by way of humanism, the ensemble of disciplines of the letter (let’s say, philology) constituted the ideal science with regard to precision. That the physician be as precise with regard to the universe (and as free of the fetters of tradition) as Estienne had been concerning Plato’s *text*, or Laurent Valla had been concerning the *text* of the Gift of Constantine, or Erasmus concerning the *text* of the Evangiles, such is the injunction hidden in the very word *book*.

This means that the apparently direct passage from literality to precision can only be entirely explained by a history. The same thing goes for the passage, apparently direct, from precision to instrumentation. In Galileo's eyes, mathematics and measure were the means — among the means, the rest will be revealed — that would allow humble physics to one day equal what the prestigious philology, through the science of language (via grammar), and through the science of written documents, had, long ago, accomplished. It is true that precision concerning empirical material required instruments that were themselves material, that is, quite different, from those the philologist used, and undoubtedly quite inferior in dignity in Galileo's eyes. Modern science, as empirical, is not only experimental; it is instrumental.²⁷

The second discriminative intervenes here. Technique has always been a material treatment by material instruments of the empirical as material. Once science takes the empirical for its object, technique can and must provide instruments for it because, after all, this science, which takes the empirical for its object, is also a literal science, that is, a precise science; the instruments provided by technique can and must be made as instruments of precision. It so happens that this was possible at that point in time because of technological progress, thanks to the celebrated engineers of the Renaissance — a thesis that, again, is historical.

The universe of modern science is at the same time and via the same movement a universe of precision and a universe of technique. Science is only literally precise if the instruments produced by technique allow it to be so materially. It is true that in the eyes of Galileo, these instruments only permitted precision insofar as science presided over their conception and their execution. Such is the true sense of the telescope and of science's relation to engineers. In this way the modern universe is configured as a union between science and technique, so intimate and reciprocal that one could also say that it's a matter of the same entity in two forms; or rather, a science, sometimes fundamental, sometimes applied; or rather, a technique, sometimes theoretical, sometimes practical.²⁸

4. THE ANCIENT EPISTEME

Historicism is all the more accentuated when one takes into account the pertinence of the reference to antiquity. It is primordial. If science becomes the theory of technique, and technique becomes the practical application of science, then one is supposing that the couple theory/practice exactly overlaps the couple science/technique. To understand the discriminative range of this overlap, one must suppose that it is not self-evident. The simplest means of doing this is to show that it has not always been true, by geographical variation (this is the question of Chinese science), or by temporal variation.

Koyré chose the second way. In the ancient world, he discovered the couple *theoria/praxis*, entirely independent of the couple *episteme/techne*. But at the same time it became possible to articulate what appears to the moderns as a paradox of this past world: the existence of an *episteme*, the existence of *technai*, and yet at the same time, the nonexistence of productive machines. Koyré's doctrine thus concludes with hypotheses on questions that are strictly speaking those of historians, concerning slavery, machines and work in the ancient world.²⁹

This is not a matter of an extension that Koyré could have dispensed with. It apparently goes to the very heart of his theorems, such as he formulates them himself. Taken in their original version, these are, as we have seen, fundamentally differential. They speak of Galilean science, but the distinctive traits they confer on it are only fully grasped in a relation of opposition and difference. The two opposite and differential terms are presented in historical language. In truth, the opposition of antiquity to modernity constitutes the pivot of what we call history, and many hold the reciprocal position that speaking of antiquity and modernity is only meaningful if one admits history. Galilean science can only be completely understood if one understands what it isn't, but in Koyré's theory what it isn't is only constructible in a historical space.

The *episteme* is revealed as complete solely at the instant wherein it exposes that by which some object cannot, in all necessity and for all eternity, be other than it is. To be more exact, the part made up of the *episteme* in a discourse is solely the grouping of what that discourse grasps of the necessary and the eternal in its object. It then follows that an object lends itself all the more naturally to an *episteme* the more easily it reveals that which in it makes it necessary and eternal — such that there is no science of what can be other than it is, and the most complete science is the science of the most necessary and eternal object. It then also follows that in man, science can only be supported from what allies man to the eternal and the necessary. There is a name for that: the *soul*. It is distinguished from the body, that agency in man which allies him to the passing and the contingent. Finally, it then follows that mathematics proposes to science a chosen paradigm.

For the mathematics inherited from the Greeks arose from the necessary and the eternal. Figures and Numbers cannot be other than they are and by the same token cannot either come to be or cease to be — being as they are for all eternity. The necessity of demonstration has value solely in the exact measure that it is co-natural with necessity in itself. Just as the trajectories of celestial bodies crystallize for corporal eyes the most adequate figure of the eternal, in the same manner the path that departs from principles and axioms to arrive at conclusions crystallizes for the eyes of the soul the most adequate figure of the necessary.

Inversely, the empirical in its very diversity, does not cease to come to be or cease to be;

by consequence it is incessantly other than it is. It is thus intrinsically rebellious to mathematics. If, however, mathematics can grasp something among this diversity, then that will be what lets itself be recognized as self-identical and eternal: the Same as such. Say for example, that certain objects, falling under the senses, let themselves be completely mathematized. What is supposed in them are eternal beings — hence the celestial bodies or harmonies. Say for example, that certain senses emanate more directly from the soul — hence sight.³⁰ For all objects that fall under any sense, one can and must cause some glimmer of eternity to emerge. If one agrees to term this glimmer hidden in each being “idea,” then it is understandable that certain ancients were able to define ideas by Numbers and that Numbers were solely an access to the Same. It was for this reason that they were important, and not due to the calculations that they made possible.

All the more so, Number is not the sole mark of the Same. Still more fundamental is necessity in demonstrations. The Greek *episteme* is founded upon demonstrations and demonstrations alone; mathematicity is only one of their secondary consequences. The radical and defining gesture consisted in drawing, from assured principles and evident axioms, conclusions in conformity with the rules of reasoning while respecting phenomenal appearances. Mathematics proposes the purest type of demonstration, to the extent that it requires a specific discipline, termed logic or dialectic, to expose its rules: (a) the principle of the unity of the object and of the homogeneity of the domain: all the propositions of science must concern elements of the same domain and be related to a unique object; (b) the principle of the minimum and the maximum: the propositions of science are either theorems or axioms — a maximum number of theorems must be deduced from a minimal number of axioms, expressed by a minimal number of primitive concepts; (c) the principle of evidence: all the axioms and primitive concepts must be evident; this dispenses with the need for their definition or demonstration.³¹

Mathematics is sovereign because it proposes the purest type of demonstration; it does so because the beings it deals with, numbers or figures, are in the closest position to the eternal and the perfect. Nothing of the sensible can come to alter the necessity of its *logoi*. It is therefore the formal paradigm of the *episteme* as such — of what there is in each particular *episteme* that makes it an *episteme* in itself, of what there is in every discourse that makes it a particular *episteme* (hence the utility of the *more geometrico*, for rendering visible, outside mathematics, the articulation of the *episteme*).

At the same time it is understood that mathematics is this formal paradigm to the degree that it *is not* the supreme *episteme*. It is not the supreme *episteme* because its object is not the supreme object; yet mathematics provides a model, because its object, stripped to the maximum of all sensible substance, has the maximum resemblance, via its formal

properties, to the supreme object. If what there is of science in a discourse depends on what that discourse grasps of the eternal, the perfect and the necessary in its object, and if, moreover, there exists an object of which one can say that it is the most necessary, the most perfect and the most eternal, because in fact it is nothing if not the necessary, the perfect and the eternal in themselves, the only entire and full science is that which, conforming to the mathematical paradigm, concerns that object that is above and beyond all mathematics: namely, God — if one agrees to so name the necessary, perfect and eternal being, hence the most necessary, the most perfect and the most eternal. Number can act as an access to such a being, the best access, the sole one perhaps, but number is not God. Mathematics alludes to what it isn't at the very instant in which it establishes its reign, but this allusion must direct the gaze toward a supreme being.

At the same time, the possibility of science in humanity is born from that which in humans allies them to the necessary and the eternal. The name of that alliance, as mentioned, is the *soul*, it being a matter of a localizable region in a human or a quasi-geometric place of points wherein the alliance is accomplished. As for the *body*, which marks humanity with the contingent and the passing, it is sometimes an allusion, sometimes an obstacle: an allusion by those of its parts that most resemble, in their materiality, materialities that themselves allude to the necessary and the eternal (the gaze, which resembles light; proportioned beauty, which alludes to numerable symmetries); everywhere else the body is an obstacle. A filter is thus required, designed to reduce the opacities of the body, leading it to the ways of purity. There is therefore only a complete *episteme* for a being endowed with a soul and a body, and moreover, one that has submitted them both to the appropriate exercises.

Having completed such exercises, the knower recognizes that the logical necessity of science itself is nothing other than the mark imprinted upon discourse by each being's necessity of being. In no way does Aristotle contradict Plato on this point. When he defines the syllogism — and one must remember, this is the general name of reasoning before being the technical name of a particular form — he says, “a discourse in which certain things having been posed, a different thing necessarily results” (*ex anankès*). But this is to echo the *Timaeus*, which ties regulated thought to the waning of celestial bodies: “God invented and gave us sight to the end that we might behold the courses of intelligence in the heaven, and apply them to the courses of our own intelligence which are akin to them, the unperturbed to the perturbed, and that we, learning them and partaking of the natural truth of reason, might imitate the absolutely unerring courses of God and regulate our own vagaries.”³² Both the Academy and the Lyceum bore witness to the proper movement of the ancient *episteme*, such as it was supposed by Koyré's theorems

and the doctrine of science. The necessity in the *logoi*, qua necessity, is the point within science wherein resemblance is achieved between the necessary being of the entity and the necessary being of knowing; reciprocally, science is nothing if not the effectuation of that resemblance that, by way of the purified soul, unifies the human endowed with a body with the incorporeal Supreme Being. There is no science except that of the necessary. Still more general than the envelopment of the microcosm by the macrocosm (however recurrent this schema of the imagination), the pursuit of resemblance at the point of necessity constitutes the prime mover of knowledge.

The Galilean peripeteia is clarified by the contrast: it is, first of all, that mathematics, in science, can spell out *all* the empirical, without concerning itself with any hierarchy of being, without ordering the objects on a scale going from the least perfect — intrinsically rebellious to number — to the most perfect — almost entirely numerable; second, it is that mathematics, spelling out the entirety of the empirical, intervenes by means of its literal nature, that is via calculation, rather than by demonstration (the emergence of science is also the inexorable decline of *mos geometricus*); third, it is that mathematics spells out the empirical *as such*, in its passing, its imperfection and its opacity.

One then understands the articulation of science with technique.³³ It is not that the ancient world did not know technique. Rather, if one believes the doctrine of science, it did not link it in an elective manner to the *episteme*. To be exact, two couples are at our disposition: *episteme/techne*, *theoria/praxis*. The modern universe superimposes them — except that, of course, at the very same moment the words cease to be correct. In the ancient world there is no reason for the couples to be exactly superimposed. If they do combine, they can get rather tangled up to the extent that an ancient term appears to gather traits that today one would say are incompatible. This signifies that in the Greek system there is a part of *theoria* in *techne* and a part of *praxis* in *episteme*. This is clearly why Socrates interrogated the artisans, in order to force them to isolate through filtering the kernel of *theoria* whose supports they were; it is clearly why the supports of the *episteme* must also act purely — science linked to conscience, as governing actions (*praxeis*).

The modern rupture therefore requires that mathematics to some degree ceases to be linked hand in hand to the eternal. Mathematizable beings (and, par excellence, the celestial bodies) are no longer *in the same manner* supposed to be eternal and perfect; they may always be supposed to be so, but that would depend on other reasons and if one must cease to suppose them to be such (if one must discern spots on the sun), that will not affect the possibility of mathematizing their paths. In the same manner, it is always possible that the necessity of mathematical demonstrations is supposed to expose the necessity of being, but that would not be via a divine analogy and, especially, it would be of no value

in the usage that is made of mathematical demonstrations in science.

In science, numbers function no longer like Numbers, golden keys of the Same, but like letters, and as letters they must grasp the diverse in its quality of being incessantly other. The empirical is literalizable *qua* empirical; the letter does not bear the object up to the heaven of Ideas; the sky is not the visible deployment of the infinite sphere of being; literalization is not idealization.

The peripeteia is therefore not that modern science becomes mathematical; ancient science was already mathematical and in certain regards modern science is even less so. Rather than mathematical, one must in effect say *mathematized*. The primary resource of mathematization is number as letter, and on that basis, calculation — not the well-formed logic of demonstrations. For the Greeks, science is mathematical; it is not number insofar as it allows counting that works toward its mathematicity (which is not mathematization) but that which makes Number an access to the Same in itself, that is, the *logos* as necessary demonstration.

But the detour via the *episteme* is not only important for Koyré. It is also one of the most important moments of the Lacanian thematic. If psychoanalysis goes hand in hand with the emergence of the modern universe, then obviously there lies one of its positive conditions, but the doctrine of science says more; it equally conceals a negative condition: the disappearance of ancient science. In other words there is something in the *episteme* that is joined to such an extent to psychoanalysis that it is able to prevent it from occurring; to understand the *episteme* is thus also to understand psychoanalysis, not only by contrast but by an intimate relation of mutual exclusion.

But if the *episteme* is nothing other than a historical figure, then the comprehension of psychoanalysis is radically historicist. Yet history, in Lacan's eyes, is fallacious. Must one then conclude that the doctrine of science, as unfolded here, is itself fallacious? That, on this basis, the hypothesis of the subject of science, which ties psychoanalysis to modern science, is an appearance to be destroyed? At the most a means for comprehension that must be thrown away once used — “throw my book away” says Gide; “one must throw away the ladder after having climbed it” said Wittgenstein — is this the last word of the doctrine?

5. THAT HISTORICISM IS NOT NECESSARY

I don't believe, however, that this is an inevitable consequence. The figure of the *episteme* is precisely what furnishes the most solid proof. The persistence of its pertinence with regard to psychoanalysis does not arise from reminiscence, but from the present.

To be exact, it arises from a logic. A figure of the *episteme* has been determined; it has

distinctive characteristics. The latter are based upon the testimony of archives. But this ballast, however convenient and even correct it may be, is in no way at the level of principle.³⁴ All that is necessary is that the figure that is sketched out is consistent and responds to effectible discourses. It is not necessary that, *de facto*, the period referred to as antiquity knew this figure alone; no more is it necessary that this figure be manifest solely during this period. Whoever demonstrates the existence in Greece and Rome of discourses both mathematized and empirical will weaken Koyré's theorems; but they will not necessarily weaken the doctrine of science.³⁵ Whoever demonstrates the existence, in the modern universe, of discourses that conform to the rules of the *episteme* will not even weaken Koyré's theorems.

The same reasoning also goes for geographical correlations: it does appear that outside the Occident, a discourse in conformity to the doctrine of science is nowhere to be found. But it is not indispensable to Lacan that it be found. In fact, in the thematic that Lacan lays claims to, the *episteme* that modern science separates itself from is more a structural figure than a properly historical entity. It is characterized by a set of theses, not by dating, even if one can establish a natural relation between the theses and dates. The definitive theses turn on the status of mathematics and on the relation between the contingent and passing, and the eternal and necessary.

The power of these theses has not vanished. Remaining purely and solely at the level of observation, who could doubt that in the figures of the ideal science, the traits of Euclidean demonstration still persist? Many recent discourses lay claim openly to an epistemology of the minimum and the maximum, which originates, of course, with the Greeks; such is, as shall be seen, one of the paradoxical traits of structuralism. If the soul, as Lacan holds on the basis of the doctrine of science, is intimately correlated to the *episteme* and to its constitutive principles, who could deny that the soul is recurrent in the most everyday discourses? Couldn't one even hold that in the soul the current discourse of civilized democracy finds its most solid anchoring point? In religions, in the spiritual party, in humanitarian gesticulation, in the political Tartuffe, one does not discern, contrary to what is often believed, the hold of Judeo-Christianity (progressive variant of the Judeo-Masonic), but rather the thematic of the Same, handed down from the Ancients. That the demiurge of the *Timaeus* and Aristotle's prime mover have fallen to the rank of Father Christmas, that they are supposed to restore all damage visible to bodily eyes by a gain visible to the eyes of the soul alone, can lend itself to laughter or tears but they are not incomprehensible.

As for science, however ready it is with its modernities, isn't the most insistent demand addressed to it the demand that it clear the conscience?³⁶ The belief remains that a moral magistracy is the duty of a great scientist — on the condition that they solely echo what

everyone has already thought, at least in the instants when they do not think. This is what is called, using a name also handed down from the Greeks, ethics. I will not argue about whether ethics is legitimate or not in the modern universe.³⁷ One thing however is sure: if ethics exists, science has nothing to do with it.

One can certainly reason in historicist terms; one could take up Gramsci's language: modern man is never contemporary with himself ("we are anachronistic in our own time" he wrote in his prison).³⁸ But Lacan is more radical, that is, more Freudian.

In a celebrated passage from his *Introductory Lectures on Psychoanalysis*, Freud mentions three "injuries which science has inflicted upon the naïve self-love of humanity": Copernicus via the putting into doubt of geocentrism, Darwin and Wallace via natural selection, and psychoanalysis.³⁹ In this way he explained the unbridled hostility that the latter provoked, comparable in his eyes to the fury unleashed by its great predecessors. It is little matter after all whether he was correct in the historical detail (Lacan, for his part, doubted it, privileging Kepler at the expense of Copernicus). Beyond this detail, it is necessary to restate the fundamental thesis that there is a recurrent anticopernicanism, and it is linked to the ego.

The term used by Freud, *Eigenliebe*, certainly carries a moral nuance (one thinks of *amor sui*, if not of the *amour propre* of the *Maximes*), but one can easily strip it of that nuance to reduce it to its material kernel, which is the ego. The ego is structural, and it is structural because it is solely the name of the function of the imaginary. This is what is affected by modern cosmology, whether one attributes the latter to Copernicus or Kepler. The heliocentrism of the first matters less because of the supposed dethroning of the Earth than because of the radical disharmony installed between the geometric center of the planetary system and the center of observation, which remains in the places of man; the step taken by the second promotes, at the expense of the circle with a unique center, the ellipse with two foci, one of which will be irremediably empty. In both cases, the good form of the circle wherein all centers coincide with all centers has given way to a bad form.⁴⁰

There again, the anticopernicanism is structural, because the ego and the imaginary, owing to their own proper law, privilege all good form. It is thus true that the *episteme* as historical figure has disappeared, but certain of its characteristic traits remain because the ego remains, whatever the periodizations.

On that basis, the following propositions are drawn in both Freud and Lacan:

- The ego has a horror of science.
- The ego has a horror of the letter as such.
- The ego and the imaginary are *gestaltist*.
- Science and the letter are indifferent to good forms.
- The imaginary as such is radically foreign to modern science.
- Modern science, as literal, dissolves the imaginary.

From now on one can better evaluate the vocabulary of periodization, such as it appears in Lacan's work, and the vocabulary of massive comparisons, which is extremely close to Kojève's neo-Hegelian style. By means of these two vocabularies, the adept will have no difficulty in articulating one of the possible responses to the question of knowing whether Lacan requires a theory of science. It is not, they will say, via scientism, because Lacan does not believe in the ideal of science for psychoanalysis and even less in an ideal science. Rather, it would apparently be via historicizing theses: "the emergence of Galilean science rendered psychoanalysis possible" or "psychoanalysis would not have been conceived without the suturing with which modern science operates with regard to the subject (and whose documentary trace is the *cogito*)" or "psychoanalysis can only be unfolded in the infinite universe of science" and so on. The problem is that these responses do nothing other than reiterate the question in another form. In a more general manner, one must not let oneself be taken in by the Lacan of the globalizing comparisons; it's a Lacan of scholarly conversation, but not a Lacan of knowledge.

On this occasion, the periodization has a precise function: to break, concerning psychoanalysis, with the pertinence of the couple ideal of science/ideal science. What could be more effective in this regard than the operators of succession and break whose minor consequence is a relativism and a nominalism of good company? I would go so far as to advance the following: in order to open the way for psychoanalysis in a conjuncture dominated by philosophical idealism, Freud had to base himself on a scientism of the ideal of science. The price to pay was no less than the scientism of the ideal science. In a conjuncture in which psychoanalytic institutions let themselves be dominated by a scientism of the ideal science, Lacan, in order to forge ahead in psychoanalysis, had to relativize and nominalize; the price to pay was the periodist discourse. In both cases it is a matter of securing, by different means, a similar function, which in both cases is a matter of protrep-

tic. Or, if one wants to attain the kernel of knowledge, it is appropriate to render it logically independent of any protreptic. In this case, this would be to render it independent of chronological successions and simultaneities.

In this manner, we do nothing other than follow Lacan. For everything is in place for cutting costs and disengaging from the historical novel. From the moment that the periodizing language had its effect, from the moment that via it, the double phantom ideal of science/ideal science was found to have lost its powers, Lacan started to purify the theory of the break. Such is the function of the theory of discourses, set in place from 1969 on: to reveal the properties of discourse in general (remember discourse, in Lacan's work, is the social bond) and by doing this, to show that heterogeneity and multiplicity are intrinsic to them.⁴¹ The latter are not simply the effects, in discourse, of periods and epochs that would be in themselves extrinsic to discourse. In particular, they are not simply projected upon the axis of successions ("this is in no way to be taken as a series of historical emergences"⁴²). By a doctrine of the plurality of places, of the plurality of terms, of the difference between properties of place and properties of terms, of the mutability of terms in relation to places, what is obtained is what could be called a nonchronological and more generally nonsuccessive articulation of the concept of break. Undoubtedly, the emergence of a new discourse, the passage from one discourse to another (what Lacan terms the "quarter turn"⁴³), in a word, the change, can be an event; these events are an object that historians attempt to grasp in the form of a chronology. But they are not what historians say they are. All history, in this regard, emerges from fallacy and the first adulteration consists precisely in the minimal homogenization supposed by temporal serialization. In itself, the quarter turn has no need to inscribe itself in a historical series.

Given that the theory of discourse is a literalization of places and terms, the break is first of all the marking of a literal impossibility. It is impossible that a system of letters be another such system. In other words, there is no internal transformation of systems; all transformation is passage from one system to another.

More profoundly, one could hold that a discourse defined in such a way is nothing other than a set of rules for synonymy and non synonymy. Two discourses will be different from one another insofar as their defining rules are different. The nature of the discursive break is then determined in the following way:

- To say that there is a break between two discourses is solely to say that none of the propositions of one are synonymous with the propositions of the other.

From this one can conclude that there can only be synonymies — if they exist — within the same discourse, and that between different discourses, the only possible resemblances

arise from homology. In such a theory, the notion of break and the notion of discourse depend entirely on each other; between two really different discourses there is no other relation than break, but the break is none other than the name of their real difference. The conclusion imposed is as follows:

- A break is not fundamentally chronological.

One could put it in other terms, generalizing its range:

- The theory of discourses is an antihistory.

Thus, synchrony here does not signify contemporaneity. It must rather be understood in the sense in which it is said that two pendulums are synchronous — that between talk of the same date, and even within the same talk, there is nonsynchrony that can be conceived easily. In the same manner, the passage from one discourse to another does not lead to univocal successions; a discourse synchronous with the *episteme* could succeed, in time, a discourse synchronous with science (and inversely). More profoundly, the nonchronological doctrine of breaks implies that a succession is only ever imaginary. There is no last real instance that legitimates serial order.

The historicizing reading of the doctrine of science is only necessary if one confines oneself to protreptic ends; it is radically insufficient if one takes into account the construction of knowledge. It is therefore appropriate to state more explicitly the intrinsic and structural traits of Galilean science and not to confine oneself to a historical reference to Galileo and his successors. This is moreover to rediscover a concern of Koyré himself, who advanced theses on this point. Lacan made use of the latter and, without always being entirely explicit, came up with others that complete them.

6. LITERALITY AND CONTINGENCY

It is possible to read Koyré eliminating the historical operators. To be more exact, it is possible to purify the Lacanian doctrine's reading of Koyré. In combining mathematicity and empiricity, in regrouping *theoria* and *praxis*, *episteme* and *techné*, Koyré's discriminatives accomplish multiple operations. However, they can all be summed up in one alone. In order to understand it one must return to an epistemology apparently well removed from Koyré, that of Popper. A scientific proposition must be refutable, said Popper, thus determining, under the name "demarcation," what one could term *Popper's discriminative*. But a proposition can only be refutable if its negation is not logically contradictory or if it can be materially invalidated by a simple observation. In other words, its referent must be able — logically or materially — to be other than it is. But that, that is contingency. In short, only a contingent proposition is refutable; there is therefore no other science than that of the contingent.

Reciprocally, every contingent can and must be graspable by science — both theoretical and applied. The set of contingents, as science grasps them in theory and practice, is the universe.

Such is the thematic in which Lacan really inscribes himself. Its middle term is the contingent. Through the latter, Koyré's chronological discriminative and Popper's structural discriminative can be combined.⁴⁴ The doctrine of science is revealed to rest upon a hidden lemma:

- Koyré's discriminative and Popper's discriminative are synonymous, on the condition that they are grasped from the point of contingency.

The first consequence imposes itself: whatever formulation Koyré's theorem was originally given in, it is not fundamentally a historical proposition; if psychoanalysis depends on this theorem, it is not for historical reasons (and especially not for chronological reasons).

A second consequence, more profound, poses that the equation of subjects be rewritten as follows:

- The subject upon which psychoanalysis operates, being a correlate of modern science, is a correlate of the contingent.

What this rewriting reveals is that Popper is necessary to Lacan. It is true that Lacan hardly ever makes reference to Popper (he became interested later on and without passion); however, it is clearly the word *contingent* that is seized by Lacan in Koyré and Kojève's work: "the starry vault no longer exists, and the set of celestial bodies...present themselves as though they could just as well not be there — their reality is essentially marked...by a character of facticity, they are fundamentally contingent."⁴⁵ In the chain of reasons that leads Koyré's and Kojève's propositions to such a promotion of contingency, it is legitimate, even if it is within Lacan's ignorance of Popper and Popper's of Lacan, to restore the missing link.

If one wishes, however, to confine oneself to what Lacan could explicitly think, is it to go beyond the legitimate to evoke Mallarmé here? In truth, if one admits that what is proper to the modern letter is its grasping of the contingent as contingent, the first motto of the age of science states that no letter will ever abolish chance. And the second statement is that every letter is a throw of the dice.

The letter is as it is, without any reason causing it to be what it is; by the same token, there is no reason for it to be other than it is. And if it were other than it is, it would solely be another letter. In truth, from the moment that it is, the letter remains and does not change ("the unique number which cannot be another"). At the most, a discourse may not change the letter, but rather change letters. In this manner, and by a tricky turn of events,

the letter takes on the traits of immutability, homomorphic to those of the eternal idea. Undoubtedly, the immutability of what has no reason to be other than it is has nothing to do with the immutability of what cannot, without violating reason, be other than it is. But the imaginary homomorphism remains.

It then follows that the capture of the diverse by the letter gives the letter, insofar as the diverse can be other than it is, the imaginary traits of what cannot be other than it is. This is what is called the necessity of the laws of science. It resembles in every point the necessity of the Supreme Being, but it resembles it all the more insofar as it has nothing to do with it. The structure of modern science is entirely based on contingency. The material necessity that one recognizes in these laws is the scar of that very contingency. In a moment of clarity, every point of every referent of every proposition of science appears to be able to be infinitely other than it is from an infinity of points of view; in the next moment, the letter has fixed each point as it is, and as not being able to be other than it is, save by changing letters, that is field. But the condition of the latter moment is the earlier moment. To manifest that a point of the universe is as it is requires the dice to be thrown in a possible universe wherein this point would be other than it is.⁴⁶ To the interval of time during which the dice tumble, before falling, the doctrine has given a name: the emergence of the subject, which is not the thrower (the thrower does not exist), but the dice themselves insofar as they are in suspension. In the vertigo of these mutually exclusive possibilities, bursts finally, at the instant after the fall of the dice, the flash of the impossible — impossible that, once fallen, they bear another number on their upturned face. Here, one sees that the impossible is not disjoined from contingency but constitutes its real kernel.

Furthermore, it is necessary, in order to see this, that one not cease to pass from the earlier to the latter. Yet this is not possible, for one must also not cease to return from the latter to the earlier. In any case, science does not allow such passages; once the letter is fixed, necessity alone remains and imposes the forgetting of the contingency that authorized it. The inopportunity of this return to the contingent is what Lacan called suture. The radicality of this forgetting is what Lacan called foreclosure.⁴⁷ Since the subject is what emerges in the step from the earlier moment to the latter moment, suture and foreclosure are necessarily suture and foreclosure of the subject.⁴⁸

To admit that a contingent and empirical proposition qua contingent and empirical is mathematizable is, at the horizon of the letter, to rip apart and sew up again in an entirely new manner, perpetually precarious and incessantly reestablished, the cloth of the passing and the immutable. The complete set of points to which the propositions of science refer is usually named the universe. Because each of these points must be graspable as an oscillation of infinite variation, because just one variation affecting just one of these points

is enough for two possible universes to be distinct, because it is due to this that the number of possible universes is infinite, and because the universe only exists for science by the detour of these possible universes, the universe is necessarily infinite and does not cease to be so, even if the points that constitute it happen to be currently finite. One would almost call this infinity qualitative, rather than quantitative.

It is through contingency alone that this infinity comes to the universe and comes to it from its very interior. Again, this upsets traditional relationships, which tie infinity with ease to an exterior place, transcending the universe. The universe, as an object of science and as a contingent object, is intrinsically infinite.⁴⁹

- The infinity of the universe is the mark of its radical contingency.

It is therefore in the universe and not outside it that one must find the marks of this infinity. The modern thesis par excellence therefore says:

- Finitude does not exist in the universe.

And as nothing exists except in the universe, it also says:

- Finitude does not exist for there is nothing that is outside the universe.

It then follows in particular that the subject is not an outside-universe. How, despite this, it can and must be distinct is the object of the theory of the subject. One can understand why this theory has recourse to the mathematical theory of the interior and the exterior, in other words, to topology. One can understand that all the variants of internal exclusion are retained.⁵⁰ These are the necessary consequences of the doctrine of science. One can also understand that the doctrine of science must articulate itself with hypotheses on the subject, independently of any historical correlation. The hypothesis of the subject of science can be disengaged from historicism.

That there is nothing outside the universe proves difficult to imagine. On this basis there is the recurrence, in representations, of figures of the outside-universe — God, man, the ego — to which specific properties are attributed that except them from the universe and constitute the universe into a whole. This property of exception receives diverse names. For a long time philosophy has laid claim to the soul, the instance in man of what allies him to God. But the soul comes from the ancient world and the *episteme*. When the latter cedes to modern science, so must the soul gradually cede its place, hence the arrival of consciousness.

This is the effective point of psychoanalysis. It takes up the problem of the universe again and resolves it thus: the concept of there being a universe, that nothing is excepted from it, not even man, is the concept that says “no” to consciousness; it is the unconscious. The name “unconscious” and its negative constitution is thereby clarified. If consciousness and, more precisely, self-consciousness gather together the privileges of man as an exception to the whole, the negation with which Freud affects consciousness has one function only, to mark these privileges as obsolete. By this movement the soul is also marked. This explains the gashing strikes that Lacan, advancing a step further than Freud, aims against the soul.⁵¹ He merely unfolds one of the effects hidden in the word unconscious. At the same time the soul, the figure of God, insofar as it is the outside-universe par excellence, is marked. One then understands Lacan’s *logion* “God is unconscious”; it means first of all that the name *unconscious* is shorthand for the nonexistence of any outside-universe whatsoever, yet the name of God designates such an outside-universe. The triumph of the modern universe over the Ancients is thus that the unconscious has even prevailed against God.

But this *logion* itself is entirely articulated within modern science and the thematic of the universe. That science requires the universe, that the universe renders impossible any outside-universe, the shorthand for all that in one word alone is *unconscious*, through which, at the same time, the soul and God are *atheitized*. Inversely, a system of propositions that aims at a defined object like the unconscious can only find its accomplishment within modern science and the universe it finds. Rabelais knew it: science without conscience and, for that reason alone, ruin of the soul. Or, to be more exact, science is only accomplished by making itself the science of there being neither consciousness nor soul.⁵²

It is strictly true, as Freud affirmed, that psychoanalysis injures the ego and that its kinship with Copernicus, that is with modern science, consists in this. But to understand this one must add that narcissism always amounts to a demand for an exception to be made for oneself. The hypothesis of the unconscious is nothing other than another way of posing the nonexistence of such exceptions; for this very reason the hypothesis is nothing more and nothing less than an affirmation of the universe of science. Not only does the unconscious thus accomplish the program feared by Rabelais, but, more precisely, it reveals its own assumption of the functions of infinity.

Besides, the two words have the same structure: one says *unbewusst* as one says *unendlich*. Infinity is what says “no” to the exception of finitude; the unconscious is what says “no” to the privilege of self-consciousness. Of course, Lacan made endless unfavorable comments about the negative character of the word *unbewusst*. One can recognize the Cartesian doctrine there: infinity is first and positive, the finite is second and is obtained in some manner by a subtrac-

tion; in the same manner, the unconscious explains the conscious and not the reverse. It is shorthand for an affirmation and not for a limitation. Yet the virtues of negation are also discernable.

Moreover, the German language adds certain virtues. The prefix *un-* is not always as flatly negative as the Latin prefix *in-*; it is not always confined to delimiting the complement of the domain signified by the positive. Thus, *Unmensch* is not a nonhuman but an undone man, a monster; *Unkraut* is not an herb (*kraut*), but a weed, a parasite; the *unheimlich* is not the inverse of the familiar, but the familiar parasitized by an anxiety that disperses it.⁵³ In the same way, one would readily say that in the modern universe, there is no distinction between the domain of the infinite and domain of the finite, but that infinity perpetually parasitizes the finite insofar as everything finite, inasmuch as it is grasped by science, is fundamentally posed as able to be infinitely other than it is. Moreover, this is not so far from Descartes, the theoretician of eternal truths. In a similar manner in psychoanalysis, the unconscious perpetually parasitizes consciousness, thereby manifesting how consciousness can be other than it is, yet not without a cost: it establishes precisely how it cannot be other. The negative prefix is nothing more than the seal of this parasitism.

Ultimately, psychoanalysis is a doctrine of the infinite and contingent universe. Its doctrine of death and sexuality is thus clarified. One cannot be unaware that in the eyes of most, death is the very mark of finitude. But the modern lemma holds that finitude does not exist and psychoanalysis follows that lemma. It even gives a specific version: Insofar as it is a mark of finitude, death is nothing in analysis.

- Death only counts in psychoanalysis insofar as it is a mark of infinity.
- Death is nothing more than the object of a drive.

Such is the foundation of the concept of the death drive. One would conclude that the word *death* is a center of homologies between the finite and the infinite, but also that any philosophy wherein death counts precisely as the inverse motif, as mark of finitude, is incompatible with the possibility of psychoanalysis. This leads to a particular conclusion: if Heidegger's philosophy is of the latter type, if being-for-death is being-for-finitude, then, notwithstanding the epistolary exchanges and private visits, notwithstanding even the weight one must give, as for the doctrine of the cure, to the definition of truth as unveiling, Lacan's doctrine, as doctrine of psychoanalysis, is antinomic to Heidegger's philosophy (and reciprocally).

Psychoanalysis deals with what the moderns call *sexuality*. This is the most well known thing in the world. Yet it is quite legitimate to ask how and why it deals with sexuality. It's useless to state that sexuality exists empirically and it's necessary for some discourse to

speak about it rationally. For it is precisely not trivial that sexuality exists — that a determinable section of reality bears that name. This is so nontrivial that it has become, it seems, intolerable that the question be posed. Foucault experienced how much it costs to be revisionist on this point. Let's even suppose that sexuality exists as it is said to exist: it is not evident that psychoanalysis speaks directly of it. It's well known that cultivated minds — Jung was anything but ignorant — have denied this.

I would advance that sexuality, insofar as psychoanalysis speaks of it, is nothing other than this, the place of infinite contingency in bodies. That there is sexuation rather than not is contingent. That there are two sexes rather than one or several is contingent. That one is of one side or another is contingent. That such and such somatic characteristics are attached to sexuation is contingent. That such and such cultural characteristics are attached to sexuation is contingent. Because it is contingent, it touches infinity.

However, something does not cease to be literalizable. For the names of *man* and *woman* are first of all a manner of being counted in the midst of a set that is both totalizable and open, and to this counting responds a certain type of logic. In "Logical Time and the Assertion of Anticipated Certainty" (1945), Lacan termed it collective logic and proposed a dialectical version, suitable for a quasi-Sartrean dramatization (*No Exit* was not far off); it is found again, in an undramatic and quasi-Russellian formalization, in the formulas of "L'Étourdit." It is clear that the question of the limit is the pivot of the latter. It is also clear that this question is tied to the question of infinity. The formulas of sexuation concern an infinite totality insofar as it is affected by the existence or nonexistence of a limit.

The Freudian unconscious as sexual is the unconscious qua being able to be other than it is; it is also the unconscious qua being just as it is and of which, from the very instant that it is just as it is, the letter states that from that point on it cannot be other than it is. But, from another point of view, yet by the same movement, the unconscious is infinite. Therefore, in its place, infinity and the contingent intersect, as is proper. Sexuality is also parasitized by infinity, from the very fact of the death drive, from the fact of jouissance, from the fact of contingency again, from the fact of the twists and turns of totality. Such that the reversibility is total, the unconscious is the hold the infinite universe has on the thought of the speaking being, but insofar as it can only be sexual; sexuality is the hold the infinite universe has on the body of the speaking being, but insofar as it can only be unconscious. Thus one finds modern science again. Psychoanalysis can only authorize itself from the doctrine of science on the condition of basing itself on sexuation as phenomenon and on sexuality as the region of reality wherein this phenomenon is graspable. In return, the doctrine of science is only another name for sexuation as a throw of the dice, that is to say, as letter.

Translated by Oliver Feltham

1. The selection translated here is the second chapter of Jean-Claude Milner's *L'Oeuvre claire: Lacan, la science, la philosophie* (Paris: Editions du Seuil, 1995).
[This chapter was originally titled "Le Doctrinal de science," but I have translated Milner's "doctrinal" as "doctrine" throughout. Trans.]
2. Jacques Lacan, "Science and Truth," *Newsletter of the Freudian Field* 3 (1989): 7.
3. *Ibid.*, 23. [References will be given to published English translations of Lacan's works where possible. Readers will find that most of the history of science books referred to exist in English. Trans.]
4. *Ibid.*, 12.
5. I refer to Francois Regnault's book *Dieu est inconscient* (Paris: Navarin, 1985); adding the paper given at the École de la Cause Freudienne, 15 October 1989, "Entre Ferdinand et Leopold." These works render other works, if any exist on this question, unnecessary.
6. One day it will be necessary to explain exactly what manipulations are involved, such that this word "scientism" passes so generally as insulting. It is no more insulting in my eyes than such words as materialism, atheism or irreligion (I pick these at random). Lacan constantly links Freud to scientism (cf., in particular "Science and Truth," 6-7); even if it's a matter of marking a difference from him, it would not seem that Lacan wanted to debase the very one to whom he had proposed a return.
7. The disjunction-conjunction of the ideal of science and the ideal science had been introduced in *Cahiers pour l'analyse*, no. 9. It obviously conforms to the disjunction-conjunction of the ideal ego and the ego ideal, such as Lacan articulated it on the basis of Daniel Lagache's work in his "Remarque sur le rapport de Daniel Lagache 'Psychanalyse et structure de personnalité,'" *Écrits* (Paris: Seuil, 1966), 647-684; see in particular 671-683. From such a structural analogy the mirage effects that the name of science generates can be easily drawn; they exist, they must be dissipated, but science is not reducible to them.
8. One fact among others: in 1911, Freud cosigned a manifesto claiming the creation of a society wherein a positivist philosophy would be developed and diffused. Among the signatories one finds the names of E. Mach, D. Hilbert, F. Klein, and A. Einstein. There is a double indication here: the fact that Freud had given his signature says something about his positions at the moment when he was publishing the third edition of the *Traumdeutung*. He had just founded the International and the *Zentralblatt für Psychoanalyse*; moreover, when one knows the type of filtering that usually accompanies this type of operation, the fact that Freud's name was accepted, even solicited, also gives a measure of his social success in the heart of the positivist milieu in the German language. See on this point Antonia Soulez's important historical introduction to the collection *Manifeste du cercle de Vienne et autres écrits* (Paris: PUF, 1985), 32.
9. Jacques Lacan, *The Four Fundamental Concepts of Psychoanalysis*, trans. Alan Sheridan (London: Penguin, 1978), 151.
10. Summarized for the *École pratique des hautes études* yearbook (1964-5, 249-51) and reproduced on the back of the 1973 edition of *Seminar XI*. [Also found under the title "Comptes rendus d'enseignement, 1964-1968. Les quatre concepts fondamentaux, 1964" in *Ornicar?* 29 (1984): 7-9. Trans.]
11. Kojève himself in "L'origine chrétienne de la science moderne," *L'Aventure de l'esprit* (= *mélanges Alexandre Koyré*), II (Paris: Hermann, 1964), 295-306, comes out with a similar proposition, but it does seem as though Lacan was first since he formulated his hypothesis from 1960 on. Moreover, it is not entirely clear that the two propositions are synonymous. Cf., following note.
12. See Jacques Lacan, *Seminar VII, The Ethics of Psychoanalysis*, trans. Dennis Porter (London: Routledge, 1992), 122: "...modern science, the kind that was born with Galileo, could only have developed out of biblical or Judaic ideology, and not out of ancient philosophy and the Aristotelian tradition." This is where the difference that separates Kojève and Lacan appears; the first attributes to Christianity, and more specifically to the dogma of the Incarnation (Kojève, *ibid.*, 303) a decisive role in the emergence of science; yet this dogma is precisely what separates Christianity from Judaism and justifies the former laying claim to the spirit rather than

the letter. Lacan attributes a decisive role to Judaism and to what, in Christianity, remains of Judaism, that is, precisely, the letter. This means that Lacan's hypothesis (1960) does not match that of Kojève (1964), despite their being almost homologous.

13. See in particular Jacques Lacan, "The Agency of the Letter," in *Écrits: A Selection* (New York: W.W. Norton & Co., 1977), 164-166 and "Science and Truth," 5-7, 13-14.
14. Rene Descartes, "Second Meditation," in *The Philosophical Writings of Descartes*, ed. Cottingham et al. (Cambridge: Cambridge University Press, 1984), vol. II, 19.
15. "Science and Truth," 13.
16. Of course, Lacan's commentary depends largely upon the interpretation of Martial Gueroult (termed *instananéist* in French), but not entirely, and Gueroult could be refuted on this point (cf., Jean-Marie Beyssade, *La philosophie première de Descartes*, [Paris: Flammarion, 1979]) without the Lacanian rewriting being radically invalidated. In the same way, it is not a decisive objection that in the *Meditations* Descartes does not take up again the formulation of the *Discourse on Method* or the *Principles of Philosophy*: "I think: therefore I am," "*cogito: ergo sum*" (cf., Etienne Balibar, "Ego sum, ego existo. Descartes au point d'hérésie," paper given to the *Société française de philosophie*, 22 February, 1992). One could even argue that Lacan's rewriting follows that of the *Meditations* to the letter: "that proposition: *I am....*"
17. No less than, moreover, the coherency of the texts. For there is an apparent contradiction between the letter of Freud and the letter of Lacan: the first posing that the dreamwork, in what is specific to it, and insofar as it is the major form of the unconscious, does not think (*The Interpretation of Dreams*, in *The Standard Edition of the Complete Psychological Works of Sigmund Freud* [London: Hogarth Press and The Institute of Psychoanalysis, 1961] vol. V, 507); the second posing that the dreamwork, in what is specific to it, and insofar as the dream is one form of the unconscious, is shorthand for the statement: "it thinks." Add to that the contradiction that opposes Freud to himself, sometimes affirming that the dream is a form of thought, and sometimes that it does not think (Ibid., 505). However, everything is clear. The thought that Freud refuses to attribute to the unconscious is qualified

thought; the thought that he does attribute to it and by which Lacan defines it is thought without qualities — for which the *cogito* is necessary.

For Freud, refusing thought to the dreamwork is to refuse it the *modalities* of thought: calculation and judgment ("the dreamwork does not think or calculate; in a more general manner, it does not judge" [Ibid., 507]). That is, everything that makes a *qualitative* difference between opposed poles. It is legitimate to look at both the text of the *Traumdeutung* and that of the *Meditations*; Descartes holds that a thing that thinks is a thing that doubts, conceives, affirms and denies, wants and does not want, imagines and feels; essential to this analysis is its differential character, not solely between modalities, but inside them in turn, between their poles (affirm/deny and so on). If the dreamwork is what Freud says it is, then, according to this analysis, it is not a thing that thinks. If, on the other hand, one holds that the dream is a form of thought, then it must be allowed that there is thought, even at the point where the difference between doubt and certitude, affirmation and negation, wanting and refusing, imagination and sensation, is problematic if not suspended. Freud, still restrained in the *Traumdeutung*, (the final state of which goes back to 1911) was explicit in the article on negation (1925): there is thought, even though no polarity, and on this basis no quality, has emerged. It is quite conceivable that Freud had ambitions that this thought without qualities could be ruled solely by the laws of quantity (energetics). We will see that the signifier proposes nonqualitative laws that, even so, will not be quantitative [The reference here is to the following chapter of *L'Oeuvre claire*. Trans.]

From a more general point of view, it is an open question whether thought without qualities, as it is constituted here, is also thought without properties. It could be that it has "minimal" properties. There again, the theory of the signifier proposes a specific response to the question.

18. Helmholtz from 1855 had explicitly raised the question of a thought without self-consciousness ("*ein denken ohne Selbstbewusstsein*"); cf., Helmholtz, "Über das Sehen des Menschen," *Vorträge und Reden*, 1896, II, 110. The historical articulation between scientism and the unconscious is thus revealed. To be more precise, in introducing a theory of the unconscious, Freud does not detach himself from scientism, rather he accomplishes its program.

19. "Science and Truth," 5.
20. *Ibid.*, 4.
21. *Ibid.*, 5. [Translation modified.]
22. *Ibid.*, 4-5.
23. "Radiophonie," *Scilicet* 2/3 (Paris: Le Seuil, 1970): 75. See also *Television* (New York: W.W. Norton & Company, 1990), 36.
24. [I have translated *littérale*, *littérialisé* and *littérialisable* throughout as *literal*, *literalized* and *literalizable*, but the reader should keep in mind that in French, and especially in this context, *littéral* signifies that which is of the letter in the sense of the letters or algebraic symbols used in the formal notation of mathematics. Trans.]
25. *Il Saggiatore* §6; cited in the edition of C. Chauvire, *L'Essayeur de Galilée* (Paris: Annales Litter. Franche-Comte, 1980), 141. [Translation modified.]
26. Pietro Redondi, *Galilée hérétique* (Paris: Gallimard, 1985), 69-75. [Pietro Redondi, *Galileo Heretic* (Princeton N.J.: Princeton University Press, 1987)]. This author takes Galileo to be an atomist; on this point he is opposed to Koyré, who made a Platonist out of Galileo (Alexandre Koyré, *Études galiléennes* [Paris: Hermann, 1939], III, 267-281). It is true that the two interpretations are not necessarily irreconcilable (cf., F. Hallyn, *Le Sens des formes* [Geneva: Droz, 1994], 296-97).
27. I must, to be exact, underline that the articulation of precision and literality is not explicit in Koyré's work. I am leaving aside, despite its historical importance, the Baconian reference, wherein the literal paradigm remains pertinent but referred to cryptography rather than to philology. Among the memorable encounters between philology and modern science, one must cite the correspondence that R. Bentley (scholarly editor of Horace) maintained with Newton (cf., Alexandre Koyré, *Newtonian Studies* [London: Chapman & Hall, 1965]). On the distinction between "experimental" and "instrumental," cf., Gerard Simon, *Le Regard, L'Être et l'apparence dans l'optique de l'Antiquité* (Paris: Le Seuil, 1988), 201. According to Simon, ancient optics was experimental; it was not and could not be instrumental.
28. In fact, the situation is of course more complicated: is there an exact synonymy between science and the theory of technique, between technique and applied science? One could discuss such a matter. In a similar manner, one could discuss whether the same thing is found if one goes from "right to left," from science to technique, or is going from "left to right," from technique to science. At this very moment it is obvious, under the pressure of fear and hope, that in tying research in biology to the discovery of vaccines, science is made into a pure and simple theorized technique. Science is then free as one wants it to be with regard to the object it theorizes, yet having that particular object: not Nature, but nature treated by technique or, in this case, not configurations of molecules, but these configurations insofar as they are modifiable by voluntary procedures for the ends of medical treatment. The controversy has become furious around AIDS. A growing number of researchers affirm that the vaccine will only be found by not searching for it. This would imply that funds go elsewhere than to research for the vaccine. This is orthodox Koyréism. But those with AIDS find it difficult to agree.
29. See the two articles that close the *Études d'histoire de la pensée philosophique*, "Les philosophes et la machine" and "Du monde de l'à peu près à l'univers de la précision" (Paris: A. Colin, 1961); re-ed. (Paris: Gallimard, 1971). The two texts had been originally published in *Critique* in 1948.
30. Hence, on this basis, the eminent status of astronomy, optics and harmony. Cf., Gerard Simon, *Le Regard, L'Être et l'apparence*, 182-3. In opposition to them, following Eugenio Garin, *Moyen Age et Renaissance* (Paris: Gallimard, 1969), one would put learned astrology, which pretended precisely to grasp the accidents of a destiny in what it has that is most individual, by means of the configurations of the eternal stars and calculations with numbers. Hence the scandal that it provoked among certain ancient philosophers (summarized in the discourse of Favorinus, reported by Aulu-Gelle, *Nuits Attiques*, XIV, 1) and the insistence upon its "foreign" (Chaldean) character.
31. Cf., H. Scholz, "Die Axiomatik der Alten," article of 1930, reprinted in *Mathesis universalis* (Darmstadt, 1969), 27-44.

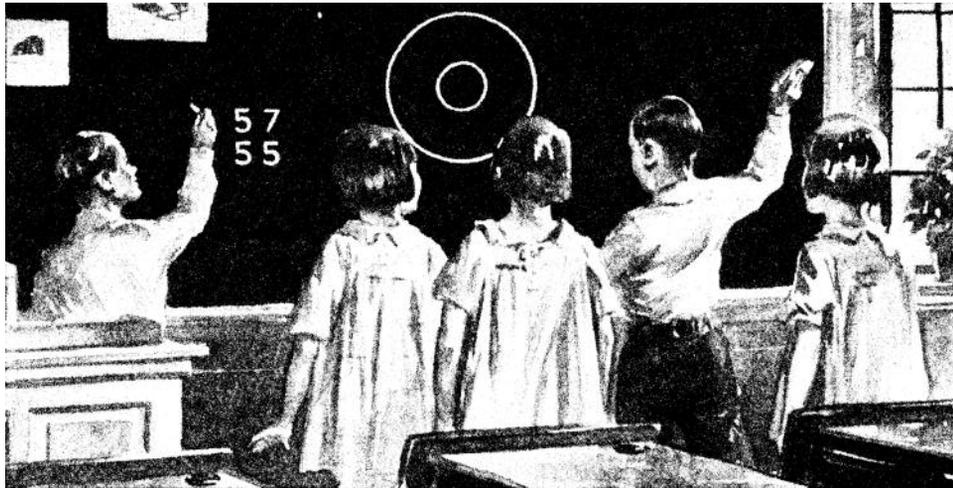
32. Plato, *Timaeus*, 47b in *Plato: The Collected Dialogues*, eds. Edith Hamilton and Huntington Cairns (Princeton N.J.: Princeton University Press, 1961), 1175. It is interesting that H. Scholz, in his brief *Esquisse d'une histoire de la logique* (Paris: Aubier, 1968), 47 — the first German edition dates from 1931 — cites this passage and considers that it still determines today the greatness of logic as a discipline. Here one is at the antipodes of logical positivism, but also of modern science. One should recall that Scholz was not only a logician and philosopher but also a theologian. In a more general sense, one should remark the degree to which attention paid to mathematical logic can lead certain philosophers to efface the Galilean break; reciprocally, it is known that Koyré had hardly any esteem for mathematical logic (witness his *Épiménide le menteur*, [Paris: Hermann, 1947]).
33. Eugenio Garin (see Garin, *Moyen Age et Renaissance*, 121-150) goes so far as to affirm that the combination of the mathematical and the empirical, characteristic of modern science, was rendered possible by the return of learned astrology, which became accessible again from the 12th century on, flourishing in the 15th and 16th centuries. For all that, magic, as action on the world ruled by *theorizable* principles, shows the first elements of the modern relation that unites science, as theory of technique, to technique, as practice and application of science.
34. Moreover, an empirical question remains open: are Koyré's propositions concerning ancient science incontestable? The specialists debate on this point even if, on the whole, the essence of his presentation is maintained by serious authors; cf., Thomas S. Kuhn, "Tradition mathématique et tradition expérimentale dans les sciences physiques," *La Tension essentielle* (Paris: Gallimard, 1990), 69-110 [*The Essential Tension: Selected Studies in Scientific Tradition and Change* (Chicago: University of Chicago Press, 1977)]; and Gerard Simon, *Le Regard, L'Être et l'apparence*.
35. Thus were the discourses held by Archimedes and Lucretius according to Michel Serres, *La Naissance de physique dans le texte de Lucrèce* (Paris: Minuit, 1977). Independently of Serres work, Archimedes is often supposed to illustrate such a combination of the mathematical and the empirical, not without technical applications. Cf., among others, Geoffrey Lloyd, *La science grecque après Aristote* (Paris: La Découverte, 1990), 54-62, 112-115 [G.E.R. Lloyd, *Greek Science after Aristotle* (New York: Norton, 1973)]. Moreover, what is known of Archimedes doctrinal positions confirms that he was himself a disciple of the fundamental positions of the ancient *episteme*. Cf., his incomplete work entitled *Method* and addressed to Eratosthene (fragment cited in Lloyd, *Greek Science*, 59-60).
36. ["*qu'elle éclaire les consciences.*" Due to the varied meanings of conscience, this phrase could also be translated as "enlighten consciousness." Trans.]
37. This is the question that Lacan poses in his *Seminar VII*. However he has not turned this exoteric speech into writing. This proves that he considered that it had not progressed as far as required for knowledge, which is confirmed by a reading of the Seminar. It is equally confirmed by the absence of any construction of a relation between what is advanced concerning ethics and what, later, is advanced under the title of an ethics of speaking well (see, for example, *Television*). Little is therefore known of Lacanian ethics. All that is known is that it would be, in principle, legitimate.
- The question of morality in an infinite, mathematized and precise universe is, of course, that posed by Kant. On this point I refer to Guy Lardreau, *La Veracité* (Lagrasse: Verdier, 1993), (cf., notably the second book, first section — 130-275 — and the close examination that the Lacanian intervention is subjected to, 159-60 and n.16) and to Jules Vuillemin, *L'Intuitionnisme kantien* (Paris: Vrin, 1994) *passim*. On the general question of ethics, in a universe where mathematics is the science of Being and not solely the language of science, one would read Alain Badiou, and singularly *L'Éthique* (Paris: Hatier, 1993). [Alain Badiou, *Ethics* (London: Verso, forthcoming)].
38. Cf., Antonio Gramsci, *Oeuvres Choisies* (Paris: Éditions sociales, 1959), 19.
39. Sigmund Freud, Lecture XVIII, *Introductory Lectures on Psychoanalysis 1916-1917*, in *SE*, vol.XVI, 285.
40. Copernicus, writes Freud, showed that "the earth, far from being the centre of the universe, only forms an insignificant part of the cosmic system" (*ibid.*). Lacan, on Koyré's authority (*La Révolution astronomique* [Paris: Hermann, 1960]) held such a presentation to be "mythic"; in his eyes, the revolutionary step had been

accomplished not by Copernicus, but by Kepler and it did not concern geocentrism, but the substitution of the ellipse for the circle. Cf., "Subversion of the subject and the dialectic of desire in the Freudian unconscious," in *Écrits: A Selection*, 295-6; "Radiophonie," *Scilicet* 2/3, 73; Jacques Lacan, *Seminar XX, Encore: On Feminine Sexuality, the Limits of Love and Knowledge*, trans. Bruce Fink (New York: W.W. Norton & Co., 1998), 40-3. Whatever may be so, one can discern in Lacan a concern for historical precision that actually sets him at a distance from historicism, the latter proceeding by means of great masses.

On a Galilean rejection of the *Gestalt*, in an entirely different domain, cf., Jean-Claude Milner, *Introduction à une science du langage* (Paris: Le Seuil, 1989), 632-633.

If it is one's persuasion to quibble with Freud, one could also reproach him with having cited Wallace next to Darwin. For on this precise point of humanity's self-love, Wallace was apparently extremely prudent (cf., for example, Stephen Jay Gould, "Natural selection and the human spirit: Darwin versus Wallace," in *The Panda's Thumb* [London: Penguin Books, 1980]).

41. Cf., *Seminar XVII* in its entirety (*L'Envers de la psychanalyse* [Paris: Le Seuil, 1991]); "Radiophonie," *Scilicet* 2/3, 96-99; the short speech (*Allocution*) given at the closure of the congress of the *École freudienne de Paris*, 19 April, 1970, *ibid.*, 391-99; *Television*, *passim*; *Seminar XX*, 14-17.
42. *Seminar XX*, 14-15.
43. "Allocution," *Scilicet* 2/3, 395
44. In this regard, one would consult Kuhn's work, and in particular his collection *The Essential Tension*, which is more explicit on the confrontation with Popper than *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962).
45. *Seminar VII*, 122.
46. One finds in Saul Kripke's work an articulation of the letter, of possible universes and a throw of the dice. Cf., in particular, *La logique des noms propres* (Paris: Editions de Minuit, 1982), 167-8 [*Naming and Necessity* (Cambridge MA: Harvard University Press, 1972)]. Evidently, this is to ignore the horror that a comparison with Lacan or Mallarmé might inspire in Kripke, supposing that he would even know what was at stake.
47. "Science and Truth," 22.
48. In other words, the doctrine of the letter is based on a logic of two periods. The reader can verify that Lacan's formula $S1(S1(S1(S1\emptyset S2)))$ — found in *Seminar XX*, 143 — is solely the literalization of this logic.
49. Which infinity is at stake? In the last resort, the literalizable infinity: that of the mathematicians, that is, of Cantor. But he came late. At the origin of Galilean science, the paradox would have it that at the very instant when it declared itself mathematized and referred the universe to infinity, there were no mathematics of infinity. It was upon this basis of delay that the oscillation between the positive infinity and the negative indefinite was structured, whose first signal was Descartes.
50. "Science and Truth," 10.
51. Cf., *Television*, 6.
52. Cf., "To be the most propitious language for scientific discourse, mathematics is the science without conscience which our good Rabelais promised...the gay science rejoices in presuming the death of the soul." In "L'Étourdit," *Scilicet* 4 (Paris: Seuil, 1973), 9. [Readers should note here that in French *conscience* signifies both moral conscience and consciousness. Trans.]
53. Walter Benjamin reports this comment by Leiris (without the editor's being able to determine whether it was Michel Leiris or Pierre Leiris involved): "the word 'familiar' would, in Baudelaire's work, be full of mystery and anxiety" (*Charles Baudelaire* [Paris: Payot, 1982], 236). To not be separated from "anywhere outside the world..." and from the non-familiar as refuge.



SCIENCE AND PSYCHOANALYSIS

GENEVIÈVE MOREL

I will begin with a little story that I heard in a lecture by Richard Feynman, the physicist known for having received the Nobel Prize (for quantum electrodynamics in 1965), and also, among science students of my generation, for his scientific manuals, which were without equal in France at that time.¹ In this lecture, to an audience of teachers, he offers diverse answers to the question “What is Science?” For example, he suggests that science is that which is transmitted from one generation to the next, on the condition that it is verified by experiment. This evokes science as transmittable knowledge and at the same time as being linked to experimentation. Feynman also gives another humorous and very Cartesian response: “Science is the belief in the ignorance of the experts.”² He tells us that science came to him by way of the desire of his father, who passed on to him a certain method of questioning the real without prejudice. This is a response that would have pleased Lacan, who said that the most certain real was the number. Feynman’s father had taught him that there was a constant relationship between the circumference of a circle and its diameter, which was the number π . Then, every time Feynman saw π somewhere he looked for the circle! One day, he came across a formula for electricity where there was π . He looked for the circle, which he found in the form of an electrical coil, and then finally he found the same formula with square electrical coils. He then understood that this π that always returns to the same place had nothing to do with shape. This is very close to what Lacan gives as one of his definitions of the real: “that which always returns to the same place, where the $\$$ can miss it.” And Feynman always missed π because he believed it to be linked to a shape or to the approximate value 3.14. He continued to miss it until the day when he admitted that π is that which always returns to the same place in certain formulas. That is a good example of the real. Feynman tells this story as his access to science, and I found

that very nice, but there is an even better illustration for our subject for today, science and psychoanalysis.

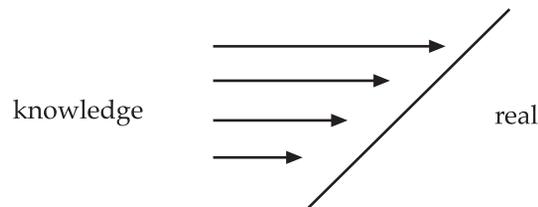
In order to prove that “mathematics isn’t only a matter of shape,” Feynman tells us another anecdote: as a student at Cornell, he scorned the other students for their stupidity. One day, at the cafeteria, he overheard one girl say another, “To make a straight line, you increase each row by the same quantity. See, when you make the same increase in each row, that makes a straight line.” He then said to himself, “What a wonderful principle of analytical geometry!” I quote him: “The more their conversation continued, the more astonished I was. Because it had never seemed to me that the female brain was capable of understanding analytical geometry”(!). As the two girls continued, he was more and more flabbergasted. Then he realized that, in fact, they were talking about knitting. This anecdote shows that one finds mathematics everywhere in reality, as structure, even in knitting and in the female brain. We find the following in his “The Nature of Physics”: “That day, I learned one thing; that the female brain is capable of understanding analytical geometry. Those who claim — even though it is manifestly contradicted every day — that women are as capable of rational thought as men may very well not be entirely mistaken.” (How tactless!) *“Maybe our difficulties come simply from our not yet having found the means to communicate with female brains. But when we succeed, there is always something to be learned from it.”*

There we have it: Feynman explains that the real of mathematics is structure, and along the way he talks about another real, the very one that characterizes psychoanalysis: “We have not yet found the means to communicate with female brains.” This is more or less what Lacan considers the real of the speaking being, insofar as (s)he is subject of language: “There is no sexual relationship,” that is to say, there is no formula like a mathematical formula, no relation or rapport that permits a man and a woman to know for certain who they are as sexed beings. And the sexual act? Well, psychoanalysis shows that nothing permits either partner to recognize him or herself definitively in the sexual act as a sexed subject. One cannot write $R(M, W)$ and this inability is linked to language. In animals, because of to the instinct which is like a sort of preformed knowledge in the real, there is a possibility of relationship. In human beings, this instinct is subverted by language; it no longer works. They find their way back a bit, regain their bearings thanks to something else, which is the phallus, but I won’t talk about that today. And when Feynman adds, “But when one succeeds (in communicating with a female brain), there is always something to be learned from it,” he says something very true. It is only by encounter, by contingency, that something can be established between the sexes, which isn’t written as a relationship (that would

assume a necessity), but is something haphazard and fleeting. This is the sort of real that psychoanalysis deals with, and without knowing it: when Feynman talks about the real, he cannot help talking about it as though by chance.

I am going to try to show you the similarities and fundamental differences between science and psychoanalysis. First we will take an epistemic point of view. Let us look at a proposition by Lacan. In a text from 1966 entitled “Science and Truth,” he affirms that “the subject upon which we operate can only be the subject of science.”³ And he recognizes that this might seem paradoxical. What subject is he talking about here? Is it about the man of science? About the man who is subjected to science, or just about man? No, it is not a matter of man: Lacan refutes that psychoanalysis is a humanism, or even a “human science”; it is at odds with the ideals of humanity. It is a matter of a concept, which has nothing intuitive about it. Let us try to deduce this.

Science is concerned with the real, and even more precisely, with *finding* some knowledge in the real, and then with operating with knowledge on the real. There is a dialectic between this finding and this operation. I will talk about this second aspect later. That one finds some knowledge in the real must appear evident to you. Think about Newton who discovers the laws of gravitation and the formula of attraction $F = g \frac{mm'}{d^2}$. (Here is a written “relationship” between masses, in opposition to “no sexual relationship.”) There is knowledge in the real because, up to a certain point, the real “obeys” this mathematical formula, and it did so even before the formula was discovered. This gave some the idea that knowledge was divine, emanating from God. This problematic would lead to the connection of science and religion. The real only obeyed the formula up to a certain point. Then one day it was noticed that the trajectory of Mercury didn’t obey Newtonian laws. Therefore, there was some real where the law became false or inexact. This indicates that there is a boundary between knowledge and the real, and that this boundary is mobile;



furthermore, it is not the same now as it was in the seventeenth century.

Science seeks to suppress this boundary and to cover over the real with knowledge. A “complete” physics would be just that: a science in which all real phenomena would find a determinate model within the internal coherence of a system. This shows that the real can be negatively defined in relation to knowledge: the real is that which it is impossible to know, impossible to subsume by any determinist mathematical laws. Lacan takes this “negative” definition of the real from Freud.⁴ He writes, “The primary process does not encounter anything real but the impossible.” This is because, as Freud explains it, the primary process, the most original in the unconscious, seeks to produce the hallucinatory image of the breast, in which the subject has already taken pleasure and which he desires to satisfy his need. The primary process succeeds in making this hallucination appear, but the tension of the need (the hunger) obviously doesn’t cease. In his “Formulations on the Two Principles of Mental Functioning,” Freud writes, “Whatever was thought of (wished for) was simply presented in a hallucinatory manner,” since “it was only the persistent non-occurrence of the expected satisfaction, the disappointment” that led to the deployment of the “reality principal” and of experience.⁵

The real, therefore, as impossible, can be applied to science. Furthermore, in *mathematical logic*, the theorems of Gödel, which in the ‘30s contributed to the crisis in the foundations of mathematics, have this formulation. I borrow from Gödel himself who “gave... (a) method of construction permitting the association of any given formalized system of axioms in mathematics with a problem about the whole undecidable numbers in this system.” That is to say, that for any system of axioms containing whole numbers, there are mathematical propositions that can be neither demonstrated nor invalidated, and there are even true propositions that cannot be demonstrated, but only observed. This *undecidable* is one of the names of the (negative) mathematical real. Gödel’s other theorem of 1931, “proof that the consistency of a system cannot be proven within that same system,” prohibits us from being sure that one will not someday find a mathematical proposition that will cause the entire system to crumble. Here, the negative is the “unprovable in the system, the consistency.” This means that in logic, knowledge is definitively limited in relation to the real, even if the system can grow infinitely in the refinement of theories and even if, conversely, each undecidable taken positively or negatively as axioms can produce two new mathematics that are incompatible with one another. Now, this open boundary, mobile and real, between knowledge and the real, is what Lacan calls the subject of science.

knowledge

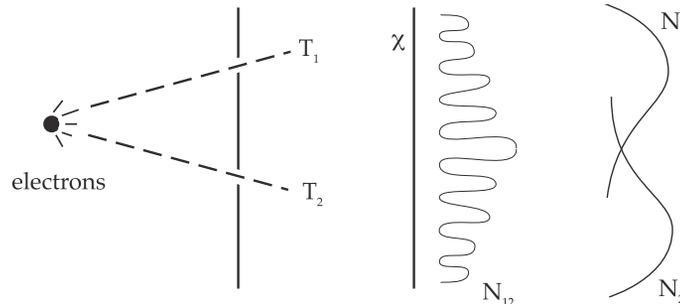
real

~~subject~~

And science is defined, he says, by the non-issue (the failure) of the effort *to suture* this subject.⁶ Since Gödel, it has been known that in logic there will always be some undecidable, some incompleteness.

Let's now take *game theory*: you know the game of "even and odd" described by Edgar Allan Poe in "The Purloined Letter." One must guess whether his partner has an even or odd number of marbles in his closed hand. Poe imagines a boy who succeeds at guessing by putting himself in the place of his partner, by identifying with him. If the boy finds his partner stupid, he will change his guess on the second round (from odd to even, or vice versa), and if he finds him a bit more intelligent, he will not change his guess, thinking that his partner will reason that the boy was going to think that he would change. In fact, there is a pitfall, a limit to the imaginary, which is that if one pushes the partner's intelligence to the next notch, one comes right back to the first idiot and thus one no longer knows what to bet. Game theory shows that in order to win in the long-term, one must play "by chance," that is to say, one must choose at random, by a throw of the dice, for example. Thus, an incalculable element is introduced into the calculation, which is, according to our definition, a real, and which has a positive name, chance. With a real partner, even in applying the method, as one doesn't play infinitely, one nevertheless wants to lose "by chance." Chance is therefore a name of the real in science and the point where the subject of science lies is the limit between the calculable and chance.

Finally, let's take *quantum mechanics* and Heisenberg's principle: "It is impossible to imagine a device, no matter what it is, that will permit the determination of the hole that the electron will take without at the same time disturbing the electron enough to destroy the figure of interferences." This deals with an experiment in which one sends electrons through a plate pierced with two holes, H1 and H2, and one measures in X the probability of arrival, for electrons per hour at each point.



(This creates a complicated curve (N12) with interferences. Consider proposition (A), which seems intuitive (because the electrons are separate, therefore compatible): “the electrons pass through either H1 or H2.” This proposition is either true or false. Blocking H1, one gets a curve obtained by the electrons passing only through H2, which is N2. Blocking H2, one gets the curve N1. But the whole process does not correspond to $N1 + N2 = N12$; therefore, (A) is false. It is false that the electrons pass through either H1 or H2.

Then one thinks: where they pass through, do they divide? One wants to have a quick look: the electrons are lit up, and the experiment is repeated. Then one sees them all pass through either H1 or H2; therefore, (A) becomes true. If one counts, with the light on, one gets $N12 = N1 + N2$ as though the electrons were bullets. This proves that any experiment is modified by observation (this is Heisenberg’s principle): one can in no way predict through which hole the electron will pass or behind which hole one will observe it. Chance is therefore present in the fundamental laws of physics. As Feynman says, “Nature itself doesn’t know which hole the electron will pass through.” Even more can be said: it is observation that introduces the randomness. It is because we want to know where this electron passes that we introduce randomness. Thus, in quantum mechanics, to measure is to draw lots. Here again, if knowledge increases, then the real becomes that much more opaque, which proves that the boundary is indeed real and that our subject of science also exists. Certain physicists, such as Einstein, certainly thought that there were hidden variables, that is to say, that our knowledge was insufficient and, for this reason, one found randomness in nature. But this was proven false. It is the opposite: the more one wants to know, the more one finds chance, irreducible to an underlying determinism, and one can no longer say “the same causes produce the same effects” on the scale of particles. This generates a crisis of foundations for science and for scientists who see effects of the existence of the subject of science, between knowledge and the real, that they would have preferred to abolish.

There are several possible responses. We saw in physics the theory of hidden variables; one alternative is to consider, contra Einstein, that “God does play dice,” that is to say, that chance is divine. In mathematics as well, if there is some undecidable, the “Platonist realists,” those who believe that there is a real in itself of mathematics, cannot accept that it is equivalent to either taking or not taking P (P being undecidable) into the system, for example, in the axiom of choice. Gödel, for example, who is the author of the most important limitations, paradoxically did not believe in chance, and thought that a special intuition existed in the mathematician that permitted him or her to know “the right choice” to implement. He fell into a serious depression after his discovery of the limitations of mathematical knowledge. There are also the formalists, who believe that the coherence of the

written, of the letter, is the only criterion of the real and that they don't need to worry about an external real (the Bourbakistes). The constructivists, on the contrary, accept nothing that one cannot hold in one's hands — infinity, for example — and believe that the undecidable leads to the exclusion of the principle of the excluded third, and so on. This is interesting because we see the return of the question of *a truth* independent of all demonstration, which goes back to the scientists, and back to when one believed the truth had been in some way eliminated by science.

Lacan locates the origin of modern science in the seventeenth century, and finds his subject of science in the thinking of Descartes, whose *cogito* breaks with the scholastic philosophy that mixed truth and knowledge. The logic of this reasoning can be defined by four phases:

1. Descartes refuses all existing knowledge in a methodical doubt. Nothing is certain. Even mathematical truths, such as $2 + 3 = 5$, are not above suspicion. It would suffice, in fact, for a cunning genius, a deceptive God, to have falsified the truth without the subject's knowing it.
2. Having arrived at this zero point of knowledge, a statement is necessary. The thoughts that lead to this refusal of knowledge demonstrate the existence of "a thing that thinks," that is, one sole certainty: "I am" this thinking thing.
3. The "I" thus constituted is correlative of the belief in a perfect God because how could an imperfect being have an idea of the infinite? (This is what intuitionism rejects.)
4. This perfect God makes himself the guarantor of eternal truths simply because he creates them. Thus the slogan of burgeoning science would be: "To God, the truth; to us, knowledge." And this knowledge, void of metaphysical truth, makes do with a formal truth, truth as a formal cause, which has nothing to do with the truth of being, nor of God. Formal truth is truth reduced to the real of writing, the truth of a formula.

This truth, as formal cause, tells us how it works "mathematically": it is like a syntax of the real, it doesn't tell us why. To those who thought that the law of gravitation implied a miracle (otherwise, how could a mass know at what distance it was from another mass so as to be able to obey the law?) Newton responded: "And after all this, one will wonder why Mr. Newton should be blamed because he does not explain by hypothesis the causes of gravity and the other attractions; as though it were a crime to be satisfied with certainties and to leave aside the 'uncertainties.'" Newton also said that "for lack of a sufficient number of experiments, he abstained from describing the laws of the mind of the agent

by which this attraction is carried out. And for the same reason, he remained silent on the cause of gravity, since there weren't experiments or phenomena that would permit him to prove what caused it" — which therefore did not prevent Newton from believing in God as the agent of gravity. Likewise Newton's famous *Hypotheses non fingo* — which Lacan in his *Radiophonie* calls "the charter of structure" because it presides over the discovery of formulas, of knowledge inscribed in the real — doesn't mean the condemnation of all hypotheses, but only of those that one can neither verify nor invalidate in a mathematically treated experiment.⁸ The title of his work, *Philosophiae naturalis principia mathematica*, will confirm Newton's position: to transmit the mathematical principles and to leave aside, for religion, the question of the hyperphysical power that would be the non-formal "true cause" of gravitation.

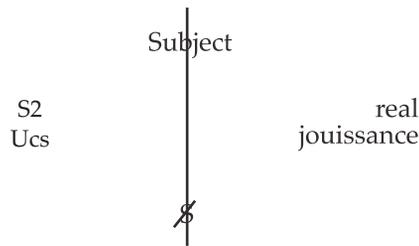
Presently in modern sciences, this initial separation of truth (as God's affair) and knowledge (our affair) is modified, or at least shaken, in the minds of certain scientists by the impossibilities encountered by science — of which burgeoning science had no idea. From this, there is a certain return in the real of this foreclosed truth, which one can observe in the subjective position of today's savants (cf., Gödel and Platonism, or those who call God chance). Religion makes a return to this point, among scientists, but not in science itself: for science this division between the formal truth and the eternal truth that we discussed earlier is a matter of structure.

Why, in psychoanalysis, do we operate upon this same subject of science? At the beginning of an analysis, something similar to Descartes' approach is produced. The subject who comes for analysis has also refused the previously existing knowledge about his or her symptom (medicine, and so on). Assuming that there is some knowledge about this symptom that makes up the unconscious, the subject further assumes that the Other possesses this knowledge — this is the subject supposed to know. The analysand assumes that this knowledge exists, a bit like the scientist assumes some knowledge in the real, and this is the very condition for him or her to be able to decipher this real, to make it really exist by enunciating it. But the difference from Descartes is that this knowledge concerning the symptom of the subject is not separate from the truth of his or her being. Because the subject suffers precisely on account of this truth embodied by his or her symptom, (s)he cannot simply say, "To the other, the truth; to me, knowledge." And the cure consists in maximally transforming this truth into knowledge. Henceforth, the truth does not have the same status; it is the *material cause*, according to the axiom, "The unconscious is structured like a language." In other words, the symptom is the effect of language on the subject. This material cause means that psychoanalysis only operates by means of speech, even if that doesn't mean that one goes there to talk! The truth of being will only be

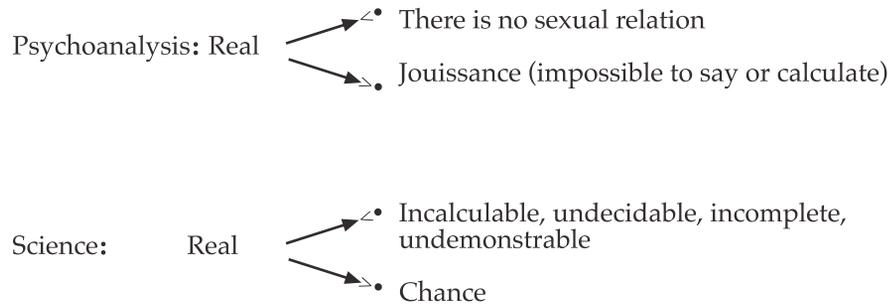
approached by what can be said about it in analysis, and it will be thus modified. There is therefore also a dialectic in psychoanalysis between the fact of finding knowledge and of operating on the real.

Another difference is that this knowledge, for the most part, is particular rather than universal. There is no collective unconscious. And this knowledge can only be deciphered in the Freudian system, not by reading or introspection. This renders the experiment very difficult to verify by others. The pass invented by the Freudian School is an attempt to respond to this difficulty. The particularity of this knowledge goes even further: one can say that the unconscious of a subject in analysis depends on the analyst, on the analyst's desire and on the subject's particular relationship with the experience. This obviously implies the non-scientific nature of psychoanalysis: in science, the desire of the experimenter plays no role, the experimenter is interchangeable — this is the difference between alchemy and chemistry. It is not so in psychoanalysis, where the transmission of the analysis is marked by the analyst who transmits it.

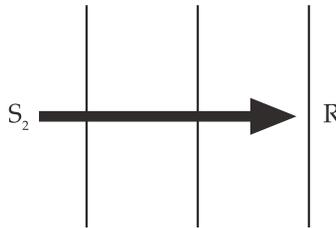
And the real? And this subject, why is it still the same as that of science? Because we have the same structure:



In psychoanalysis also, the deciphering of unconscious knowledge has a real limit. However much the unconscious is deciphered, it cannot make the sexual relationship exist, it cannot write it. The real is an integral constituent of the experiment, as in quantum mechanics. And as a matter of fact, one can also call it chance, *tuché*, encounter. An analyst's interpretation, as calculated as it is, has incalculable effects because it concerns jouissance. Jouissance is one of those names of the real at which psychoanalysis takes aim. We saw that the real was characterized by an impossibility:



The analytic operation always takes aim at this boundary between knowledge and jouissance, symbolic and real, where the subject is produced. One must fight against the knowledge of the unconscious that effaces the subject because (s)he doesn't want to know that (s)he knows it, and against the jouissance that causes "a fade-out" (jouissance is inter-dicted). The difference is that science seeks to suture the "fade out" where this subject appears, while psychoanalysis seeks to expose it. The goal of psychoanalysis is therefore to push back the boundary by advancing on jouissance, thanks to a deciphering. But, as in science — which shows that the subject is real — this boundary cannot be pushed back indefinitely:



One cannot cover the whole real up by the symbolic. What is the real limit? It is "the axiom" of the subject. Lacan uses this term for fantasy. For any given subject, the real is filtered, framed by fantasy, as though by a window. When, in analysis, the subject knows to which fundamental fantasy (s)he is bound, this paradoxically gives him or her a few degrees more freedom. The subject comes to the impossible that is particular to him or her, and, Lacan says, this opens new paths.

I would like to finish on a more ethical plane. Earlier, I said that science does not only discover knowledge in the real. Thanks to this knowledge, science produces new effects on the real; actually, so does psychoanalysis. In the last issue of *L'Annee*, a lesson from

Lacan's seminar, *L'envers de la psychanalyse*, was published. Here, Lacan forges a few word for this: *o-percevoir*, a contraction of "to operate" and "to perceive."⁹

Science creates something new for the subject. Lacan invents two words relating to this: *aléthosphère* and *lathouse*. *Aléthosphère* is the atmosphere of truth, the effects of formal truth on the atmosphere, to populate it with waves. These waves, when Lacan wrote this in 1970, were what upheld cosmonauts in space. In *Radiophonie*, Lacan calls them acosmonauts because science dismisses the cosmos. They were able "to communicate," thanks to waves, by exchanging banalities and trivialities such as "how are you?" and so on. This parable shows us that the modern subject of the scientific age is no longer sustained by ideals (like the beautiful) as (s)he was before, but by prosthetics, which are these radio voices. Incidentally, more recently, during the Gulf War, the public was sustained by gazes incarnated by television. These signs of the desire of the Other are actualized, as they are in psychosis, but for all subjects. In "The Function and Field of Speech and Language in Psychoanalysis," along with paradoxes about speech and language, Lacan talked about "the most profound alienation of the subject in our scientific civilization."¹⁰ Lacan was already stressing that "communication" permitted the subject to forget his or her subjectivity: "He will make an effective contribution to the common task in his daily work and will be able to furnish his leisure time with all the pleasures of a profuse culture which, from detective novels to historical memoirs, from educational lectures to the orthopedics of group relations, will give him the wherewithal to forget his own existence and his death, at the same time to misconstrue (*méconnaître*) the particular meaning of his life in false communication."¹¹

The second word that Lacan introduces is *lathouse* from *lanthano*, "to conceal," where *alètheia* comes from, the truth (of the aorist). It is the materialization of the formal truth in a concealed object that causes desire: "And for the petty objects *a* that you are going to encounter upon leaving, there on the pavement at every street corner, behind every store window, in this profusion of objects made to create your desire, insofar as it is now science that creates it, think of these objects as *lathouse*."

Thus, the subject is at once dismissed by science, universalized, prostheticized by the *aléthosphère*, captivated by the *lathouses*. And here psychoanalysis has a role to play, to succeed in sufficiently making the *lathouse* (even if it is impossible) cause the desire of a subject and restore his subjective singularity.

To illustrate, I will paraphrase a joke told by Feynman: A king who had asked Euclid to teach him geometry was complaining about its difficulty. Euclid then responded: "There is no royal road" (*Il n'y a pas de voie royale*). Now, for psychoanalysis, there is a royal road, as one knows since Freud: the dream is the royal road to the unconscious. And

that's how Freud began his work, *The Interpretation of Dreams*: with the analysis of his own dreams and by breaking with the science of his era, even if he otherwise respected it and pursued it as an ideal for psychoanalysis.

I will finish with three small clinical examples showing the effects of science on subjects and the transformation of the psychoanalytic clinic that results from these effects.

DREAMING OF FORECLOSURE THANKS TO SCIENCE

A young homosexual woman, dressed as a man, a hysteric who wants to arouse "doubt" in the other with regard to her gender. She wants to be taken for a man, and wants to exhibit herself with heterosexual women in order to cause in the other this famous "doubt," the lack of the Other, which is her own question: "Am I a man or a woman?" — expressed in acting-out. She has never had heterosexual relations, except once with the son of a woman with whom she had a liaison; it was the day of her ovulation and she wanted a child. It did not work, and she no longer wants to try. I am only stressing a simple dream: "The baby of her sister's female friend (who is also homosexual), a boy, is born 'without a father,' by anonymous artificial insemination."

This is a very simple example that shows how scientific progress is used as a means to bypass the father by a person who would like to eliminate men; this is furthermore what the young woman comes to talk about. She pays the price for it in the form of a massive inhibition, having been reduced to imitating men exclusively, rejecting femininity on the Other's side. I would say that this woman is dreaming of the foreclosure of the Name-of-the-Father, and in order to do this, she takes from science that upon which her dream is grounded: artificial procreation. Indeed, science, Lacan said, wants to know nothing (in the sense of foreclosure) about the truth as cause, and "psychoanalysis is essentially what brings the Name-of-the-Father back into scientific consideration."¹² The hysteric in question dreams of foreclosure by borrowing it from science and comes to analysis suffering from this undelivered, even though it is ceaselessly addressed to all passers-by, whose uneasiness it is meant to cause. One of the questions raised by this example is clearly that of artificial forms of procreation.

EISLER'S CASE (1921): THE EFFECTS OF THE DISCOURSE OF SCIENCE WHEN THE GAZE IS REALIZED

This deals with an observation of traumatic hysteria, credited to Joseph Eisler, from the years 1914-1918; Lacan comments briefly upon this case in his seminar on psychosis.¹³ The man in question is a tram conductor during the Hungarian revolution after having been first a baker, and then a chemist. One day, he falls on the ground while getting off the

tram. He injures himself, is taken to the hospital, and his scalp is stitched up. Nothing is wrong with him. “He left after a thorough examination. They took a lot of X-rays, and they were quite certain that nothing was wrong with him.”¹⁴ Later he falls victim to crises that cause pain in his abdomen so severe that he has to use a pillow to block it. He even loses consciousness at times. Since nothing organic is found to be wrong with him, traumatic hysteria is suspected and he is sent to Eisler. Eisler notices the man’s ambiguous positions on the couch...and interprets his homosexuality. The subject is not at all affected by this. In his childhood, multiple traumas are found... In spite of the fruitfulness of this diagnosis, Lacan remarks, “it is noticed when the material is being produced that what was decisive in the decompensation of the neurosis wasn’t the accident but the radiographic examinations.... It is at the time of the examinations which subject him to mysterious instruments that the subject’s crises are triggered. And these crises, their sense... appear linked to a fantasy of pregnancy.”¹⁵ And therefore, linked to the question: “Am I or am I not capable of procreating?” This interpretation is confirmed by certain salient elements in the subject’s past; he had, as a child, witnessed a baby being cut into pieces.

Let us bring up, for our present goal, that X-rays date from the beginning of the century. This invention is therefore relatively recent at the time of this observation. Now X-ray technology has lost its novelty. For this subject, it is the penetration of this gaze into the interior of his body that impregnates him This observation shows the unexpected effect that a discovery normally intended for his well-being has on the subject. We should not deduce from this that X-rays should not be used, but this example shows that each scientific discovery operates in a particular way on subjects. Here the verb *o-percevoir* is appropriate for science: a subject’s response that science does not take into account — because it is unable to do so.

AN UNCONSCIOUS STRUCTURED LIKE A MACINTOSH

Lacan’s axiom, “The unconscious is structured like a language,” implies that language is divided according to the two planes of metaphor and metonymy. The metaphor is the figure used by poetry, and Lacan showed how, as a result of the foreclosure of the Name-of-the-Father, poetry is lacking in psychosis. He notes this in particular about the *Mémoires* of President Schreber. It is also clear that computers do not have the capacity to make metaphors, in the creative sense of the word. Their system is reduced to a syntax in which there is no room for chance, so much so that it is even extremely difficult, speaking in terms of mathematics, to make a machine simulate chance. Indeed, a machine only does what it is told to do and therefore everything is planned. One is required to make it function with certain sequences that mime randomness and

to make intervene, at certain moments of the operation, an exterior element, such as the computer's clock.

Mr. X is a computer programmer. I will not describe his case in detail. He is a paranoiac with a "delirious core" organized around his recently dead father and his noble family. Except for this and a slightly peculiar life with his girlfriend, he is completely normal — an expression used by Lacan in the '70s in reference to psychosis. A few signifiers permit him to make the world go around: "the pressure" at work and at home (he mistreats his girlfriend), the opposition of "the moral" and "the physical" (him and his girlfriend). He aspires to be a "boss" like his father.

Mr. X seems completely dehumanized. Not the slightest lack. Not the slightest dialectic. From the beginning of analysis, which he is determined to do like the rest of his family and which is justified by his anguish, he explains to me his conception of the unconscious: like a Macintosh, with embedded interlocking drawers that one pulls open in turn. The only difference is that he senses that he lacks a "stopping principle." Hence, he has the idea that his unconscious is algorithmic, but cannot stop. For us, the stopping principle is castration. Obviously, for him this is cruelly lacking. He sees analysis as a gigantic programming of which he is the master. This was quickly felt in transference... In this conception, there was no room for chance, *tuché*, surprise. He requires that I be able to describe the trajectory of analysis like a curve upon which I would then pinpoint his precise coordinates.

This example illustrates well the affinity of the psychotic with one of the most famous productions of modern science, the computer — whose invention is tied to these discoveries of the '30s that limited its scope. Here, the subject is sustained as though by a prosthesis, by the machine incarnating mathematics, right up to his unconscious. It is what "supports the perineum" for him, as Lacan says in *L'envers de la psychanalyse*. In other words, it is his body's skeleton, unsupported by the paternal metaphor.

Translated by Karen M. Fisher

1. This lecture was given during the cycle of "Lectures in the Freudian Field" (*Conférences du Champ freudien*) in Louvain la-Neuve, Belgium, in February, 1991.
2. [This translation, as well as any subsequent translations from Feynman's lecture, is mine. In addition, all translations of future references are mine unless an English translation is noted. Trans.]
3. Jacques Lacan, "La Science et la vérité," in *Écrits* (Paris: Seuil, 1966), 858. [An English translation of this text by Bruce Fink appeared as "Science and Truth" in *Newsletter of the Freudian Field* 3, 1-2 (1989): 4-29. Trans.]
4. Lacan, "De nos antécédents," in *Écrits* (Paris: Seuil, 1966), 68.
5. Sigmund Freud, "Formulations on the Two Principles of Mental Functioning," in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, trans. James Strachey (London: Hogarth Press and The Institute of Psychoanalysis, 1961), vol. XII, 219.
6. Lacan, "Science and Truth," 10.
7. Alexandre Koyré, *Newtonian Studies* (Chicago: University of Chicago Press, 1965).
8. Koyré, *Newtonian Studies*, 16, note 3.
9. Lacan, "L'envers de la psychanalyse," *L'Ane* 45 (1991).
10. Lacan, *Écrits: A Selection*, trans. Alan Sheridan (New York: Norton, 1977), 70.
11. *Ibid.*, 70.
12. Lacan, "Science and Truth," 22.
13. Lacan, *Seminar III. The Psychoses*, trans. Russell Grigg (New York: Norton, 1993), 168-171.
14. *Ibid.*, 168.
15. *Ibid.*, 170.

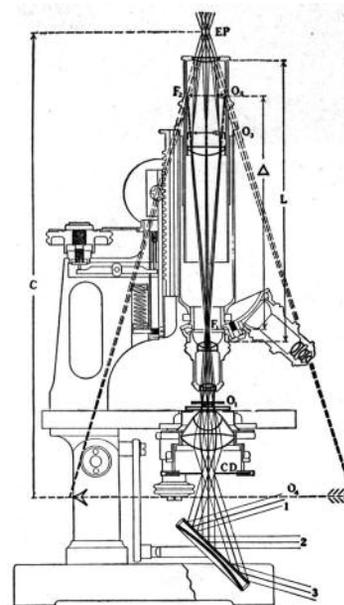


DIAGRAM SHOWING PATH OF LIGHT RAYS

- F₁ Upper focal plane of objective
- F₂ Lower focal plane of eyepiece
- Δ Optical tube length = distance between F₁ and F₂
- O₁ Object
- O₂ Real image in F₂, transposed by the collective lens, to
- O₃ Real image in eyepiece diaphragm
- O₄ Virtual image formed at the projection distance C, 250 mm. from
- EP Eyepoint
- CD Condenser diaphragm
- L Mechanical tube length (160 mm.)
- 1, 2, 3 Three pencils of parallel light coming from different points of a distant illuminant, for instance, a white cloud, which illuminate three different points of the object



THE BODY AND PSYCHO; OR, OF “FARTHER USES OF THE DEAD TO THE LIVING”

MIRAN BOŽOVIĆ

The stuffing of dead human bodies and their subsequent animation is not something that originates with Norman Bates in Alfred Hitchcock’s *Psycho*. There is in fact a quite respectable philosophical history to human taxidermy and bringing stuffed bodies back to life that reaches back to the beginning of the nineteenth century. Thus, in her post-mortem fate, in her “after-life,” Mrs. Bates is not alone; her resurrected body has at least one distinguished historical predecessor, namely the stuffed body of the British utilitarian philosopher, Jeremy Bentham.

I

Bentham’s last wish was that, after his death, his body be publicly dissected, and then preserved and exhibited. The ideas behind this somewhat extraordinary wish were elaborated in his work *Auto-Icon; or, Farther Uses of the Dead to the Living*.¹ While other philosophers who reflect on death are mostly concerned with the destiny of the soul after the death of the body, Bentham, in *Auto-Icon*, is concerned exclusively with the destiny of the dead body, that is, the body that the soul leaves behind. Accordingly, whereas other philosophers’ reflections on death usually take the form of meditations on the immortality of the soul and completely disregard the post-mortem fate of the body, Bentham’s reflections take the form of meditations on the body — first and foremost on his own dead body — and disregard the destiny of the soul. As a treatise on the author’s own dead body, Bentham’s *Auto-Icon* is perhaps the only work of its kind; it thus constitutes its own genre, for which Bentham coined a new term: “auto-thanatography,”² a natural sequel to the autobiography.

While people generally find the very thought of death or dead bodies revolting, Bentham, by contrast, respected dead bodies — the bodies of animals and humans, preserved after death “in the torrid regions of Africa,” “in the ice of the poles,” “in the ruins of

Herculaneum and Pompeii," "in rocks," and in "bogs, impregnated with tannine matter" — for providing "valuable materials for thought" (1). While others, as a rule, rarely talk about death, particularly not their own, Bentham says of his own death, and of the fate of his body after death, that "for many a year the subject has been a favorite one at my table" (2).

A good example of the way people generally try at all costs to ward off the idea of their own death can be found in Leo Tolstoy's novella *The Death of Ivan Ilyich*. In the novella, not only do all the friends of the recently deceased Ivan Ilyich behave "as though death were a chance experience that could happen only to Ivan Ilyich,"³ and not to themselves, but Ivan himself dies believing that death is an experience that happens only to others and not to himself:

Ivan Ilyich saw that he was dying, and he was in a constant state of despair.

In the depth of his heart he knew he was dying, but not only was he unaccustomed to such an idea, he simply could not grasp it, could not grasp it at all.

The syllogism he had learned from Kiesewetter's logic — "Caius is a man, men are mortal, therefore Caius is mortal" — had always seemed to him correct as applied to Caius, but by no means to himself. That man Caius represented man in the abstract, and so the reasoning was perfectly sound; but he was not Caius, not an abstract man; he had always been a creature quite, quite distinct from all the others....

Caius really was mortal, and it was only right that he should die, but for him, Vanya, Ivan Ilyich, with all his thoughts and feelings, it was something else again. And it simply was not possible that he should have to die. That would be too terrible.⁴

Although Ivan is terminally ill, he still thinks that it will be Caius, that is, "man in the abstract," who will die, not he himself.

Although Bentham wrote his *Auto-Icon* shortly before his death and referred to it as his "last work,"⁵ he betrays in the treatise no fear of death; instead, he reflects on his own death just as objectively as he reflects upon everything else, that is, from the point of view of its possible utility. Although he usually writes in a cold and dull manner, this utilitarian sage, when writing his auto-thanatography, becomes lively for the first time and does not even try to hide his enthusiasm in contemplating the post-mortem fate of his body. As a utilitarian, he was exclusively interested in how he could be of use to his fellow humans even after death, that is, in what way even his dead body could contribute to the happiness of the living. As he wrote already in 1769, he wished "that mankind may reap some small benefit in and by my decease, having hitherto had small opportunities to contribute thereto while living."⁶

Other philosophers, such as Nicolas Malebranche or George Berkeley, similarly display no fear of death, but Bentham's lack of fear stems from different causes. It is, perhaps, not hard to face death if we share Berkeley's belief that the soul is "naturally immortal"⁷ and that "the Resurrection follows the next moment to death."⁸ The latter idea constitutes one of the "several paradoxes" that follow from Berkeley's radical theory of time. If, as a mind, I only exist as long as I perceive, then, of course, the moment I cease to perceive — that is, the moment I fall into a totally dreamless sleep or lose consciousness — I should cease to exist. Subsequently, in order to avoid this conclusion, Berkeley introduces his theory of time. According to Berkeley, what constitutes the time of each individual mind — and each individual mind has its own wholly subjective time, there is no absolute time — is "the succession of ideas"⁹ in the mind. It follows that the moment the succession of ideas ceases to exist, so does time. But if, when there is no longer any succession of ideas, there is also no time, then between death (the moment when I lose consciousness) and the resurrection (the moment when I regain consciousness) there is no time for me not to exist.¹⁰ Thus, what Berkeley is claiming is not that *I* myself do not exist in the interval separating my death from the resurrection, but rather the *interval* itself does not exist. Since he believed that the "intervals of Death or Annihilation" were "nothing,"¹¹ is it any wonder that he got a friend to assist him in hanging himself because he was curious to know "what were the pains and symptoms...felt upon such an occasion"?¹²

It might be even less difficult to face death, if we were to share Malebranche's belief that "at death we do not lose anything."¹³ According to Malebranche, in addition to the material body, which is inaccessible and inefficacious, we possess yet another "ideal" or "intelligible body"; and it is only the latter body that is capable of acting on us. It is not simply that the ideal body begins acting on us after death, when we have lost the material body; rather the ideal body acts on us all along. Thus, although we believe that it is our material body that causes pain when we are injured, for example, it is in fact the ideal body that is the source of pain. Since, according to Malebranche, the soul can be united only to that which can act upon it, it follows that the soul is not, and cannot be, united to the material, but only to the ideal body. The ideal body is "more real" than the material body; moreover, unlike the material body which no longer exists after death, our ideal body is "incorruptible,"¹⁴ and we therefore possess it even after we have lost the material one. Since death cannot separate us from the ideal body, to which we are really united, but only from the material body, which even while we were still alive was incapable of acting on us and was thus actually dead even before death, it is clear that "at death we do not lose anything": "therefore death which separates the soul...from this insensible body...is not to be feared at all."¹⁵ Furthermore, since the body that acts upon us even while the material

body is still alive is precisely the body that also acts upon us after the material body's death, it follows that, in Malebranche, resurrection *precedes* death itself.¹⁶

On the other hand, the "soul, existing in a state of separation from the body," cannot even be said to be a "real entity." Indeed, it may well turn out to be only a "fictitious entity"¹⁷ and our entire post-mortem fate that of "a senseless carcass" (7). Consequently, if we share Bentham's uncertainty about the ontological status of the soul after the death of the body, there clearly is not much we can hope for in the afterlife. While Malebranche, in *Entretiens sur la mort*, views his post-mortem fate as dependent on the immortal soul, which, even after the death of the material body, remains united to the ideal body, Bentham, by contrast, in *Auto-Icon*, sees his post-mortem fate as dependent solely on his dead body. Although this body will remain soulless even after the resurrection, it will nevertheless be this body that Bentham will claim as "his own self."

2

According to Bentham, the conventional disposal of the body after death goes against utilitarian wisdom, if not against common sense: not only does it actively harm the living — "undertaker, lawyer, priest — all join in the depredation" (1) — it also deprives them of the good they might otherwise have obtained from the dead. But what is the good that can be extracted from the dead? In what way can the dead, through their bodies, contribute "to the common stock of human happiness" (2)?

After death, human bodies can serve two purposes: one, "transitory," and the other, "permanent." The transitory purpose is "anatomical, or dissectional," and the permanent one is "conservative, or statuary" (2). "The mass of matter which death has created," should not simply be disposed of, but should be used "with a view to the felicity of mankind." Bearing in mind his "greatest-happiness principle," Bentham argues that the dead body can be put to the best use if "the soft and corruptible parts" are employed "for the purpose of anatomical instructions," and "the comparatively incorruptible part" converted into "an Auto-Icon" (2).

Let us first look at the "transitory," that is, "anatomical, or dissectional" purpose of dead human bodies. It might seem unnecessary for utilitarians to have to persuade anyone about the utility of the dead in teaching anatomy — by now most of us will admit that by dissecting and studying the bodies "of the insensible dead," the "susceptible living" may be spared pain, disease, and premature death. Yet, in Bentham's time, this position was not widely shared. As Ruth Richardson observes, in Great Britain during this period, the only legal source of bodies for medical dissection were the bodies of hanged murderers. The dissection, performed by a surgeon-anatomist, was considered part of the punishment, an

extension of the hangman's task.¹⁸ Consequently, anatomists acquired a particularly low reputation in public opinion and the act of dissection itself was viewed with suspicion. The dissection of murderers was made compulsory by the 1752 Murder Act, in which dissection is described as a "further Terror and peculiar Mark of Infamy."¹⁹ But since the bodies from this source clearly were in scarce supply, to satisfy the ever-increasing demand of the anatomy schools, the so-called "bodysnatchers" (or "resurrectionists") emerged and began digging corpses up from their graves and selling them to anatomy schools. Bodysnatching was not technically a crime of theft — dead bodies were not thought to belong to anyone by law and consequently "could neither be owned or stolen" — but was considered merely as an offense against public morality.²⁰ However, the most notorious of the body snatchers, Burke and Hare from Edinburgh, mentioned by Bentham in his *Auto-Icon*, did not simply dig up dead bodies, but actually murdered living people with the intention of selling their bodies to anatomists.

It is in this historical context that Bentham's extraordinary last will must be understood. Bentham left his dead body to his friend and disciple, Dr. Thomas Southwood Smith; it thus became his property and could not be stolen from him with impunity. He was to dissect it and use it

as the means of illustrating a series of lectures to which scientific & literary men are to be invited.... These lectures are to expound the situation structure & functions of the different organs.... The object of these lectures being two fold first to communicate curious interesting & highly important knowledge & secondly to show that the primitive horror at dissection originates in ignorance....²¹

Bentham left his own body to an anatomist for dissection in a period when there was a growing demand for corpses in the medical schools, but only a scant supply, since only convicted criminals could be dissected. Indeed, corpses were so much in demand and so scarce in supply, that murder began to pay. According to Bentham, it was "the pecuniary value attached" to the corpses that "created murderers in the shapes of Burkes and Hares" (7). Rather than an empty gesture of a capricious philosopher, who had lost his mind in old age, Bentham's donation of his body was an "exemplary bequest,"²² intended to inspire others to bequeath their bodies for dissection after death, and thus ultimately to make murder unprofitable. Smith executed Bentham's last will faithfully, and dissected his friend's body in front of his disciples and medical students. Before the dissection, he gave a long oration, entitled *A Lecture delivered over the remains of Jeremy Bentham*, over the corpse.

The idea that dissected human bodies, having once served their "transitory" purpose, should be preserved, that is, put to their "permanent," or "conservative, or statuary" purpose, is urged by Bentham as follows:

What resemblance, what painting, what statue of a human being can be so like him, as, in the character of an Auto-Icon, he or she will be to himself or herself. Is not identity preferable to similitude? (3)

Since nothing resembles an individual as well as that individual resembles him or herself, the bodies of the dead need to be preserved as their own most adequate representations. While one is usually represented after death by various icons, that is, “resemblances,” “paintings” and “statues,” preserving the body makes it possible for anyone to become his or her own icon, that is, an “auto-icon.” The term “auto-icon,” invented by Bentham, is, as he says, “self-explanatory”; it means “a man who is his own image” (2). Converted into an auto-icon, every man could, even after death, continue to represent himself, to be “his own image.” Since each man would be “his own statue” (2), auto-iconism would, of course, “supersede the necessity of sculpture” (4); that is, since each man would be “his own monument” (4), “there would no longer be needed monuments of stone or marble” (3). The art of auto-iconism, in short, would provide “likenesses more perfect than painting or sculpture could furnish” (5). Bentham is thus interested in the dead body in the same way that DeQuincy is interested in murder — as the object of “one of the fine arts.”

Bentham set a personal example not only for the “transitory,” that is the “anatomical” purpose, but also for the “permanent” or “statuary” purpose of dead human bodies: in his will, he directed Smith, after he had performed the dissection and anatomical demonstrations, to reassemble his bones into a skeleton, place on it the head, which was to have been processed separately, and then clothe the skeleton “in one of the suits of black usually worn by me” and seat it “in a Chair usually occupied by me when living.” Thus clad, the skeleton was to be equipped with “the staff in my later years borne by me” and put in “an appropriate box or case....”²³ As a result, Bentham can still be seen today exemplifying the “permanent” purpose of dead human bodies: he sits as “his own statue” in a glass and mahogany case in a corridor of University College London — and still represents himself more than a century and a half after his death.

While the conservative preparation of the trunk and extremities amounted to no more than ordinary taxidermy — the skeleton is tied together at the joints by copper wires and wrapped in straw, hay, tow, cotton wool, wood wool, and so on²⁴ — the auto-iconization of the head required a special treatment. That special attention should be paid to the head was clear to Bentham: “The head of each individual is peculiar to him and, when properly preserved, is better than a statue” (2). Accordingly, it was advised that the head be treated like the heads of indigenous New Zealanders, that is, by exsiccation. (A head, processed in this way, can be seen, for example, in Hitchcock’s *Under Capricorn*.) In striving to contribute to human happiness, then, a civilized man was not to scorn the “savage

ingenuity” of “the barbarous New Zealanders,” who have “preceded the most cultivated nations in the Auto-Icon art” (2). The eyes, one of the “soft and corruptible parts” of the body, did not have to present a problem, since artificial eyes would be made out of glass and would not be “distinguishable from those which nature makes” (2).

A curious irony had it that the auto-iconization of Bentham’s body failed precisely at the head. Although Smith faithfully followed Bentham’s instructions, the desiccated head was markedly dissimilar to the head of the living Bentham, and the anatomist therefore had a wax replica made to replace it. Although “identical” to the head of the living Bentham, the original head of the auto-icon was no longer “similar” to it, and Bentham, converted into an auto-icon, no longer resembled himself. It was, then, the wax replica that turned out to be more “like” Bentham, than Bentham, in the character of an auto-icon, was “like himself.” However, as it is the head that, according to Bentham, is what is “peculiar” to each individual, Bentham’s auto-icon, with its wax head, turned out to be no “better than a statue.” The irony of this lies not only in the fact that it was the example of Bentham himself that proved that an individual is not necessarily his or her own most adequate representation after death, but also in the fact that in considering how to preserve his own head after death, Bentham was led to toy with the idea of experimenting in “the Auto-Icon art” of the New Zealanders: he planned to obtain a human head from an anatomist and dry it out in a stove in his house.²⁵ It is not clear if the experiment was ever actually carried out, although Bentham, in his *Auto-Icon*, does somewhat cryptically refer to experiments in “the slow exhaustion of the moisture from the human head,” which have been going on “in this country” and “which promise complete success” (2).

3

How exactly were the auto-iconized dead supposed to “contribute to the happiness of the living”? Besides their numerous other uses — moral, political, economical, genealogical, architectural, phrenological²⁶ and so on — the auto-icons were also supposed to benefit the living through their “theatrical, or dramatic use” (12). Auto-iconism would make possible an entirely new kind of theater, in which the auto-icons performed as actors. On the stage, the auto-icons would speak and gesticulate; they would be animated either from within (moved by “a boy stationed within and hidden by the robe”) or from without (“by means of strings or wires,” operated by “persons under the stage”). By special contrivances, it would seem as if the auto-icons breathed and as if their voices, lent by actors, issued from their own mouths; since the skin on their faces “would be rendered of a more or less brownish hue,” as a result of “the process of exsiccation,” (13) they would need to wear stage make-up. Thus, for the ulti-

mate good to be extracted from them, the dead would have to be, as it were, brought back to life.

The only roles the dead would play would be themselves. Thus, for instance, Shakespeare's *Julius Caesar*, staged according to Bentham's principles of auto-iconism, would feature Julius Caesar himself, that is, his auto-icon, in the title role. "What actor can play Julius Caesar better than Julius Caesar, in the character of an auto-icon, can play himself?" is how the first sentence of Bentham's manifesto of the auto-iconic theater would no doubt read. All the roles in this theater would thus be the posthumous equivalent of Hitchcock's personal appearances in his films (in which the director plays himself). Moreover, the auto-iconic theater would make it possible for the characters that actually lived centuries and continents apart to meet on stage face to face.

It is in this spirit that Bentham briefly sketches some dialogues that could be staged in the auto-iconic theater. The dialogues are categorized according to different disciplines, such as ethics, mathematics, politics and so on.²⁷ Each of the performers discusses his own work and his achievements. The performers include thinkers as ancient as Confucius, Aristotle and Euclid, and as recent as John Locke, Isaac Newton and D'Alembert. In all the draft dialogues, there is one name that persistently pops up, that of Bentham himself. Bentham would thus appear in all these dialogues and of course play himself (just as Hitchcock appears in each of his films and plays himself). But unlike Hitchcock, who assigned himself brief walk-ons in his films, Bentham reserves for himself absolutely pivotal roles in which he would compare his various achievements to the leading authorities in each particular field. Bentham also works out the choreography of the corpses on the stage, down to the smallest details: when all the representatives of a particular discipline were gathered on the stage, Bentham would enter and be greeted in the name of all the performers by one of the interlocutors who would then introduce Bentham to each of the others and briefly sketch the principal achievements of each in his respective discipline.²⁸ The following exchange on ethics is a good example of the typical course of these dialogues. "The sage of the 1830th year after the Christian era," that is, Bentham himself, says to "the sage of three centuries and a half before the same," that is, Aristotle:

In your work on morals, at the very outset of it, you bring forward the observation, that good in some shape or other, is the end in view of all men. Two thousand years have passed, and in all that time, nothing has been done on the subject by anybody else. Nobody has given a precise and clear import to the word corresponding to good, by translating the language of good and evil into the language of pleasure and pain... (14).

Nobody but Bentham himself, of course, who considered paraphrasis — namely replacing words referring to abstract and obscure entities, the reality of which is merely "verbal,"

with words referring to perceptible, really existing entities, such as pleasure and pain — to be one of his most important achievements! More or less the same story is repeated also in Bentham's dialogues on mathematics with Euclid and Newton, on politics with John Locke, and so forth.²⁹

Dialogues between *these* dead clearly could not have been staged auto-iconically, since, with the exception of Bentham himself, none of them could play themselves any longer. While Bentham might well have hesitated as to the exact ontological status of their souls existing in a state of separation from their bodies — are they “inferential real entities” or “inferential fictitious entities”? — he had no doubt as to their bodies: there were no “perceptible real entities” in the external world corresponding to the names of his interlocutors after their death. Nowadays, that is, more than a century and a half after Bentham's death, such a performance should, in principle, be possible, although the selection of Bentham's co-actors and interlocutors would be rather limited. Apart from Bentham, the only eminent sages that could play themselves after their death would be, for instance, Lenin (one can easily imagine a dialogue between Bentham and Lenin, let us say, on ontology, in which the two interlocutors would jointly mock Berkeley and his belief in the nonexistence of matter, with Bentham probably quoting from his *Fragment on Ontology*, and Lenin from his *Materialism and Empirio-Criticism*), Ho Chi Minh, Mao Tse-Tung, Kim Il Sung and few others. Like Bentham, these men were all “auto-iconized”; even after death, they all continue to represent themselves. In one significant respect, they can even be said to represent themselves more adequately than Bentham does: unlike Bentham's auto-icon, their embalmed bodies are indubitably “better than a statue.” Yet, even though they are all unquestionably “their own statues” or “their own monuments,” they are nevertheless nothing more than just that, that is, *monuments* to themselves. What Bentham would probably have found objectionable about all these auto-iconized thinkers is that they all, as a rule, represent themselves as *dead*, that is, as corpses: even though they look exactly the same as they did when they were still alive, they nevertheless lie like dead people with their eyes closed, whereas Bentham himself is sitting upright in a chair, his (glass) eyes opened, his hat on his head and his walking stick in his hands, as if he had just sat down, or as if he were just about to rise from his chair and leave for his daily “antejantacular circumgyration” — in a word, as if he were *alive*. While Bentham's auto-icon is flexible at the joints (if necessary, it can even be dismantled),³⁰ the rigid, embalmed corpses would be impossible to animate or to bring back to life even on the stage. So in the auto-iconic theater, in which the dead are brought back to life by the staging of dialogues between them, Lenin, Ho Chi Minh, Mao Tse-Tung, or Kim Il Sung could only play themselves at the moment of their deaths. It is perhaps because they only represent

themselves as dead that their embalmed bodies have not superseded “the necessity of sculpture,” but on the contrary, have inspired innumerable likenesses that represent them as living, even though, according to Bentham, their bodies are without question “better than a statue.” Although these others may “contribute to the happiness of the living,” not *all* the good has been “extracted” from them. They offer “anatomico-moral instruction” (7), but do not serve any “theatrical, or dramatic” purpose. It is therefore questionable whether the “extracted” good in fact outweighs “the evil done” (1), that is, the expenses. For example, until a short time ago, Lenin’s mausoleum laboratory in Moscow employed a staff of almost one hundred scientists — histologists, anatomists, biochemists, physical chemists and opticians — who maintained the embalmed corpse around the clock, treating it with special chemicals and by means of equipment worth several million dollars.³¹ In contrast, Bentham’s auto-icon has been restored only twice since 1832: on both occasions, the moth-eaten clothes were simply cleaned and patched up, the stuffing replaced, and a bag of naphthalene and a bunch of lavender added for good measure.³²

Let us briefly recall some typical difficulties concerning the dead human body in medieval philosophy. If the rational soul is the only substantial form of the human body, then after death, that is, after the separation of body from soul, Christ’s body can no longer be called his. If, however, the dead body on the cross cannot be said to be identical with Christ’s body, then it cannot be a fit object of worship.³³ For the utilitarian sage, however, this dilemma would present no difficulty; as he tersely puts it: “a man’s Auto-Icon is his own self” (10). Converted into an auto-icon, the “comparatively incorruptible part” of the matter created by death is identical with the living body and therefore a fit object of worship (or scorn), to the extent that people, while still alive, will take into account the judgment they will receive after death in the eyes of their fellow men when deciding upon any course of action: “What will be said of my Auto-Icon hereafter?” (7). Public opinion, then, would assign the auto-icons their place in “the temple of honor” or in “the temple of dishonor” (6), but since it would not always be possible to assign this place unequivocally, Bentham supplements his secular version of heaven and hell with “the Auto-Icon purgatory” (7), that is, a temple in which the auto-icons would await the definite judgment of public opinion. Bentham believes that, although the utilitarian eschatology cannot threaten with suffering or entice with pleasure after death — auto-icons are merely “senseless” carcasses — it can, by exposing the auto-icons to the public eye, nevertheless introduce “into the field of thought and action...motives both moral and political” (7).

Furthermore, Bentham predicts that his auto-icon will become sacred. It is true that he designates his auto-icon merely “quasi sacred” (15), but this was only because he thought that the term “sacred” had become “so open to abuse, as well as already so much abused”

(15), not because he considered its use in this case exaggerated in any way. How was this anticipated beatification supposed to come about? Once the principles of auto-iconism had been generally accepted and people, following Bentham's example, had begun to auto-iconize their dead, the auto-icons would, by themselves, arouse in people a "virtuous curiosity" (7). This, in turn, would trigger pilgrimages to "the Auto-Icons of the virtuous," of the "benefactors of the human race," that is, to the auto-icons of those who, while living, had acted in accordance with Bentham's principle of "the greatest happiness of the greatest number." These auto-icons "in their silence would be eloquent preachers"; and the lesson they would preach to the pilgrims would be: "Go thou and do likewise" (7). Therefore, what would be propagated in this way would be virtuous behavior, that is, action in accordance with Bentham's greatest-happiness principle.

While pilgrimages to the auto-icons of the benefactors would be undertaken by the masses, the pilgrimages to "the old philosopher preserved in some safe repository" would be made only by the "votaries of the greatest-happiness principle" (15). Bentham's own auto-icon would thus be worshiped by only those few who understood that the good that made the auto-icons of the benefactors worthy of worship in the eyes of the masses was the direct result of their acting in accordance with Bentham's greatest-happiness principle; that is, his auto-icon would be worshiped by those who realized that the one who had first introduced this principle was, for that very reason, himself the greatest benefactor of the human race. In short, Bentham's auto-icon would be worshiped by the converts to utilitarianism.

It would be the auto-icon of Bentham himself that would, in the eyes of the converts, make all other auto-icons worthy of worship. Thus, although like all the other auto-icons of the illustrious dead, Bentham's would be nothing other than "a senseless carcass of the biped" (7), in the eyes of the converts, it would be the only one to deserve the elevated status of a "*quasi* sacred Auto-Icon" precisely because it would be the only one that would be worthy of worship on account of the person *whom it represents*, that is, it would be the sole icon worthy of worship *in its own right*.

In his will Bentham directed his disciples, whenever they met to commemorate "the Founder of the greatest happiness system of morals and legislation," to bring the case-box containing his auto-icon into the room with them.³⁴ Thus, while in other sects, as a rule, other leaders succeed the founder after his or her death, in contrast, Bentham as an auto-icon would continue to "preside bodily" (5) over the sect of his followers even after his death:

But when Bentham has ceased to live (in memory will he never cease to live!), whom shall the Bentham Club have for its chairman? Whom but Bentham himself? On him will all eyes be turned — to him will all speeches be addressed (5).

What we encounter in Bentham's *Auto-Icon* is the obverse of Spinoza's project outlined in the second half of the fifth part of his *Ethics*. Here Spinoza considers "the mind's duration without relation to the body,"³⁵ not, as Bentham does, *the body's duration without relation to the mind*. While Spinoza's attention is focused on the part of the human mind that is eternal, Bentham is concerned with *the part of the human body that is eternal*: Spinoza believed that "the human mind cannot be absolutely destroyed with the body, but [that] something of it remains which is eternal,"³⁶ whereas Bentham no doubt believed that, after death, something of the human body remains that is "imperishable" (12), namely, its "comparatively incorruptible part," converted into an auto-icon. Thus, if Spinoza's project in the *Ethics* can be termed an "alternative, secular salvation"³⁷ of the mind, Bentham's may be termed an *alternative, secular resurrection of the body*.

4

One of the most faithful proponents of Bentham's principles of auto-iconism can be said to be Norman Bates from Hitchcock's *Psycho*. Norman's attitude toward dead bodies is no less utilitarian than Bentham's own, for, like the philosopher, Norman believes, as we read in the novel, "in the preservative powers of taxidermy."³⁸ He does not leave his mother's dead body to the processes of natural decay and corruption, but digs it up from the grave, stuffs it and preserves it as her own most adequate representation. Like his stuffed birds — ravens and owls — so Norman's mother becomes after her death "her own image" or "her own statue." Admittedly, the auto-icon of Mrs. Bates assembled by Norman looks somewhat less lifelike than the auto-icon of Bentham, but we should bear in mind that the latter owes its lifelike appearance primarily to the fact that Bentham's desiccated head was later replaced by a wax replica into which glass eyes were inserted. Artificial eyes were the only concession Bentham was prepared to make within his strict principles of auto-iconism; that is to say, the only parts of his body that he did not insist on preserving as auto-iconic after death were his eyes. Instead, Bentham had a pair of glass eyes, later to adorn his desiccated head, made in his own color twenty years before his death that he used to carry around in his pocket to show to his friends.³⁹ (Similarly, according to Zbarsky, false eyes were also inserted into Lenin's mummified head.⁴⁰) In contrast, Norman Bates allows the dried head of his mother to remain attached to her body and leaves her eye sockets empty, rather than betray the principles of auto-iconism. Thus, even though Mrs. Bates, in the character of an auto-icon, no longer resembles herself, nevertheless in Norman's eyes, she represents herself more adequately than Bentham and Lenin represent themselves.

Nor does Norman leave the bodies of his other two victims, Marion and detective Arbogast, to natural decay and corruption, but drops them into the swamp, where corpses can remain more or less preserved over long periods of time. (The fact that swamps were places where bodies were known to have been preserved, is also mentioned by Bentham.⁴¹) Thus, even if they had been brought to light many years after their deaths, Marion and Arbogast would still have represented themselves, no less than Mrs. Bates. Naturally auto-iconized, their bodies would perhaps have looked even more lifelike than the taxidermically treated body of Mrs. Bates. So, Norman is still experimenting with the art of auto-iconography.

Norman manifests a utilitarian attitude not only toward dead bodies but also toward taxidermy itself, that is, to the very procedure by which the dead are rendered useful to the living. As he observes, “stuffing things” is an inexpensive hobby: “It’s not as expensive as you might think,” he says, “It’s cheap, really. You know, needles, thread, sawdust. The chemicals are the only things that cost anything....”⁴² Furthermore, while the good is being extracted from the dead by Norman at minimal costs, it is also “more than a hobby”: while people normally take up hobbies “to pass the time,” Norman Bates goes about stuffing things “to fill it.”⁴³ Thus, even before they can be put to their “farther use,” the dead are already of benefit to him: “stuffing things” is what, in itself, gives him a sense of personal fulfillment, satisfies him. Stuffing the dead, in short, is what he lives for.

Norman’s pragmatic attitude toward dead bodies draws not only on the tradition of utilitarianism, but on its immediate precursors as well. He does not leave the death of the bodies, which he will later put to “farther use,” to chance; it is the bodies of his victims that he stuffs and auto-iconizes. The stuffed ravens and owls most likely have not died of natural causes, but, like Mrs. Bates, must have been killed. In his utilitarianism run amok, Norman therefore resembles the infamous assassins Burke and Hare, who murdered people so that their bodies could be used for utilitarian purposes, that is, for anatomical instruction. But while the bodies of Burke’s and Hare’s victims served Bentham’s “transitory,” that is, “dissectional, or anatomical” purpose, the bodies of Norman’s victims — his mother as well as the ravens and owls — serve Bentham’s “permanent,” that is, “conservative, or statuary” purpose. After Burke was finally caught, he was sentenced to be hanged and publicly dissected; that is, the one who had engaged in murder to serve utilitarian ends, was himself, in turn, murdered and his own body put to “farther use to the living.” In fact, Burke’s body was used not only for “transitory,” but also for “permanent” purposes: the presiding judge decreed that after the execution and subsequent dissection of his body, Burke’s skeleton should be reassembled and preserved in memory of his atrocious crimes.⁴⁴ Thus, Burke can still be seen today, displayed in the Edinburgh University

Museum. Even today he continues to represent himself, even today he continues to be “his own image,” his own icon. Is not this exemplary punishment also the one to which Hitchcock, in *Psycho*, condemns Norman Bates by showing him in the end just sitting and staring vacantly, uncannily like the stuffed figures of his mother and Bentham? Does it not seem, then, as if Norman has been stuffed while still alive, since all he is capable of doing henceforth is *representing* himself? Ultimately, Norman comes to realize this himself, when, in the novel, he decides, through his mother’s voice, that the best thing for him to do is to pretend to be “a stuffed figure” — “a harmless stuffed figure that couldn’t hurt or be hurt but merely exist forever.”⁴⁵ Isn’t Norman, then, condemned to exemplify, with his body, “a farther use of the dead” even before his death?

And finally, Norman also puts the stuffed body of his mother, her auto-icon, to its “theatrical, or dramatic use.” As we have seen, Bentham would have wished to have his philosophical monologues staged after his death in the form of dialogues between himself and various illustrious dead thinkers. It was precisely in order for him to be able to play himself in these “dialogues of the dead,” that Bentham had his body auto-iconized. These dialogues did not take place, mainly because with the exception of Bentham’s own body, the bodies of those with whom he would have wished to converse after death were not preserved. In contrast, Norman Bates puts Bentham’s fantasy of the auto-iconic theater into practice: his fantasy scripts are not taking place merely in his head, that is, in the form of imaginary conversations or interior monologues. Rather, they are *acted out* in the form of dialogues between himself and his dead mother, who in his little theater, plays herself, while Norman animates her body (or her auto-icon), and lends it his voice. “What actor can play my mother better than my mother, in the character of an auto-icon, can play herself?” is how, no doubt, the first sentence of Norman’s version of the Benthamite auto-iconic theater would read.

5

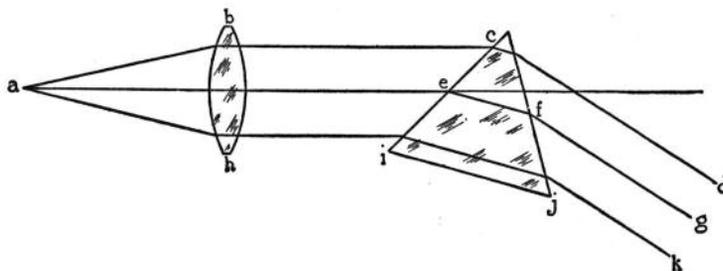
Bentham’s central principle of auto-iconism — that is, since nothing can resemble a thing as closely as that thing represents itself, the thing must act as its own representation — ultimately derives from Leibniz’s principle of the identity of indiscernibles. According to Leibniz, no two things in nature can be exactly alike. If two things perfectly resemble each other, they are also numerically identical, that is, one and the same thing; two things that are indiscernible from one another are in reality nothing other than “the same thing under two names.”⁴⁶

From a Lacanian perspective, however, it is rather the reverse that holds true. In an old racist joke, a gypsy is examined by a psychiatrist who first explains what free association

is: you immediately say what comes to your mind in response to the psychiatrist's cue. Thereupon, the psychiatrist proceeds to the test itself: he says "table," and the gypsy answers, "Fucking Fatima"; the psychiatrist then says "sky," the gypsy again answers, "Fucking Fatima," and on and on, until the psychiatrist explodes: "But you did not understand me! You must tell me what pops into your mind, what you are thinking of, when I say my word!" The gypsy calmly answers: "Yes, I got your point, I am not that stupid, but I think all the time about fucking Fatima!" This racist joke should be supplemented by the crucial final twist at work in another well-known joke about a pupil who, when questioned by his biology teacher about various animals, always reduced the answer to the definition of a horse. When asked, for instance, "What is an elephant?" the pupil answers, "An animal that lives in the jungle where there are no horses. A horse is a domestic mammal with four legs, used for riding, working in the fields or pulling carts." Or again, to the question "What is a fish?" he says, "An animal that, unlike a horse, has no legs. A horse is a domestic mammal...." And to "What is a dog?" he responds, "An animal that, unlike a horse, barks. A horse is a domestic mammal..." and so on, until, finally, the desperate teacher asks the pupil: "OK, what is a horse?" Perplexed and totally thrown off balance, the pupil starts to mumble and cry, unable to provide an answer. Along the same lines, the psychiatrist should have given to the sex-starved gypsy the cue "Fucking Fatima," to which, undoubtedly, the poor gypsy would have broken down in a panic, unable to generate any association.

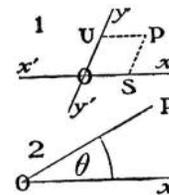
Why would this be the case? Because, precisely (and in contrast to Bentham's principle of auto-iconism, according to which a thing is its own icon, that is, resembles itself) a horse *is* a horse; it does not *look like* or *resemble* a horse, in the same way that "fucking Fatima" *is* "fucking Fatima," and not some association generated by the idea of "fucking Fatima." (Another homologous structure is that of a well-known tribe mentioned by Levi-Strauss for whose members all dreams have hidden sexual meaning — all except those with explicit sexual content.) To put it in philosophical terms, what we encounter here is the obverse of Leibniz's principle of the identity of indiscernibles: the anti-Leibnizian lesson of the Lacanian logic of the signifier is that, since a thing does not "look like itself," resemblance, on the contrary, guarantees non-identity. It is this paradox that accounts for the uncanny effect of encountering a double: the more he looks like me, the more the abyss of his otherness stands out. It is in accordance with this logic that, in the film *Lady Eve*, a character played by Henry Fonda sees the same woman for the second time (a woman who still looks exactly the same but is now pretending to be somebody different) and exclaims: "They look too much alike to be the same!" What distinguishes the two women for him is precisely the fact that they are indistinguishable: they simply resemble

one another too much to be identical. And it is precisely the same logic that, in *Animal Crackers*, governs Groucho Marx's speculation about Emmanuel Ravelli's identity: upon learning that someone who looks "exactly like" Emmanuel Ravelli is in fact Emmanuel Ravelli, he nevertheless protests: "But I still insist there *is* a resemblance." It is because Emmanuel Ravelli resembles himself exactly that Groucho finds it hard to believe that he is, in fact, Emmanuel Ravelli: how could he possibly be Emmanuel Ravelli when he looks "exactly like" him? It seems then that, according to this logic, an individual could only remind us of himself or be recognized unequivocally if, despite the fact that everything about him reminds us of him, *he himself does not remind us of himself*. In the same way, Margaret Dumont, in the opening scene from *A Night at the Opera*, reminds Groucho Marx of herself: "Your eyes, your throat, your lips — everything about you reminds me of you. Except you." Or, in Hegelese, the "oneness" of a thing is not grounded in its properties, but in the negative synthesis of a pure "One" that excludes (or relates negatively to) all positive properties. This "one," which guarantees the identity of a thing, does not reside in its properties, since it is ultimately its signifier.



1. Jeremy Bentham, *Auto-Icon; or, Farther Uses of the Dead to the Living. A Fragment*. From the MSS. of Jeremy Bentham. (Unpublished).
2. Bentham, *Auto-Icon*, 2. All further references to this work are made in the text.
3. Leo Tolstoy, *The Death of Ivan Ilyich*, trans. Lynn Solotaroff (New York: Bantam, 1981), 44. See also 37.
4. *Ibid.*, 93-94.
5. *Ibid.*, 1, note by the editor.
6. Quoted in Thomas Southwood Smith, *A Lecture delivered over the remains of Jeremy Bentham* (London: Effingham Wilson, 1832), 4.
7. George Berkeley, *A Treatise Concerning the Principles of Human Knowledge*, ed. Jonathan Dancy (Oxford: Oxford University Press, 1998), 156.
8. Berkeley to Samuel Johnson, 24 March, 1730, in *Philosophical Works*, ed. M. R. Ayers (London: Dent, 1992), 354.
9. *Ibid.* See also Berkeley, *A Treatise Concerning the Principles of Human Knowledge*, 138.
10. For a fuller account of Berkeley's theory of time, see Ian C. Tipton, *Berkeley: The Philosophy of Immaterialism* (London: Methuen, 1974), 271-96; George Pitcher, *Berkeley* (London: Routledge and Kegan Paul, 1977), 206-11; A. C. Grayling, *Berkeley: The Central Arguments* (London: Duckworth, 1986), 174-83; David Berman, *George Berkeley: Idealism and the Man* (Oxford: Clarendon Press, 1994), 61-70; and E. J. Furlong, "On Being 'Embrangled' by Time," in *Berkeley: Critical and Interpretative Essays*, ed. Colin M. Turbayne (Minneapolis: University of Minnesota Press, 1982), 148-55.
11. Berkeley, *Philosophical Commentaries*, in *Philosophical Works*, 308.
12. See "Some Original Memoirs of the late famous Bishop of Cloyne," in *Works of Oliver Goldsmith*, ed. A. Friedman (Oxford: Clarendon Press, 1966), vol. III, 35; quoted in David Berman, *Berkeley: Experimental Philosophy* (London: Phoenix, 1997), 38.
13. Nicolas Malebranche, *Entretiens sur la mort*, in *Oeuvres completes de Malebranche*, ed. Andre Robinet (Paris: J. Vrin, 1972-84), vol. XII-XIII, 410.
14. *Ibid.*, 405.
15. *Ibid.*, 409-10.
16. Incidentally, there is an apocryphal story — quoted by Thomas DeQuincy in his brilliant essay *Murder Considered as One of the Fine Arts* — according to which Berkeley is supposed to have caused Malebranche's death. When Berkeley called on the famous philosopher in Paris he found him in his cell cooking. A dispute arose about the latter's system. Berkeley urged Malebranche to retract his doctrine of occasional causes, while the latter stubbornly stood his ground — "culinary and metaphysical irritations united to derange his liver: he took to his bed, and died" (Thomas DeQuincy, *On Murder Considered as One of the Fine Arts & On War* [London: The Doppler Press, 1980], 19). Berkeley thus came to be considered as "the occasional cause of Malebranche's death." For more on this point, see A. A. Luce, *Berkeley and Malebranche: A Study in the Origins of Berkeley's Thought* (Oxford: Oxford University Press, 1967), 208-10.
17. Bentham, "A Fragment on Ontology," in *The Works of Jeremy Bentham*, ed. John Bowring (Edinburgh, 1838-43), vol. VIII, note 196.
18. Ruth Richardson, *Death, Dissection and the Destitute* (London: Routledge & Kegan Paul, 1987), 34.
19. Quoted in Richardson, 37.
20. See *ibid.*, 58-59.

21. Bentham MSS. Box 155, UC Library; quoted in C. F. A. Marmoy, "The 'Auto-Icon' of Jeremy Bentham at University College London," *Medical History* 2 (1958): 80.
22. Ruth Richardson and Brian Hurwitz, "Jeremy Bentham's self image: an exemplary bequest for dissection," *British Medical Journal* 295 (July 1987): 195.
23. Bentham MSS. Box 155, UC Library; quoted in Marmoy, "The 'Auto-Icon' of Jeremy Bentham," 80.
24. See Marmoy, "The 'Auto-Icon' of Jeremy Bentham," 85.
25. See John Bowring, *Autobiographical Recollections* (London: H. S. King, 1877), 343; quoted in Marmoy, "The 'Auto-Icon' of Jeremy Bentham," 78.
26. See Bentham, *Auto-Icon*, 3.
27. *Ibid.*, 14-15.
28. *Ibid.*, 13.
29. *Ibid.*, 14-15.
30. See Ruth Richardson and Brian Hurwitz, "Jeremy Bentham's self image," 197.
31. See Ilya Zbarsky and Samuel Hutchinson, *Lenin's Embalmers*, trans. Barbara Bray (London: The Harvill Press, 1998), 181.
32. See Richardson and Hurwitz, "Jeremy Bentham's self image," 196.
33. For an account of the controversy, see Anthony Kenny, *Aquinas* (Oxford: Oxford University Press, 1980), 47. For an ingenious solution, see Meister Eckhart, *Did the Forms of the Elements Remain in the Body of Christ while Dying on the Cross?* in *Parisian Questions and Prologues*, trans. Armand A. Maurer (Toronto: Pontifical Institute of Mediaeval Studies, 1974), 71-75.
34. For the text of Bentham's last will, see Marmoy, "The 'Auto-Icon' of Jeremy Bentham," 80.
35. Spinoza, *Ethics*, in *The Collected Works of Spinoza*, trans. Edwin Curley (Princeton: Princeton University Press, 1988), 606.
36. *Ibid.*, 607.
37. Yirmiyahu Yovel, *Spinoza and Other Heretics* (Princeton: Princeton University Press, 1989), 154.
38. Robert Bloch, *Psycho* (London: Bloomsbury, 1997), 149.
39. See Marmoy, "The 'Auto-Icon' of Jeremy Bentham," note 84.
40. See Zbarsky and Hutchinson, *Lenin's Embalmers*, 85.
41. See Bentham, *Auto-Icon*, 1.
42. Richard J. Anobile, ed., *Alfred Hitchcock's Psycho* (London: Pan Books, 1974), 78.
43. *Ibid.*
44. See Richardson, *Death, Dissection and the Destitute*, 143. See also 340, note 52.
45. Bloch, *Psycho*, 152.
46. Leibniz, *Philosophical Writings*, trans. Mary Morris and G. H. R. Parkinson (London: Dent, 1973), 216.



FREGE / ON A CONTEMPORARY USAGE OF FREGE

ALAIN BADIOU

*[Here follows an excerpt from *Le Nombre et les nombres* by Alain Badiou, in which he lays out the axioms of set theory on which he bases his bold claim that being — what is — is pure multiplicity. The lucid style of writing does not gainsay the fact that the core idea — of an ontology that would be mathematized and thus freed from the thanato-theology that ordinarily corrupts it — is a difficult one to grasp and requires considerable patience. Since it is impossible in a short space to do justice to the comprehensiveness of Badiou's fine argument, we have chosen this excerpt with care, believing it gives the reader at least a sense of that argument's stakes. For these pages concern a dramatic moment in mathematical theory precipitated by Russell's devastating letter to Frege, who recognized immediately its consequences for his life's work. What Frege neglected to consider — and Russell's tendering of a "paradoxical" set made plain — is that not every concept has a definite extension; in some cases a predicate or property cannot define a set, a totality. Outside the confines of Zermelo's axiom of separation, that is, in the actual world, one cannot suppose an "all there is," a universe of things. The world is, in other words, actually infinite.]*

To this mathematical drama, this excerpt might be viewed as adding a cinematic one. Badiou appends to this discussion a note on Jacques-Alain Miller's concept of suture as it was proposed in a paper delivered to Lacan's seminar in 1965 and titled "Suture (elements of the logic of the signifier)." This dazzling paper, first published in French in 1966, was later translated by Jacqueline Rose and printed in *Screen* vol. 18, no. 4 (Winter 1977/78) in the now infamous "Dossier on Suture." Miller invented the concept of suture for psychoanalysis, to name the relation of the subject to the chain of its discourse; cinematic theorists (Jean-Pierre Oudart, Daniel Dayan, William Rothman, initially) appropriated the concept to designate a style of editing by which the diegetic field of the film knitted itself together to echo or deny (depending on the theory) an absent field, an off-screen space.

This is not the place to resurrect the often rancorous debates that surrounded the cinematic theory of suture (which even led film critics to

boycott a conference where, it was feared, suture theorists would be gathered). It must be recalled, however, that the tormenting clarity of Miller's proposition left its mark on film theory for a very long time, redirecting its very focus toward the way the film "positioned its spectator." Nor is this the moment to delve into the import of Badiou's objections to Miller's argument. We will simply point out that while Miller designates the (constitutive) empty place of reality as "subject," Badiou will name it "the event." For Badiou, then, a film text sustains a subject through fidelity to the name of a vanished event. For Miller, the subject is the contingent event that founds the text.

—Joan Copjec

FREGE¹

1

Frege maintains that pure thought generates number. Like Mallarmé, although without the effect of chance, Frege thinks that "all thought emits a throw of the dice."² What is called the "logicism" of Frege is very profound: number is not a singular form of Being, nor a particular property of things. It is neither empirical nor transcendental. It is no longer a constitutive category, but rather is deduced from the concept; it is, as Frege writes, a trait of the concept.³

2

The pivotal property that permits the transition from pure concept to number is the *extension* of the concept. How can we understand this? Given an arbitrary concept, an object "falls" under this concept if it is a "true case" of this concept, if the statement that attributes to this object the property contained in the concept is a true statement. Or, if the object validates the concept. Everything, one will notice, originates in the truth-value of statements, which is their denotation (true or false). We could hold that, if the concept generates number, this is in order that there be truth. Number is, in this sense, the index of truth, and not an index of Being.

But the idea of extension is ramified, obscure.

3

Let there be a concept. We will call the extension of this concept all the cases of truth (every object as a case of truth) that fall under this concept. Every concept has one extension.

Now, suppose there are two concepts, C1 and C2. We will say that they are *equinumerous* if a biunivocal correspondence exists that associates object for object everything that falls under the concept C1 and the concept C2. Thus we can define a biuni-

vocal correspondence between the extension of C1 and that of C2.

We can clearly see that Frege orients himself toward a “cardinal” definition of number, and that he does not care about the ordering structure of what falls under the concept. Biunivocity is an essential tool that is in fact characteristic of all efforts to “number” the multiple in itself, the pure multiple, subtracted from all structural considerations. To say that two concepts are equinumerous⁴ is to say that they have the “same quantity,” that their extensions have the same extent — an abstraction made from any consideration about what the objects are that fall under these concepts.

4

Number consists in *marking* equinumerosity, the quantitative identity of concepts. Whence the famous definition: “The number that belongs to the concept C is the extension of the concept ‘equinumerous to the concept C.’”⁵ This means that every concept C generates a number, namely the set of concepts that are equinumerous to concept C, that have the “same pure quantity,” the same quantity of extension, as C. Note that a number, grasped in its being, always designates a set of concepts, being all those that validate the statement: “being a concept equinumerous to C.”

5

The chain by which the concept of number is constructed is the following: Concept \emptyset Truth \emptyset Objects that fall under the concept (that validate the statement of attribution of the concept to the object) \emptyset Extension of the concept (all the truth-cases of the concept) \emptyset Equinumerosity between two concepts (by the biunivocal correspondence of their extensions) \emptyset Concepts that fall under the concept of equinumerosity to concept C (that validate the statement “being equinumerous to C”) \emptyset Extension of equinumerosity to C (set of concepts of the preceding stage) \emptyset Number that belongs to the concept (number is thus the name of the extension of equinumerosity to C).

From a simplified and operative point of view, we can also say that one departs from the concept, that one passes through the object under the condition of truth, that one thus compares concepts, and that the number names a set of concepts that have in common a possible and definite property of this comparison (equinumerosity).

6

To rediscover the “usual,” familiar numbers on the basis of this pure conceptualism, that norm of truth alone, Frege begins by his admirable deduction of zero: zero is the number that belongs to the concept “not identical to itself.” Since every object is identical to itself,

the extension of the concept “not identical to itself” is empty. Zero is henceforth the set of concepts with empty extensions, and which, by this fact, are equinumerous to the concept “not identical to itself.” This means precisely that the number, which belongs to every concept whose extension is empty, is zero.

I have indicated elsewhere the passage to the number 1: “One” is the number that belongs to the concept “identical to zero.” It is interesting to note that Frege emphasizes, with regard to 1, that it has no more “intuitive” or empirical privilege than it has a transcendental foundation: “The definition of 1 has an objective legitimacy that is not subordinated to any contestation.”⁶ Without any doubt, Frege participates in the great modern process of the destitution of the One.

The engendering of the sequence of numbers beyond 1 only poses technical problems, whose resolution, when passing from n to $n+1$, is to construct a correlation between the extensions of corresponding concepts such that the “remainder” is exactly 1 — which has been defined.

7

Thus the deduction of number as a consequence of the concept is accomplished. More exactly, from the triplet concept / truth / object, and from this unique formal operator that is biunivocal correspondence, number arises as the instance of pure thought, or integrally logical production; thought *must* suppose itself, in the form of a concept *susceptible* to having truth cases (thus endowed with an extension). This done, thought supposes number.

8

Why choose, in particular, the concept “not identical to itself” to found zero? Any concept could be chosen for which the extension is void, if there is no thinkable object that could have the property that designates this concept. One such concept is “square circle,” a concept of which Frege moreover declares that it “does not merit the evil that one says of it.”⁷ Since it is a question of an integrally conceptual determination of number, the arbitrariness of the choice of the concept is a little embarrassing. Frege is aware of this, since he writes: “To define the zero, I could have taken any concept under which nothing falls.”⁸ To avoid his own objection, Frege invokes Leibniz, whose principle of identity, which presumes that every object is identical to itself, has the merit of being “purely logical.” Purely logical? We understood that it was a question of legitimating the categories of logico-mathematics (in particular number) on the single consideration of laws of pure thought. Is there not a risk of circularity, if a logical rule is straightaway required? We will

thus say that “identical to itself” must not be confounded with “equal to itself.” Certainly, equality is one of the logical, or operatory, predicates, that it is a question of founding (and particularly equality between numbers). But, if “identity” must be carefully distinguished from the logical predicate of equality, it is clear that the statement “every object is identical to itself” is not a “purely logical” statement. *It is an ontological statement.* And, as an ontological statement, it is immediately debatable: no Hegelian, for instance, would admit the universal validity of the principle of identity. For this supposed Hegelian, the extension of the concept “not identical to itself” is anything but void!

9

The purely *a priori* determination of a concept whose extension is certain to be empty is an impossible task without powerful prior ontological axioms. The impasse into which Frege falls is that of an uncontrolled doctrine of the object. Because, with regard to the pure concept, what is an “object” in general, an object grasped as an arbitrary object of the total universe of objects? And why is it required that the object be identical to itself, when it is not even required of the concept that it be non-contradictory to be legitimate — as Frege indicates by affirming concepts like “square circle,” which he considers concepts just like others? Why would the law of the being of objects be more restrictive than the law of the being of concepts? This is undoubtedly so *if we admit the Leibnizian ontology*, for which existing objects obey *another principle* than thinkable objects: the principle of sufficient reason. It thus appears that the deduction of number on the basis of the concept is less universal, or “purely logical,” than it is Leibnizian.

10

To presume that the extension of a concept is one thing or another (for example, that the extension of the concept “not identical to itself” is empty) amounts to supposing that we can move without inconvenience from the concept to existence, since the extension of a concept puts into play “objects” that fall under this concept. There is a generalized ontological argument here, and it is this argument that sustains the deduction of number on the basis of a single concept: number belongs to the concept *in the mediation of thinkable objects that fall under the concept.*

11

Russell’s paradox, communicated to Frege in 1903, challenges any pretension to legislate over existence on the basis of the concept alone, and especially over the existence of the extension of concepts. Russell in effect presents a concept (in Frege’s sense), the concept “being a set that is not an element of itself” — which is certainly a completely acceptable

concept (better still, in fact, than “not identical to itself”) — but one for which, nonetheless, *the extension does not exist*. It is in effect contradictory to suppose that “objects,” in the instance of sets that “fall under this concept,” themselves form a set. And, if they do not form a set,⁹ we cannot define some biunivocal correspondence for them. Thus this “extension” does not support equinumerosity, and consequently no number belongs to the concept “a set that is not an element of itself.”

The advent of the concept of an in-numerable ruins Frege’s general deduction. And, since the paradoxical concept in question is utterly ordinary (in fact, all the sets dealt with by mathematicians verify this concept: they are not elements of themselves), we could suspect that there exist many other concepts to which no number belongs. In fact, it is *a priori* impossible to predict the extent of the disaster. Even the concept “not identical to itself” could just as well turn out to have no existing extension, which is an entirely different thing from having an empty extension. Let us add that Russell’s paradox is purely logical, that is, precisely demonstrated: to admit the existence of a set of all those sets that are not elements of themselves ruins deductive language by introducing a *formal* contradiction (the equivalence of a proposition and its negation).

12

A sort of reparation has been proposed by Zermelo,¹⁰ who argues that one can move from the concept to the existence of its extension *under the condition that one is operating in an already-given existence*. Given a concept C and a domain of existing objects, you can say that there exists, *in this existing domain*, the set of objects that fall under this concept, and thus the extension of this concept. This extension is evidently relative to an already specified domain of objects that does not exist “in itself.” This is a major ontological change: it is impossible in this new frame to move from the concept to existence (thus to number), but only to an existence in some way cut out from its pre-given existence. You can “separate” in a given domain the objects of this domain that validate the property exposed by the concept. This is why Zermelo’s principle, which drastically limits the rights of the concept and of language over existence, is called the axiom of separation. It even seems that, under the condition of this axiom, we are protected from the inconsistency of paradoxes such as Russell’s.

13

Russell’s paradox is in no way paradoxical. It is a materialist argument, because it demonstrates that being-multiple is anterior to the statements that affect it. It is impossible, says the “paradox,” to accord to language and to the concept the right to legislate without limit

over existence. Even supposing that there is a transcendental function of language is to suppose that the existent is already available, and that the power of this function only cuts out, or delimits, in this specified existent, the extensions of the concept.

14

Can we, by assuming Zermelo's axiom, save the Fregean construction of number? The entire point again depends upon the question of zero. I could proceed thus: given a delimited domain of objects, whose existence is guaranteed elsewhere, I will call "zero" (or the empty set, which is the same thing) that which detaches, or separates, in this domain, the concept "not identical to itself," or any other concept such that I can assure myself that no objects of the domain fall under it. As it is a question of the limited domain, and not as in Frege's construction of "all objects" (which leads to the impasse of a Leibnizian choice without criteria), I have the chance to locate such a concept. If, for example, I take a set of black objects, I call "zero" that which separates the concept "being white." The remainder of the construction follows.

15

But what domain of objects can I begin with of which it is guaranteed that they are treated by pure thought, that they are "purely logical"? Frege knew well enough to construct a concept of number that was, according to his own expression, "neither a sensible being, nor a property of external things," and he emphasized on several occasions that number is subtracted from the representable. Establishing that number is a production of thought, deducing it only from the abstract attributes of the concept in general, cannot accommodate white or black objects. The question thus becomes "of what existent can I assure myself outside of any experience?" Is the axiom "there exists something" an axiom of pure thought, and, supposing that it is, what property can I discern of which it is certain that it belongs to nothing of this existent "something"?

16

As a "purely logical" demonstration of existence for the thought of an arbitrary object, of a point of Being, of an "object=x," the statement "all x is equal to itself" is an axiom of logic under equality. But the universal rules of first-order logic, a logic valid for the whole domain of objects, permit the deduction, from the statement "all x is equal to x," of the statement "there exists x that is equal to x" (subordination of the existential qualifier to the universal quantifier).¹¹ Thus, there exists x (by knowing, at least, this x that is equal to itself).

One can thus, in the frame of set theory, demonstrate *first of all*, by purely logical means, that a set exists. And *then* one can distinguish the empty set in this existent of which one has proof that it exists, by utilizing a property that no element can validate (for example, “not being equal to itself”). We have respected Zermelo’s axiom, since we have operated in a pre-given existent, and we have even engendered the zero.

17

I believe that this “demonstration” is an unconvincing artifice, a logical sleight of hand. Of that thing, which one universally presumes is equal to itself (which is eventually accepted as an abstract law, or law of the concept), who can reasonably infer that there *exists* something rather nothing? If the universe were absolutely void, it would remain logically admissible that, if a thing exists (which would not be the case), it would be restricted to being equal to itself. The statement “all x is equal to x” would be valid, but there would not be any x. Thus the statement “there exists x equal to itself” would not be valid.

The passage from a universal statement to an assertion of existence is an exorbitant right that the concept cannot arrogate to itself. It is not possible to establish existence on the basis of a universal law that can sustain itself just as well in absolute nothingness (see, for example, the statement “nothing is identical to itself”). And, as no existent object is deducible from pure thought, you cannot distinguish the zero there. Zermelo does not save Frege.

18

The existence of zero, or the empty set, and thus the evidence of numbers cannot in any way be deduced from the concept, or from language. “Zero exists” is inevitably a primary assertion, even one that fixes an existence from which all others will proceed. Far from Zermelo’s axiom, combined with Frege’s logicism, allowing us to engender the zero and then the chain of numbers, it is on the contrary the absolutely inaugural existence of zero (as the empty set) that ensures the possibility of separating some extension of the concept from what is. Number here is primary: it is this point of Being on which the exercise of the concept depends. Number, as number of nothing, or zero, sutures every text to its latent being. The void is not a production of thought, because it is from its existence that thought proceeds, inasmuch as “thinking and being are the same.”¹² In this sense, it is the concept that comes from number, and not the reverse.

19

Frege’s attempt is in certain regards unique: it is not a question of creating new intra-mathematical concepts (like Dedekind and Cantor), but — using only the resources of a

rigorous analysis — of elucidating what, among the possible objects of thought, singularizes those which fall under the concept of number. In this sense, my own effort follows along the same line. It only involves removing the obstacles by reframing the investigation according to renovated parameters. It is above all a question of showing that thought is not constituted by concepts and statements alone, but also by decisions that engage it in an epoch of its exercise.

COMPLEMENTARY NOTE ON A CONTEMPORARY USAGE OF FREGE

1

Jacques-Alain Miller proposed, in a 1965 paper entitled “Suture” and subtitled “Elements of a Logic of the Signifier,”¹³ a reprise of the construction of number by Frege. This text finds a certain logic of compatibility between structuralism and the Lacanian theory of the subject. I myself have periodically returned to this foundation¹⁴ to think through this connection. Twenty-five years later, I follow, I still follow there (*j’y suis, j’y suis toujours*).

2

The question Miller addresses to Frege is: *What functions in the series of whole natural numbers?* The response to that question — a response, I would say, that is extorted by force from Frege — is, “in the process of the constitution of the series, the *function of the subject*, misrecognized, is operative.”

3

If we take this response seriously, it signifies that — in the last resort and in the proper mode of its misrecognition — it is the function of the subject for which Lacan’s teaching transmits the concept that constitutes, if not the essence, at least the process of engenderment (the “genesis of the progression,” says Miller) of number.

One evidently cannot neglect such a radical thesis. Radical with regard to the immediate import of Frege’s doctrine, which consecrates a particular development refuting the idea that number would be “subjective” (it is true for Frege that “subjective” means “caught in representation,” which evidently does not recover the Lacanian function of the subject). Radical with regard to my own thesis, since I hold that number is a form of being, and that, far from sustaining the function of the subject, it is on the contrary under the presupposition of number, and especially of this primary number-Being that is the void (or zero), that the function of the subject receives its bit of being.

4

It is not a question here of examining what this text — the first great Lacanian text that is not by Lacan — brings to the doctrine of the signifier, or by what analogy it illuminates the import of this still so little established epoch of all that the Master taught us about the snare of the subject in the effects of a chain. It is exclusively a question of addressing what Miller's text assumes and proposes *with regard to the thought of number as such*.

5

Miller organizes his demonstration in this way:

—To found zero, Frege (as we saw in 2.6) invokes the concept “not identical to itself.” No object falls under this concept. On this point, Miller emphasizes, even compounds, a Leibnizian reference of Frege's. In effect, if an object cannot be identical to or be exchanged with itself, then truth is entirely subverted. A statement that bears on an object A supposes, in order to be true, the invariance of A in each of the occurrences of the statement, or “each time” the statement is made. The principle “A is A” is a law of any possible truth. Reciprocally, in order that truth be saved, it is crucial that no object fall under the concept “not identical to itself” — whence the zero, which numbers the extension of such a concept.

—In this way, number is demonstrated to prove this single concept under the condition of truth. Now, this demonstration is uniquely consistent because if one could invoke, in thought, an object that is “not identical to itself,” it could only be for engendering the inscription of zero. Thus, writes Miller, “[t]he zero which is inscribed in the place of number consummates the exclusion of this object.”¹⁵

To say that “no object” falls under the concept “not identical to itself” is to make that object vanish through that invocation, in this nothing for which the single subsistent trait will be, precisely, the mark zero. “Our purpose,” Miller concludes, “has been to recognize in the zero-number the suturing stand in for the lack.”¹⁶

—What is it that comes to be lacking in this way? What “object” can have as the holding-place for its own default the first numerical mark, and sustain, with regard to the complete chain of numbers, the uninscribable place that pertains to its vanishing? What insists between numbers? It is necessary to agree that no

“object” can fall, even if it fails there, into the empty place that assigns non-identity-with-self. But “exist” (or here, particularly, “ek-sist”) is exactly what that which is not an object does — the non-object as such, the object as impossibility of the object, that is, the subject. “The impossible object, which the discourse of logic summons as the not-identical-with-itself and then rejects, wanting to know nothing of it, we name the object, insofar as it functions as the excess which operates in the series of numbers, the subject.”¹⁷

One must finally distinguish what Miller assumes of Frege and what can really be attributed to Frege. I will proceed in three stages.

FIRST STAGE. Miller takes as his point of departure the Leibniz-Frege proposition according to which the “salvation of truth” demands that all objects be identical to themselves. This is in fact to assume surreptitiously the integral literalization of the real to which Leibniz devoted his whole life, and of which Frege’s ideography is no doubt the inheritor. In this regard, Miller is even right to follow Leibniz and make equivalent “identical-to-itself” and “substitutability,” marking them in such a way that the letter and the object are equivalent. What can, in effect, the substitutability of an object mean? Only the letter is integrally substitutable for itself. “A is A” is a principle of letters, not objects. To be identifiable at one remove from itself, and to be submitted to a question of substitutability, is to say, in this instance, an object must be under the authority of a letter, which only calculus supposes. If A is not at all moments identical to A then truth, or veracity, as *calculus*, is annihilated.

The latent hypothesis is thus that *truth is of the order of calculus*. It is only under this supposition that it is necessary to represent the object as a letter and, as a result, the non-identical status of an object-letter radically subverts truth. And if truth is of the order of calculus, then zero — which numbers the exclusion of non-identity to self (the subject) — is only itself a letter, the letter 0. It is henceforth easy to conclude that zero is the inert holding-place of the lack, and that which “pushes” the engendering of marks in the series of numbers, a repetition where the misrecognition of what insists is spoken, is the function of the subject.

More simply, if truth is saved only through maintaining the principle of identity, the object emerges within the field of truth only as a letter offered to calculus. And, if this is the case, number can only be sustained as the repetition of that which insists as lack, which is forcibly the non-object (or the non-letter, which is the same), the place where “nothing can be written”¹⁸ — in short, the subject.

Nothing is retained of Leibnizian being, although he fails to recognize in this philosophy the archetype of one of the three great orientations of thought: the constructivist or

nominalist orientation (the other two being the transcendent and the generic).¹⁹ Holding the generic orientation, I declare that, for truth to be saved, it is precisely necessary to abolish the two great maxims of Leibnizian thought, which are the principle of non-contradiction and the principle of indiscernibles.

9

A truth supposes that the situation for which it is true occurs as “not identical to itself.” This non-identity-with-self is itself an indication that the situation has been supplemented by one multiple “too many” — for which, however, belonging or not-belonging to the situation is intrinsically undecidable. I have called this supplement “the event” and the event is always the origin of the process of a truth. Now the situation, from the time that the undecidable dice-throw of the event must be decided, necessarily enters into the wavering of its identity.

10

The process of a truth — making holes in the strata of knowledge that the situation holds onto — inscribes itself as indiscernible infinity, which no treasure of established language can designate.

It is enough to say that zero, or the void, has nothing in itself to do with the salvation (*salut*)²⁰ of truth, which plays in the correlative “work” between the undecidability of the event and the indiscernability of what results in the situation. It is no longer possible to refer truth to the power of the letter, since no statement can attest to the existence of a truth. The statement “truth is” — far from wagering that no object falls under the concept of “not identical to itself” and that zero is thus the number of this concept — permits this triple conclusion:

- there exists an object that occurs as “not identical to itself” (the undecidability of the event)
- an infinity of objects exist which do not fall under any concept (the indiscernability of a truth)
- number is not a category of truth

11

SECOND STAGE. What is the strategy of Miller’s text and what role do numbers play in it? Is it truly a matter of maintaining that the function of the subject is implicated, in the

position of misrecognized foundation, in the essence of number? This is undoubtedly what the already-cited formula clearly states: “In the process of the constitution of the series of numbers, in the genesis of progression, the function of the subject, misrecognized, is operative.”²¹ More precisely, the function of the subject, which is inscribed in the place of lack that the zero as number marks as the place of its revocation, is alone capable of explicating what, in the series of numbers, functions as iteration, or repetition: as excluded, the subject (the “not identical to itself”) is included through the insistence of marks, incessantly to repeat the “step more” of zero approaching one (“the counting for one,” Miller notes). Then indefinitely, from n to $n+1$: “its exclusion [the subject in Lacan’s sense] from the field of number is assimilable to repetition.”²²

12

Other passages of Miller’s text are more equivocal, turning into an analogical indication. For example: “if the series of numbers, metonymy of the zero, begins with metaphor, if the zero member of the series is only standing-in-place suturing the absence (of the absolute zero) which moves beneath the chain according to the alternation of a repetition and an exclusion—then what is there to prevent us from recognizing in the restored relation of the zero to the series of numbers the most elementary relation of the subject to the signifying chain?”²³ The word “recognizing” is compatible with the idea that the Fregean doctrine of number proposes a “matrix” (the title of another article by Miller on the same question)²⁴ that is isomorphic (maximum case), or similar (minimum case) but in any case not identical to the relation of the subject to the signifying chain. The doctrine of Frege would be an analogue (*analogon*) pertinent to Lacanian logic, and one for which we have nothing to say since, in this case, Miller’s text would not be a text on number. It would not be on two counts: initially, because it relates not to number but rather Frege’s doctrine of number (without giving a position on the validity or consistency of that doctrine), and also because it proposes the series of number as a didactic vector for the logic of the signifier, and not as an effective example of the function of the subject’s implication in the series of number.

13

This critical avoidance supposes that two conditions are met: first, that there is, between the doctrine of the number and that of meaning, isomorphism or similarity, and not identity or exemplification; second, that Miller does not account for the validity of the Fregean doctrine of number.

14

On this last point, in my view (I mean, for one who is concerned with the thought of number as such) all is suspended; Miller maintains this suspense from beginning to end. He'll mention "Frege's system" without deciding whether or not — in his view — it is the case that the theory of number is realized, a theory entirely defensible in its essence. It is striking that at no point in this very subtle and intricate exercise are the immanent difficulties of "Frege's system" ever mentioned — particularly those that I have highlighted with regard to the zero, the impact of Russell's paradox, Zermelo's axiom and ultimately, the exchange between language and existence. It thus remains possible to believe that the isomorphism between signifier and number operates between Lacan, on one hand, and, on the other hand, a version of Frege reduced to a singular theory, whose inconsistency has no impact with regard to the analogical objectives.

15

Evidently, it remains to be seen if this inconsistency isn't, as a result, transferred to the other pole of the analogy — thus to the logic of the signifier. The risk is not inconsequential if one imagines that the letter is placed, by Miller, in a fundamental position with regard to a very rushed logic, which the doctrine of Frege serves. "The first [the logic of the signifier] treats of the emergence of the second [logician's logic], and should be conceived of as the logic of the origin of logic."²⁵ What happens if the process of organization is completed through the theme of the subject of a schema (Frege's) struck with inconsistency? The problem is not my own. Under the conditions that I give, if the text is not regulated under number, we are free.

16

THIRD STAGE. There remains, however, an incontestable point of adherence on Miller's part to a general representation of number, which is taken in some way as intuitive, and with which I cannot agree. It is the idea — central, since it is precisely there that the subject makes itself known as the cause of repetition — that number is maintained in a "functioning," or in the "genesis of a progression." This is the image of a number "constructed" iteratively, on the basis of this quilting point that is the mark zero. This dynamic theme that makes number visible as passage, self-production, is omnipresent in Miller's text. The analysis centers precisely on the "passage" from zero to one, or on the "paradox of engenderment" of $n+1$ on the basis of n .

17

This image of number as iteration and passage cuts out in advance any methodical discussion about the essence of number. Even if we can only cover the numerical domain according to the laws of progression (*parcourir*), for which succession is the most common (but not the only, by far), why must it follow that these laws are constitutive of the being of number? I can even see why we have to “pass” from one number to the next, or from a sequence of numbers to its limit, but it is at the very least imprudent to thereby conclude that number is defined or constituted by such passages. It might well be (and this is my thesis) that number does not pass, that it is immemorally deployed in a swarm coextensive to its being. And we will see, in the same way that we account, through difficult passages, for our journey only in its deployment, it is also likely that to this day we ignore, have no use for, or no passage onto, the considerable part of what our thought can conceive of existing numbers.

18

The “constructivist” thesis, that makes of iteration, of succession, of passage, the essence of number, comes to the *conclusion* that very few numbers exist, since “to exist” has no other possible sense than as the effective support of such a passage. Certainly, the intuitionists assume this impoverished perspective. Even a demi-intuitionist like Borel²⁶ thinks that the great majority of whole numbers only “exist” as a fictional and inaccessible mass. It could even be that the Leibzian choice that Miller borrows from Frege is doubled by a latent intuitionist choice.

If it is undoubtedly necessary to recognize that there is more than one common point between the logic of the signifier and intuitionist logic, this will only be because the second expressly invokes the subject (the “mathematical subject”) in its machinery. But in my opinion, such a choice would be a supplementary reason for not entering into a doctrine of number whose entire effect is that the site of number, measured by the operator intuition of a subject, is inexorably finite. For the domain of number is instead an ontological prescription incommensurable with any subject, and immersed in the infinity of infinities.

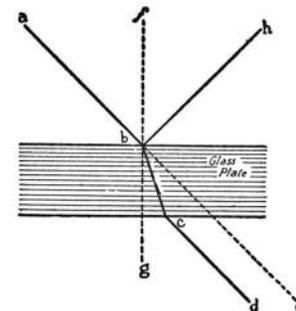
The problem thus becomes: how to think number by admitting, against Leibniz, that there are real indiscernibles; against the intuitionists, that number persists and does not pass; and against the foundational use of the subjective theme, that number exceeds all finitude?

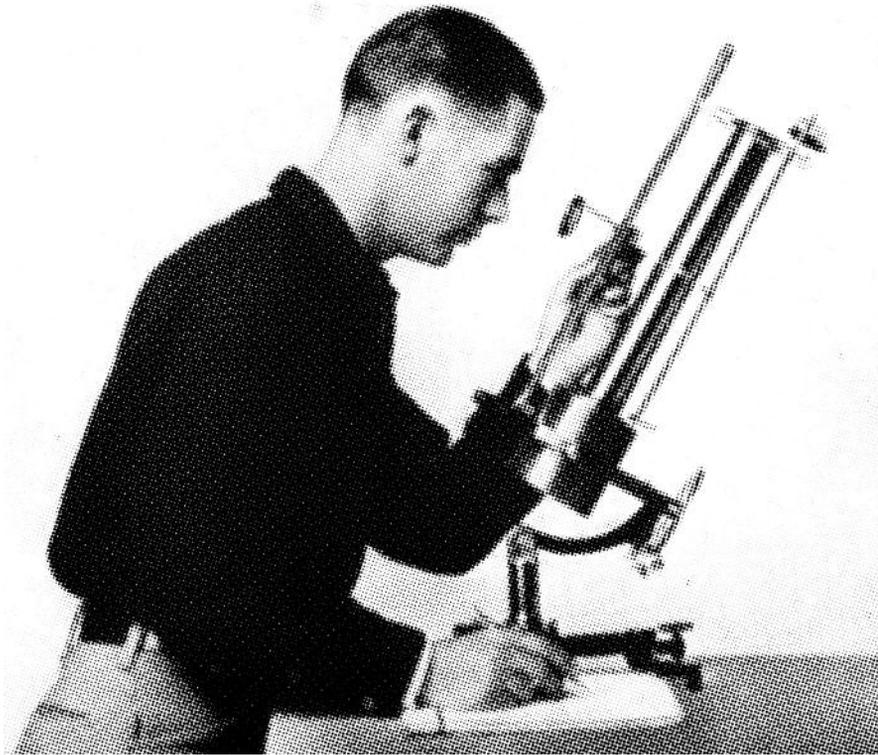
Translated by Sam Gillespie and Justin Clemens

1. The selections translated here are the second and third chapters of Alain Badiou's *Le Nombre et les nombres* (Paris: Editions du Seuil, 1990).
2. ["Tout pensée émit un coup de dès." Stephen Mallarmé, "Dice Thrown Will Never Annul Chance," in *Selected Prose and Poetry*, trans. Mary Ann Caws (New York: New Directions, 1982), 127. Trans.]
3. The reference for Frege's conception of number is *The Foundations of Arithmetic*, trans. Claude Imbert (Paris: Éditions du Seuil, 1969). The first German edition is from 1884. The extremely dense fundamental development occurs in paragraphs 55-86. I [Badiou] must commend the excellent work of Claude Imbert, in particular, his long introduction. [The English translation is by J. L. Austin. See Gottlob Frege, *The Foundations of Arithmetic* (Evanston: Northwestern University Press, 1969). I have avoided the colloquialism of Austin's translation so as to stay true to Badiou's French. I will, however, footnote citations to the English text throughout. Trans.]
4. [In French, *équimériques*. Austin uses the more familiar "equal." I will use equinumerous here to emphasize that it is a purely numerical equality that is in question. Trans.]
5. ["The number which belongs to the concept F is the extension of the concept 'equal to the concept F.'" Frege, *Foundations*, 79-80. Trans.]
6. ["Our definition of the number 1 does not presuppose, for its objective legitimacy, any matter of observed fact." Frege, *Foundations*, 90.]
7. ["*Ne mérite pas le mal qu'on en dit.*" Austin translates the passage in reference to the concepts of a "wooden iron" and "square circle": "Now I believe those old friends are not so black as they are painted." Frege, *Foundations*, 87.]
8. ["I could have used for the definition of naught any other concept under which no object falls." Frege, *Foundations*, 88.]
9. The letter in which Russell communicated the paradox of his name, originally written in German, has been translated into English in *From Frege to Gödel: A Sourcebook in Mathematical Logic*, ed. Jean Van Heijenoort (Cambridge: Harvard UP, 1967), 124-5. Russell concludes by making an informed distinction between "set" (*ensemble*) and "totality." "From this I conclude that under certain circumstances, a set does not form a totality" (125). [In the English, "definable collection" is used, which Badiou then translates into French as *ensemble*, which is usually translated as "set." I have thus modified the translation of Russell. The German word in Russell's original is *Menge*. Trans.]
10. Zermelo developed his axiomatic of set theory, including the axiom of separation that reverses Russell's paradox, in a text written in 1908. [The English translation, "Investigations in the Foundation of Set Theory I" can be found in Van Heijenoort, *From Frege to Gödel*, 199-223, esp. §1: "Fundamental Definitions and Axioms," 201-205. Trans.]
11. The subordination of the existential qualifier to the universal qualifier signifies that given a property P, if all x's possess that property, then there is an x that possesses it. As given in predicate calculus: $Ax(Px) \rightarrow Ex(P(x))$. The axioms and rules of classical predicate calculus allow one to deduce this. Cited, for example, from the manual of E. Mendelson, *Introduction to Mathematical Logic* (D. Von Nostrand Company, 1964), 70-71.
12. [The quote, of course, is from Parmenides. We are here following the standard English translation as given, for example, in Heidegger's *Introduction to Metaphysics*, trans. Ralph Manheim (New Haven: Yale University Press, 1959), 136. Louise Burchill, in her translation of Badiou's *Deleuze*, uses "the same, it is thinking and being" to translate Badiou's French: "*le même, lui, est a la fois penser et l'être.*" She notes, furthermore, that Badiou's translation conforms to Jean Beaufort's French translation of *La Poème de Parmenedie* (Paris: PUF, 1955), 56. See Badiou, *Deleuze: The Clamor of Being*, trans. Louise Burchill (Minneapolis: University of Minnesota Press, 2000), 137. Trans.]
13. Miller's text was published in *Cahiers pour l'analyse 1* (Paris: Éditions du Seuil, 1966). It completes a lecture, in the same issue of the journal, of an article by Y. Duroux, "Psychology and Logic," which examines in detail the function of the successor in Frege. [I am here relying, with occasional modifications, on Jacqueline Rose's translation of Miller. See Jacques-Alain Miller, "Suture

(elements of a logic of the signifier)," in *Screen* 18.4 (Winter, 1977-8): 24-34. Trans.]

14. Alain Badiou, "Marque et Manque: à propos du Zero," in *Cahiers pour l'analyse* 10 (May, 1969).
15. Miller, "Suture (elements of a logic of the signifier)," 30.
16. *Ibid*, 31.
17. *Ibid*, translation modified.
18. *Ibid*, 30. Translates "...rien ne saurait être écrit."
19. For a typology of these orientations of thought, see Mediation 27 of Alain Badiou, *L'Être et l'événement* (Paris: Éditions du Seuil, 1988), 311-315.
20. ["Salut" has a religious meaning of "salvation." Trans.]
21. Miller, "Suture (elements of a logic of the signifier)," 27. [In the French, "in the genesis of progression" and "misrecognized" are deleted and replaced with ellipses.]
22. *Ibid.*, 27.
23. *Ibid.*, 32, translation modified.
24. Miller "Matrice," *Ornicar?* 4 (1975). Translated by Daniel G. Collins in *lacanian ink* 12 (Fall, 1997): 48-51.
25. Miller, "Suture (elements of a logic of the signifier)," 25.
26. See for example, E. Borel, "Mathematical Philosophy and Infinity," in *Revue du mois* 14 (1912): 219-227.





THE PHANTOM OF FREUD IN CLASSICAL LOGIC

ROBERT GROOME

By request of the author, this article (pages 117-143) is unavailable in electronic format. Please refer to the print edition for full-text access.

BOOKS RECEIVED

Serge André, *What Does A Woman Want?* trans. Susan Fairfield (New York: The Other Press, 1999).

Alain Badiou, *Deleuze: The Clamor of Being*, trans. Louise Burchill (Minneapolis: University of Minnesota Press, 1999).

Alain Badiou, *Manifesto for Philosophy*, trans. Norman Madarasz (Albany: SUNY, 1999).

Miran Božovič and Slavoj Žižek, *An Utterly Dark Spot: Gaze and Body in Early Modern Philosophy* (Ann Arbor: University of Michigan Press, 2000).

Judith Butler, Ernesto Laclau and Slavoj Žižek, *Contingency, Hegemony, Universality: Contemporary Dialogues on the Left* (London: Verso, 2000).

Joan Copjec and Michael Sorkin, eds., *Giving Ground: The Politics of Propinquity* (London: Verso, 1999).

Henry Krips, *Fetish: An Erotics of Culture* (Ithaca: Cornell University Press, 1999).

Juliet Flower MacCannell, *The Hysteric's Guide to the Future Female Subject* (Minneapolis: University of Minnesota Press, 1999).

Paul Mann, *Masocriticism* (Albany: SUNY, 1999).

Monique David-Ménard, *Tout le plaisir est pour moi* (Paris: Hachette Littératures, 2000).

Dany Nobus, ed., *Key Concepts of Lacanian Psychoanalysis* (New York: The Other Press, 1998).

Jill Robbins, *Altered Reading: Levinas and Literature* (Chicago: University of Chicago Press, 1999).

Renata Salecl, ed., *Sexuation* (Sic 3)
(Durham: Duke University Press, 2000).

Charles Shepherdson, *Vital Signs: Nature, Culture, Psychoanalysis*
(New York: Routledge, 2000).

Yannis Stavrakakis, *Lacan and the Political*
(New York: Routledge, 1999).

Jacob Torfing, *New Theories of Discourse: Laclau, Mouffe, and Žižek*
(Cambridge: Blackwell, 1999).

Paul Verhaeghe, *Love in a Time of Loneliness: 3 Essays on Drive and Desire*, trans. Plym Peters and Tony Langham
(New York: The Other Press, 1999).

Slavoj Žižek, *The Art of the Ridiculous Sublime: On David Lynch's Lost Highway* (Seattle: University of Washington Press, 2000).

Slavoj Žižek, *The Fragile Absolute, Or Why the Christian Legacy is Worth Fighting For* (London: Verso, 2000).

Slavoj Žižek, ed., *The Fright of Real Tears: The Uses and Misuses of Lacan in Film Theory* (Bloomington and Indianapolis: Indiana University Press, 2000).

Slavoj Žižek, *The Ticklish Subject: The Absent Centre of Political Ontology* (London: Verso, 1999).

Slavoj Žižek, *The Žižek Reader*, eds. Elizabeth Wright and Edmund Wright (Cambridge: Blackwell, 1999).

Alenka Zupančič, *Ethics of the Real: Kant and Lacan*
(London: Verso, 2000).

CONTRIBUTORS

ALAIN BADIOU teaches philosophy at the University of Paris VIII and at the Collège International de Philosophie in Paris. He is the author of numerous books in French, two of which, *Manifesto for Philosophy* and *Deleuze: The Clamor of Being*, have been recently translated into English. A translation of his *Ethics* is forthcoming from Verso Press.

MIRAN BOŽOVIČ is a Professor of Modern Philosophy at the University of Ljubljana in Slovenia. He is the editor of Jeremy Bentham's *The Panopticon Writings* and the author of the forthcoming book, *An Utterly Dark Spot: Gaze and Body in Early Modern Philosophy* with a foreword by Slavoj Žižek.

ROBERT GROOME has held appointments as Assistant Professor at the University of Paris XIII and as psychoanalyst at the Fair-play clinic in Paris, France. He moved to Los Angeles in 1998, where he is founder of, and an analyst at, the association P.I.T.E. (Psychoanalysis in Intension / Topology in Extension). Among his publications are: *Sur les Noeuds* (translation and introduction of "On Knots" by P.G. Tait), *Clinique de la Topologie* and *Le Spectre de Freud dans la Logique Classique*.

JEAN-CLAUDE MILNER is a Professor of Linguistics at the University of Paris VII and is the President of the Collège International de Philosophie in Paris. He is the author of many books in French on linguistics, poetics, philosophy and education and his *For the Love of Language* has been translated into English.

GENEVIÈVE MOREL is a psychoanalyst in Paris and Lille. She is a graduate of L'Ecole Normale Supérieure in mathematics and oversees courses in psychoanalysis at the University of Paris VIII. Her most recent work to appear in French is *Ambigüités Sexuelles: Sexuation et Psychose*.

SLAVOJ ŽIŽEK is Director of Research at the Kultur Wissenschaftliches Institut in Essen, Germany. Author of many books in English, he is about to publish several more this year: *The Art of the Ridiculous Sublime: On David Lynch's Lost Highway*; *The Fragile Absolute, Or Why the Christian Legacy is Worth Fighting For*; *The Fright of Real Tears: The Uses and Misuses of Lacan in Film Theory* (editor); and *Contingency, Hegemony, Universality: Contemporary Dialogues on the Left* with Judith Butler and Ernesto Laclau.