the tortoise, the arrow, which at every infinitely small moment of time is at rest, never reaches the target, and so forth. Symbolism defines a world that is absolutely static but dynamic at every local site. Carrying Cartesian methodology a step further, Hegel substitutes linguistic logic for algebraic logic and words for rigorously defined alphabetic signs, an essential development in the prehistory of the logical calculus and contemporary information-handling technology, despite the inherent lack of rigor. History is understood not as the product of the temporal continuum but as the narrative of the attempt to rationalize the accumulated symbolism in its relation to the past and future, which are at once open to inspection and symbolically infinite.

Hegel solves the logical problem by displacing it to the infinite, but at the expense of the legitimacy of finite existence. The focus is changed from the individual, Cartesian investigator to the world historical individual or genius who redeems the masses from the mere empty accumulation of time. Hegel achieves the absolute science without answering any of the finite scientific questions. The philosopher of administration contributes nothing to the store of practical knowledge which administration requires.

The moment on the practical level that corresponds to the seizure of world history is, needless to say, not so dramatic but for the postmodern masses, long after the excitement of history has past, it is crucial. Hegel merely overwhelms the illogicality of the physical by appeal to an infinite perspective. It was the experimental scientists who were left to implement the imperial administration. Fechner writes: "The determination of psychic measurement is a matter for outer psychophysics and its first applications lie within its boundary; its further applications and consequences, however, extend necessarily into the domain of inner psychophysics and its deeper meaning lies there" (Herrnstein and Boring, 1965, 68). For Fechner, who was a mystic, this meaning is very deep indeed, for the passage from outer psychophysics, where sensations can be measured, to inner psychophysics where they cannot, was the passage from the palpable to the impalpable, from the finite to the infinite. It is the experimental equivalent to Hegel's rejection of sense certainty. The differential equation by which he expresses the infinite approach to the absolute limit of sensation is Fechner's Napoleon, which manifests the absolute limit.

With his practical commitments, however, Fechner must deter-

mine the dry-as-dust question of how to tabulate his results. What should he do with the undecidable cases? He resolved the problem by distributing the undecidable cases evenly between the categories, but his procedure provoked a lively debate in statistical analysis during the last two decades of the nineteenth century and after. Stephen M. Stigler summarizes the alternatives which were considered:

> 1. Follow Fechner's approach and divide the doubtful cases between right and wrong.
>
> 2. Calculate two values of *h* [Fechner's term for individual sensitivity] and average them: one with all doubtful cases treated as right, and one with all treated as wrong . . .
>
> 3. Insist that no doubtful answers be allowed, so that all answers became right or wrong. (Stigler, 1986, 253–254)

One way or another, all of these methods void undecidable cases. That is to say, Miss Stein, who produces no useable results, is eliminated as abnormal. Abstraction and purpose enter the experiment by way of these practical considerations. And in hundreds of similar "practical" situations, when we are required to observe symbolic entities, our participation in the world of disciplined knowledge is lost. Our experience is not of a tyrannical experimenter, saying, "*Chose!* You *must* decide!" but of a friendly, smiling person, saying, "Well, what do you think?" Or even more frequently, it is ourselves, in a quandary, and taking this or that chance. One by one, none of the decisions is important. If, however, no decision is important individually, how do collections of such decisions attain importance? The subject's obligation is transferred from the experience to the symbolism.

In general, clearly, the domain of the measurable and the domain of the symbolic behave according to radically different logics: the one that describes a world of proliferating difference and ceaseless flux does not obey the law of transitivity; the other describes for the infinite mind the static world of Zeno's paradoxes. Lacking infinite minds, we experience the symbolic domain as an intense dynamism that goes nowhere—the road of despair.

In the domain of the measurable, there are no discrete units. In the smallest samples we can isolate, things are already mixed: this thing is becoming that thing, here is there, now is then. Each thing is itself, though not *equal* to itself, and exists through its own self-

difference. The world is dense; everything is at hand. The measure of things is not supplied by the things themselves but must come from elsewhere. There are no things until someone *does* something. Fechner's weights all weigh the same; indeed are all the same weight, until someone lifts them.

In his masterful study of African drumming, John Miller Chernoff makes a useful distinction between "rhythm as something to 'get with,'"—rhythm that supplies its own measure—as we know it in the West, and "rhythm . . . as something to 'respond to'"—something to be measured. "In African music," he writes "it is the listener or dancer who has to supply the beat: the music itself does not become the concentrated focus of an event" (Chernoff, 1979, 55). Rhythm is directionless and purposeless, a medium of indeterminate topology that is created moment by moment and step by step. Its flow is characterized by the paradox $A = B$, $B = C$, $A < C$.

In the symbolic domain, the subject, who is a center of purposive behavior, divides the intuitive epistemic domain into a class of tokens and a class of objects, which are assumed to be self-identical, and notes relationships between them: *each thing is related to and has meaning through some other thing*, not what it is in itself, because in itself it is nothing. The biography of the subject is the history of formal systems, and from Descartes to Lacan the articulation of that biography and that history explores the boundary conditions, the relationship between conscious and unconscious, which, of course, constantly supplies new content but never anything that was not implicit in the system itself (i.e., unconscious). In this domain, as Baudrillard notes, we create a simulated world of relationships with something not quite ourselves, not quite at the center of it; and when we try to analyze our plight, we create more simulations. The world is always out of reach. The impossibility of this situation has been brought into acceptable tolerance by statistical probability. The science of statistical analysis has transformed the symbolic domain. The Hegelian subject, the heroic consciousness of *Phenomenology,* which presided over history, has been rendered as a statistically reliable zone. Statistical methodology in both the physical and the social sciences developed immense sophistication during the first half of the twentieth century. The unique subject became a luxury, catered to by the so-called arts and humanities. Now a rich subjectivity is a kind of

property enjoyed by the elite in posthistorical capitalism and socialism alike.

The Continuous and the Discrete

The developments that we have traced through Fechner's experiment could be followed by other paths through the last half of the nineteenth century. The terms would be different, in some cases perhaps very different, but the issues that are fundamental would be same. Although our primary concern is with language and linguistics, I must at least mention the development of non-Euclidean and N-dimensional geometries. The theoretical impact of the new geometries was profound, and, as Linda Dalrymple Henderson has shown in her important study, *The Fourth Dimension and Non-Euclidean Geometry in Modern Art,* they were significantly used and abused by the cubists and the futurists, artists who are directly relevant to our story (Henderson, 1983).

The fifth postulate of Euclid—that only one line parallel to a given line can be drawn through a given point—had seemed to many geometers less certain than the other postulates, and in the 1820s Nikolai Ivanovich Lobachevsky and Janos Bolyai independently showed that any number of lines that approach but never reach a given line may be drawn on curved surfaces, while in the 1850s, Georg Friedrich Bernhard Riemann noted that spherical surfaces are finite but unbounded and, therefore, on a spherical surface no parallel lines are possible. It was not until around the turn of the century, however, that Henri Poincaré, L. E. J. Brouwer, and others realized that the new geometries had struck a fatal blow to the Kantian doctrine of space and the possibility of a priori synthetic knowledge. If any number of mutually contradictory geometries can be shown to be internally consistent, no particular geometry can be privileged. The implications of this fact are profound: language, to recall Hegel's phrase, is *not* truer. We can learn nothing about the world by studying the requirements of the symbolism by which we represent it. With these developments, the formalism that had prevailed in Western culture since the Greeks could not be maintained. It was the closure of metaphysics, the end of logocentrism. Thereafter, mediation of experience in whatever medium no longer constituted significant philosophic data. For

more than two millennia, Western thinking had taken place inside a horizon defined by the relationship of words to the Word. Things had meaning because of their relationship to something else. At some time, in the early part of this century, relationship as a source of meaning was emptied out. Significance thereafter was not a matter of interpretation but of experience.

N-dimensional geometries, which were of course also impossible from a Euclidean perspective, developed out of algebraic geometry. Although there are no definitive originating statements comparable to those of Lobachevsky and Bolyai, Arthur Cayley and Hermann Grassman are usually cited as important early contributors to the idea. Gradually, it became clear during the 1840s that it was possible to add any number of axes to the *x*, *y*, and *z* axes of the Cartesian coordinates. Of course, it was not clear how to visualize these additional dimensions, but they could be mathematically described. The philosophic importance of Riemann's famous inaugural lecture before the faculty of the University of Göttingen in 1854 results from his consideration of the relationship between the intuitive space of geometry and the mathematical space of analysis. There are, Riemann notes, two types of manifolds: the discrete and the continuous. They are distinguished significantly in these terms: "while in a discrete manifold the principle of metric relations is implicit in the notion of . . . [the discrete] manifold, it must come from elsewhere in the case of a continuous manifold" (Riemann, 1929, 424–25). This difference can be clearly illustrated with the symbolic and the measurable in Fechner's experiment.

With Riemann, the problem of the one and the many, which had dominated philosophy since the Greeks, was replaced with the problem of distinguishing two different forms of multiplicity. If a manifold consists of discrete units, of course, the units lend themselves to the establishment of scale. It is necessary only to discover the proper interpretation of their forms. If a space is continuous, however, the production of a world of discrete things—selves, trees, houses—becomes a matter of interaction between the space and the measurer. It is not merely a "relativization of the relations of writer, reader and observer (critic)," to recall Roland Barthes's words, that is called for, but the *creation* of these entities by writing, reading, and observing. To the question, which naturally

enough occurs, *who* writes, reads, and observes, the only answer is no one. *Writing, reading, and observing are interactions in a continuous spatio-temporal field which is, in fact, the Creation.*

Charles Olson assesses the importance of Riemannian geometry in these terms:

> All things did come in again, in the 19th century. An idea shook loose, and energy and motion became as important a structure of things as that they are plural, and, by matter, mass. It was even shown that in the infinitely small the older concepts of space ceased to be valid at all. Quantity—the measurable and numerable—was suddenly as shafted in, to any thing, as it was also, as had been obvious, the striking character of the external world, that all things do extend out. Nothing was now inert fact, all things were there for feeling, to promote it, and be felt; and man, in the midst of it, knowing well how he was folded in, as well as how suddenly possessed or repossessed of a character of being, a thing among things, which I shall call his physicality. It made a re-entry of or to the universe. Reality was without interruption. (Olson, 1967, 118–19)

Thereafter, the modernist equation of being and language had a different significance. It was not possible to trace language to an origin in being and then follow the language. Neither being nor language necessarily contained in themselves a principle of measurement. The possibility of measure derived from the *act* of equating the world and being, not from the world or being. Things were dense with quantity, not merely symbolic surfaces. The physical world and the symbolic world were deeply embedded in one another.

The Two Modernisms Again

There are two modernisms in the twentieth century. One is a bedraggled romanticism, which attempts to make a virtue of its impoverishment, its lack of concrete content and its bare formalism. It is committed to the discovery of discrete units of reality and the disciplined enforcement of the rules of their combinations, a version of the ancient equation of being and language incorporating the modern concept of infinite categorical species. It is not surprising, therefore, that modernism produced so many right- and left-wing totalitarians: the finite world is a discipline of the infinite. Even the liberalism that emerged from this socio-intellectual ma-

trix was a kind of self-frustrating totalitarianism committed from the outset to a contradiction that it refused to face and refused to resolve. The radical modernists, on the other hand, take up intransitive reality, putting the contradiction at the origin of language, the eros of life itself, rather than deferring it to the infinite future. Gertrude Stein makes this elegant distinction between the two:

> Lord Grey remarked that when the generals before the war talked about the war they talked about it as a nineteenth-century war although to be fought with twentieth-century weapons. That is because war is a thing that decides how it is to be done when it is to be done. It is prepared and to that degree it is like all academies it is not a thing made by being made it is a thing prepared. Writing and painting and all that, is like that, for those who occupy themselves with it and don't make it as it is made. (Stein, 1962, 513–14)

So there are those who prepare anything and try to make it as it is prepared, and there are those who make anything as it is made. To this we can now add another definition: postmodernists, having prepared perfectly and made it perfectly as it was prepared, now prepare themselves to spend eternity administering their failure.

Romantic modernism devolved quickly and naturally into structuralism and poststructuralism. From the beginning it was an ill-advised strategy to save the tradition of art in the face of overwhelming abstraction, and it turned out to be a viable motive for theoretical discourse which actually needed only a few exemplary works of art as an origin. The testimony of a few crucial works as articulations of abstract form sufficed; they were the manifest *logos* that had escaped the embarrassment and logical difficulty of incarnation. Thus it was possible to continue the traditions of Christian culture without Jesus; the central mystery could be the pure, formal mechanism of the soul.

Thinking particularly of Picasso, Joyce, Braque, Stravinsky, Le Corbusier, and Xlebnikov, Roman Jakobson writes:

> The extraordinary capacity of these discoverers to overcome again and again the faded habits of their own yesterdays, together with an unprecedented gift for seizing and shaping anew every older tradition or foreign model without sacrificing the stamp of their own permanent individuality in the amazing polyphony of ever new creations, is intimately allied to their unique feeling for the dialectic tensions between the parts and the uniting whole,

and between the conjugated parts, primarily between the two aspects of any artistic sign, its *signans* and its *signatum*. Stravinsky with his "search for the *One* out of the *Many*" reveals the core of his work when he reminds us that "the one precedes the many" and that "the coexistence of the two is constantly necessary". As he revealed, all the problems of art (and, we may add, of language too) "revolve ineluctably about this question".

Those of us who were concerned with language learned to apply the principle of relativity in linguistic operations; we were consistently drawn in this direction by the spectacular development of modern physics and by the pictorial theory and practice of cubism, where everything "is based on relationship" and interaction between parts and wholes, between color and shape, between the representation and the represented. "I do not not believe in things," Braque declared, "I believe only in their relationship." (Jakobson, 1962, 632)

I quote this passage at length because Jakobson's thought so thoroughly underwrites the academic practice of aesthetic criticism. This is the modernism that proposes once again to renew the faded habits of classical modernism, to insist once again that being and language are identical, that the one precedes and *prepares* the many. The new style, which gave the new art its fresh appearance, resulted from the introduction of the discrete infinitesimal and thus nonrepresentational forms into art as Ferdinand de Saussure introduced them into linguistics: Saussure's famous statement, "*dan la langue il n'y a que des differences sans termes positifs,*" defines phonological units as nodes of pure difference which like mathematical points are dimensionless—not things but the "things" of relationships. The essential quality of these non-things, caught up in the weird logic of the transfinite, is that they are discrete and self-identical.

Hegel had prepared the way to thought in the common language of these immense abstractions as Descartes had prepared the way in mathematics, and the rise of phonological science coincided with a revival of interest in Hegel. The resonances of Roman Jakobson's historical assumptions are clear: "The dichotomy of distinctive features is, in essence, a logical operation, one of the primary logical operations of a child and—if we pass from ontogeny to phylogeny—of mankind" (Jakobson, 1962, 424). Of the terms of the binary opposition, Jakobson writes, "Both arise simultaneously and *force* the infant to choose one and to *suppress* the

other of the two alternatives" (Jakobson, 1962, 499–500, my emphasis). These are the violent terms of the dialectic of the master and the slave. What is the nature of this force and this suppression that imposes ideal distinctions in phonological space upon us?

I taught my daughter "up" and "down" (and got some exercise) by playing a game in which we would alternatively squat and stand. She learned that she could not be both up and down. The world legislates absolutely that we cannot at the same time bend the knees to bring the buttocks near the heels *and* straighten the knees to make the greatest possible distance between the buttocks and the heels. This is a law that we cannot break. Its logic relates directly to other acts such as climbing, lifting, sitting and so forth. Eventually my daughter learned that she could say "up" but stay down and then laugh at me because I had gotten up. In the physical domain she had to be up or down; in the domain of grammar, she could make a joke. She had entered the *verkehrte Welt*, where even the profoundest oppositions are interchangeable and where making sense requires discipline. The forces that compel obedience to the rules of sense making are social. Joking is controlled by strict conventions: consider, for example, the satyr play, the tradition of the fool, and the shamanistic jokester in traditional cultures. The interpretation of a linguistic calculus, however, like the interpretation of the harmonic structure, goes through a natural growth in which dissonance is gradually replaced with harmony. Even when it is significantly constrained by the norms of a complex cultural tradition, the dialectical tensions of grammar, developed to their greatest abstract potential, go into regression, leading us into a search for the "infinitesimals of the poetic word," in Velimir Xlebnikov's phrase to which Jakobson refers. As meaning is discovered to be undecidable, semantic representation breaks down, and art is reduced to the polyphonous display of the artist's own "permanent individualism," as Jakobson says, or, as one might say less sympathetically, "egotism." Language thus understood is the productive medium of the will to power. Finally, its objective structure dissolves into private associations that can only be confessed guiltily and ironically by Eliot's Prufrock and his kind or blotched out beyond unblotching as a private "mythology of self" by Stevens's Crispin. In either case the narrative recycling of history confronts the postmodern problems of administration. In the *verkehrte Welt*, as it begins to enter the third millennia, the presence and absence

of the mystical body of Christ fade into one another, and we give ourselves up to the mastery of a theoretical establishment to negotiate for living space.

Although both modernisms equate language with being as a point of beginning again, their conceptions of language are different: one conceives language in terms of symbolism, the other in terms of measure; one derives language from language itself (from Socratic memory or Cartesian-Chomskyan innate knowledge), the other derives language from nonlanguage.

The thought of language as an extra-ontological structure is, of course, powerful. As an independent subjective structure that describes all ontological possibilities, language is conceived as a mechanism of knowledge. It is, however, an illusion of literacy, and now, as we reach the limits of literacy as a mode of organizing knowledge, the nature of the illusion is clarified. If all of language can be represented with a finite number of phonemes, which combine according to a finite number of rules, it should be possible to generate all of legal combinations for any language. "Spoken language," however, as Eric Havelock writes, "is a continuum, a soundtrack manufactured by the larynx and carried on waves in the air, divisible acoustically into moments but not spatially extended into panels. Moments which anticipate and echo each other are con-sonant, not symmetrical" (Havelock and Hershbell, 1978, 15). With the appearance of a fluent alphabetic script, "The sound-sequence was suddenly brought into contact with a set of written symbols possessed of unique phonetic efficiency. . . The alphabet applied to the Homeric tongue constituted an act of 'translation' from sound to sight. It is the completeness of the art which must first be emphasized, and therefore the completeness of the coverage of human experience" (Havelock and Hershbell, 1978, 4). The alphabet translates from from the continuous manifold of vocal space to the discrete manifold of phonetic space. Its "completeness of coverage," its masking of the temporal consonance with the symmetry of a visual and implicitly logical space, engendered the problems that philosophy arose to solve. The philosophic project of the West has been committed to the impossible task of integrating the continuous manifold of the spoken word and the discrete manifold of the written word.

Derrida asks, "Why is the phoneme the most 'ideal' of signs? Where does this complicity between sound and ideality, or rather,

between voice and ideality, come from?" (Derrida, 1978a, 77). The answer is that it comes from *writing* and the abstract requirements of the written alphabet to break-up the continuity of the voice's sound field so it can be represented by a finite combinatory. The voice and ear know phones but no phonemes, which must exist, if at all, only in a private cognitive realm. When speech patterns are studied on spectographs, which record the physical characteristics of sound, nothing in the voice signal corresponds to the consonants and vowels; they are not measurable entities. Moreover, individual sound segments vary depending upon the local phonetic context. That is, the measured phonological continuum cannot be rationalized. "Phonemics," which is ultimately to say, formal grammar as such, "admits no operations 'with unnamed entities,'" Roman Jakobson tells us (Jakobson, 1962, 639) and in an important and necessary sense, the physical, phonological continuum consists of unnamed entities: undifferentiable differences which make measured or named differences. Jakobson writes:

> phonemic analysis deliberately considers and processes the physical matter in order to elicit the strictly relative, oppositive values superimposed on the "phonetic premises" by the coding rules of language . . . phonemic study of paradigmatic relations overcomes the gross phonetic contingencies and discloses the consistent dichotomy of the distinctive features which is basically the same LOGICAL PRINCIPLE that underlies the grammatical structure of language." (Jakobson, 1962, 639)

This "processing" of physical matter and this "overcoming"—or "sublation" in Hegelian terminology—of gross phonetic contingencies turn out to be the fundamental operations of the technological enterprise itself. Meaning and structure are dissociated from one another and then recombined by formal semantic techniques. Paradoxically, writing, this most public of media, has its essential existence in the ideal space of the private soul or in a statistical space of the socius. Meaning, having been deferred in favor of constituting a literate machine, must be reintroduced as an independent rule-governed system. The privatization of the public—the internalization of language in the individual soul or the initiation of the individual into the public requirements of writing—has been the burden of the modern West and the bane of every school child. The conditioning of a literate population re-

quires an educational system that makes the abstract requirements of combinatorial logic the most intimate of experiences. Our education is long and arduous, and its grimness extends far beyond schooling as such to an entire cultural enterprise that requires the substitution of semantic rules for the concrete and specific occasions of language. It requires an overwhelming cultural uniformity.

The structuralist strategy assumes a logical world consisting of enumerable, discrete, self-identical atoms combining according to a finite set of rules. The various poststructuralisms show either that the atoms cannot be enumerated or, more to the point, that a finite set of rules cannot account for their structures. Poststructuralist improvisation consists of play amongst the endless possibilities.

Another kind of improvisation addresses not a preexistent field of discrete atoms but a continuum, a time-sound field where nothing ever repeats. Phonemes are heard as much for their sound and the quantities of time they mark (phrasing) as for their semantic content, which is, of course, to say that they are *not* phonemes but small entities of multiple values. Everything is at once the same and different, forever beginning again. There are no infinitesimals, no instants in which time stops, no simple natures, atoms, or distinctive differences, no phonemes, no systematic backgrounds, neither implicit logical structures nor unconscious.

It is easy to mistake the nature of such improvisation, and it seems to me that even so discerning a critic as Gerald L. Bruns does so. In an essay on William Carlos Williams's masterful double improvisation, *Kora in Hell,* which improvises not only a text but also its own commentary, Bruns says rightly that "improvisation is the performance of a composition in the moment of its composition" (Bruns, 1982, 145), but he fails to understand the permission that controls the situation. He speaks of an innocence, an "evasion of Adam's curse." It is not clear how he squares this characterization with the title of the poem. If Kora is to return to earth, her meanings must work in time where winter has taken its toll on all things. The habits are forgotten; words are emptied of their associations. In his remarkable essay on Proust, Samuel Beckett writes:

> The creation of the world did not take place once and for all time, but takes place every day. Habit . . . is the generic term for the countless treaties concluded between the individuals and their countless correlative objects. The periods of transition that separate consecutive adaptations . . . represent the perilous zones in the life of the individual, dangerous, precarious, painful,

> mysterious, and fertile, when for a moment the boredom of living is replaced by the suffering of being. (Beckett, 1931, 8)

Between one set of habits and the next is the zone of improvisation. It is a time of extraordinary peril for the individual. When an entire culture can no longer keep up with its own startling change and loses its habits, its survival comes profoundly into doubt. For the last hundred years in the West, the activity in the vicinity of the boundary that divides these two states—the one where everything has been said, and the other where there may be nothing to say—has been brisk. It is the familiar topos of the modern improvisor. Robert Duncan writes:

> the death of Man at work, bee hive
> cells a-buzz with it,
> the thriving of Death among us
> the work of Art to set words
> jiving breaking into crises
> in which a deathless strain moves thru
> means without ends
> Brancusi's towering column
> moving into its true power,
> into an imagined "endlessness", each stage of the form
> dying upward, giving way
> measures moving in eternity unmoving.
>
> (Duncan, 1984, 19)

"Jiving breaking into crises" specifies the art of the improvisor. It is the disruption of the deathly habits of the beehive, which is busy only with its own mechanism. In the beehive, there is only death and the hard work of emulating death; it is the image of repetition obsession. The purposelessness of art—"means without ends"—escapes both death and the compulsion of sentimentalized habit. The alternatives that poststructuralism discovers are defined in a world of rule-governed linguistic atoms. The improvisation of the common knowledge, on the other hand, is an eros uncompromised by death, an eros that makes symbols only of things in its construction of the things which construct it.

The examples from *Kora* that Bruns himself gives undercut the notion that improvisation represents a kind of poetic holiday; he speaks of a "theory of gameless play." If Williams is innocent of the usual rhetorical requirements, he incurs another guilt—the guilt of anyone who uses words perhaps—that the unreasonable body of language is inseparable from the organon of representation and

reason. He finds himself responsible for that which is arbitrary, "meaningless," and "merely" physical in language. Bruns takes this example from *Kora:*

> When beldams dig clams their fat hams (it's always beldams) balanced near Tellus's hide, this rhinoceros pelt, these lumped stones—buffoonery of midges on a bull's thigh—invoke,—what you will: birth's glut, awe at God's craft, youth's poverty, evolution of a child's caper, man's poor inconsequence. Eclipse of all things; sun's self turned hen's rump.

It is difficult to understand how a reader would find innocence in a passage that attends so relentlessly to "the tone-leading of vowels" and that is, further, poised on a rime (lumped / rump), giving the passage something of the formal quality of a couplet. And the passage does not lose the burden of the sound even as it opens into a new paragraph:

> Cross a knife and fork and listen to the church bells! It is the harvest moon's made wine of our blood. Up over the dark factory into the blue glare start the young poplars. They whisper: It is Sunday! It is Sunday! But the laws of the country have been stripped bare of leaves. Out over the marshes flicker our laughter.
> (Williams, 1970, 50–51)

Here "church" picks up the phonetic dynamism from "turned," and the passage carries on the short-*a* sounds that were announced at the beginning, almost like a tonic key, yielding the rime of "glare" and "bare" and moving into related repetitions in "h*ar*vest," "d*ar*k," and "m*ar*shes." Bruns suggests that Williams follows "the law of unpredictability." It seems, rather, that Bruns and Williams are interest in different phenomena. Bruns is confident that the sound pattern of a poem is a largely irrational sequence of noises. In these passages one comes to ask whether it is the sequence of noises—the complex patterns of which could be considered at much greater length than I have here—or the readerly expectation of a syntax of subordination which is irrational.

The text is, Bruns says, a list, and "The list, in contrast to the game, is more character than plot—is episodic, one damn thing after another, or containing no demands for a conclusion" (Bruns, 1982, 150). He is, I suspect, thinking of the impossibility of "giving an account" of this writing. What does one tell the eager students in Introduction to Modern Poetry? If there were plot or

rules, we might discover the principle for the generation of items on the list, but there is no secret to be unlocked. The reader can only wait and see; the explicator quickly runs into foolishness. Bruns seems slightly scandalized that language is so prolific: "A list is a way of exceeding the limits of the sentence without actually abolishing them" (Bruns, 1982, 150). The production here, however, is profusion, joyously spilling over the bounds of the sentence, the completed thought goes beyond completion, beyond conclusion. In the "Prologue" to *Kora,* Williams writes: "The true value is that peculiarity which gives an object a character by itself. The associational or sentimental value is false. Its imposition is due to lack of imagination, to an easy lateral sliding. The attention has been held too rigid on the one plane instead of following a more flexible, jagged resort. It is to loosen the attention, my attention since I occupy part of the field, that I write these improvisations. Here I clash with Wallace Stevens" (Williams, 1970, 15).

In the domain of the symbolic, the domain of Stevens's work, things have meaning through their relationship to the symbolic system as whole. The fundamental semantic unit is the metaphor. Meaning arises from the ratio of the particular to its implicit background. Stevens and artists of his kind seek the stable reconciliation of the particular with the totality that is possible only in the artful illusion. For Stevens, the supremely self-conscious artist, who is aware of the instability of such artful ploys, the illusion reaches out endlessly to stabilize itself in a regression of illusions. *In the domain of the measured or common, things have meaning through themselves.* The problem is not the one and the many but the many and the more: the erotic proliferation never looks to any stability beyond the stability that the act itself affords. The language is not a calculus but a construction, moment by moment, image by image. The fundamental semantic unit is the image. Williams's mother stands at the beginning of the "Prologue" as a kind of muse: "Whatever is before her is sufficient to itself and so to be valued" (Williams, 1970, 6).

How to Read and Write

Ezra Pound's "How to Read" (1927) and its expanded version, *ABC of Reading* (1934), and Gertrude Stein's *How to Write* (1931) are at the pre-Socratic stage of the new poetics. For the first time,

there is a proposal to begin again that does not involve the Edenic equation of being with the logic of symbolism. Both Pound and Stein write how-to books: theirs is a knowledge that cannot be stated but only practiced. That is to say, as Wittgenstein repeatedly demonstrates, *meaning is use*. Going beyond the beginning is now a question not of thought but of practice.

Gertrude Stein writes: "I said in the beginning of saying this thing that if it were possible that a movement were lively enough it would exist so completely that it would not be necessary to see it moving against anything to know that it is moving" (Stein, 1985, 170). That movement is the eros of the common knowledge. It is a knowledge not of ratios or relationships but of things in themselves, unique and beyond comparison. Value is based upon individuality, not exchange or metaphor. Pound notes, "No science save the arts will give us the requisite data for learning in what way men differ" (Pound, 1965, 42). Stein makes a similar point: "While I was listening and hearing and feeling the rhythm of each human being I gradually began to feel the difficulty of putting it down. Types of people I could put down but a whole human being felt at one and the same time, in other words while in the act of feeling that person was very difficult to put into words" (Stein, 1985, 145). The poets of the common knowledge do not mystify voice and self on behalf of writing. They are concerned not with the presence of the self but with the presence of the Other. Here is a tree, a stone, above all, another person. Where might we look to find more basic or more reliable knowledge which could guarantee our intuition? That which exists through itself discovers itself an object amongst objects in a space uninterrupted by discrete egos.

In *ABC of Reading,* Pound distinguishes between alphabetic and ideogrammatic languages. The one, as we have seen, consists of a finite combinatory of simple signs that we now call "phonemes" and a set of rules by which phonemes are combined. Pound was aware by 1912 or 1913 that the allowable combinations cannot be specified by a finite number of rules. "The other kind of language," he notes, "starts by being a picture of the cat, or of something moving, or being, or of a group of things which occur under certain circumstances, or which participate a common quality" (Pound, 1960, 29). The important difference between these languages is not the obvious one. Pound was fascinated by the visual quality of the Chinese written character and by the concrete-

ness of calligraphy, but he was at least as interested in language as sound as language as image:

> And poor old Homer blind, blind, as a bat,
> Ear, ear for the sea-surge, murmur of old men's voices:
> 'Let her go back to the ships,
> Back among Grecian faces, lest evil come on our own,
> Evil and further evil, and a curse cursed on our children,
> Moves, yes she moves like a goddess
> and has the face of a god
> and the voice of Schoeney's daughters,
> and doom goes with her in walking,
> Let her go back to the ships,
> back among Grecian voices.
>
> (Pound, 1971, 10)

Calligraphy or typography is only one aspect of the physicality of language. The poet who wrote these lines, as much as the poet whom they are about, is a master of the craft, the materials of which are consonants and vowels cutting designs in time. Pound does not conclude from the example of Chinese poetry that we must abandon phonetic writing; rather, he proposes the necessity of abandoning the grammatical and logical modes that phonology implies. We must return to the beginnings, to learn to read again, and specifically to begin with the ABCs as images—marks in measurable space—rather than phonemes, which are ideal entities that cannot be discovered in the most sophisticated spectographic analysis of speech.

Our language instruction begins well enough. We give teething babies ABC books made of materials that can withstand repeated gummings. The alphabetic characters are associated with images, and it is important for children to learn that the relationship of *B* to *ball* is not unique; it may also be *baby, bottle,* and so forth. Slightly more advanced ABCs include the information that the alphabetic characters have alternative forms: *B* may also be *b*. The alphabet is arbitrary; the images are not. Children learn to talk without rules, and it is only the seriously impaired who do not speak with at least some proficiency. As children begin to read and write, however, we begin to teach rules of grammar and the learning of language falls under a discipline. The dynamism is lost. "Chinese notation . . . ," Fenollosa writes, "is based upon a vivid shorthand picture of the operations of nature." Of the Chinese

sentence "man sees horse" he says, "The thought-picture is not only called up by these signs as well as by words, but far more vividly and concretely. Legs belong to all three characters: they are *alive*. The group holds something of the quality of a continuous moving picture" (Fenollosa, 1967, 8). Sergei Eisenstein independently noted the comparison of the Chinese character and the frames of the cinema: "The film-frame can never be an inflexible *letter of the alphabet*, but must always remain a multiple-meaning *ideogram*. And it can be read only in juxtaposition, just as an ideogram acquires its specific *significance, meaning*, and even *pronunciation*. . . ." (Eisenstein, 1957, 65–66). It is not the visual nature of the Chinese characters but the ways in which, juxtaposed, their discrete boundaries break down and create self-modifying and self-producing continua that is important. The sense of their necessary relationship to their meanings derives primarily not from representation of their referent, which is of course often vague, but from their intransitive measurability.

Of *The Making of Americans* and the early portraits, Gertrude Stein writes:

> I was doing what the cinema was doing, I was making a succession of the statement of what that person was until I had not many things but one thing. . .
>
> In a cinema picture no two pictures are exactly alike each one is just that much different from the one before, and so in those early portraits there was as I am sure you realize as I read them to you also as there was in *The Making of Americans* no repetition. Each time that I said somebody whose portrait I was writing was something that something was just that much different from what I had just said that somebody was and little by little in this way a whole portrait came into being, a portrait that was not description and that was made by each time, and I did a great many times, say it. (Stein, 1985, 177)

In the cinema, we see measured sequences. From frame to frame, a slowly moving object appears in adjacent frames to be indistinguishably repeated. A comparison of every other frame, however, may reveal that it is moving. That is, movie sequences are intransitive like other measured forms: frame A equals frame B, frame B equals frame C, but frame A does not equal frame C. If every point of an object's trajectory were represented on film, it would have to be infinitely long and would require an infinitely

fast machine to project its movement. Stein's phrase, "a whole portrait came into being . . . that was *made each time*" (my emphasis), is accurate to the construction of measured images. The image does not exist at any instantaneous cross section, but, the *whole* subject is in each measurable duration. Unlike a description that decomposes the sitter into atomic units and presents her unit by unit—eyes, nose, mouth, and so forth—Stein's subjects as integral beings are implicit in each time of their making. The continuity of the image in cinematic time and space is a result of the complex event of the movie—the film moving through the projector at a certain speed, the eye of the viewer scanning the screen, the appearance and gradual decay of light traces on the retina, and so forth. Stein slows the process down, so the measure "made by each time" is clearly revealed and our participation is restored. The signs, thus, referring only to themselves, being only what they are, are utterly necessary and, as they could not be otherwise, they are unambiguous, though of course unparaphrasable. Meaning is not an in-other-words equivalent that somehow accompanies the sign.

Although Pound had recognized the rightness of Fenollosa's critique of Western grammar, he did not question the institutions that preserved and enforced the historical tradition of that grammar. As a writer, he escaped totalitarianism, but as a reader, even a reader of his own work, he often did not. This peculiar schizophrenia was widespread among U.S. writers between 1917 and 1945. Pound, like so many of his generation, was a devotee of a widespread nostalgia cult—flourishing in universities to this day—that appeals to the literate past, when the unity of a text interpreted the various marks that constituted it and the problem of the One and the Many generated dialectical excitement. As long as the culture maintained a homogeneous collection of controlling images, the dialectic was a powerful administrative tool precisely because it was possible to structure the writing and *reading* of texts and thus to organize large populations for production. In a literate culture, however, the semantic resources that are available to a speaker and an audience—a shared orientation in a landscape—must be synthetically reproduced in written records, and as E. D. Hirsch and Alan Bloom show in their best-selling books, literacy requires a rigorous selection of references. The European tradition invested inconceivable amounts of time and energy in constructing a universal landscape in language. For two and one-half millennia,

the culture built the pyramids of *logos* on the backs of school children. The world view which it accommodates is provincial but provinciality or at least narrowness is essential to its success. The semantic keys must constitute a compact and teachable package.

Shifting the emphasis from Pound's how to read to Stein's how to write requires a radical empowerment of the audience. It is a change of this order that is required. Gertrude Stein declares "Grammar is in our power" (Stein, 1973, 73). Thus, the reign of intimidation by the written word, which had originated with the Greek conception of the *logos,* ended. Nietzsche had said that we still believed in God because we believed in grammar. He could only imagine an eternal recurrence of the casting out and the return of the deity. Thought, to say nothing of emotion, had not been fully our responsibility. We had been appropriated by structures that were not our own. Some of these structures we could rationalize or partially rationalize logically or grammatically; only the origin remained mysterious. It was dealt with theologically; a singular mystery could be localized and ritualized. Although it involved a large cultural investment, it was more or less successfully maintained for millennia.

The rational structures were static and required only realization and maintenance. Emotion, on the other hand, the intelligent stirrings of body that also agitate the mind, had seemed inexplicable, capricious invasions that could be met only with hopeless submission or extraordinary discipline. The blindness of love, the senseless passions of war, and the almost endless diversity of non-theological, religious excitements have been merely to be enjoyed or endured. For Stein, what had been called "reason" and "emotion," these traditionally irreconcilable mental phenomena, were relative loci on a continuum, dynamic forms for which we are responsible in every act of living. Grammar is an order that derives from our participation in it and in life, not from its own internal necessities. The users of language are always in the condition of writers, creating a life from an *ad hoc* language, not readers responding to and responsible for a prior code. Stein's grammar is not descriptive but active. In *How to Write,* her grammar is so singular as to have a proper name: "Consider grammar grammar may fairly be said to be not explicative. Grammar. One two three completely. It is impossible to avoid meaning and if there is meaning and it says what it does there is grammar. Arthur a grammar"

(Stein, 1973, 71). Of course since grammar is in our power, we may also hear "Arthur" as "Author"—a name as an imperative verb; we author not a text but a grammar. "Grammar is how you are" (Stein, 1973, 95).

The traditional grammars are all heavily biased toward the substantive and therefore the static; the Zenonian paradoxes are inevitably hidden away somewhere in them. In order "to think pure change" as the Hegelian imperative requires, it is necessary to overcome the Western bias toward grammars based on nouns or even some ultimate, Hegelian noun. As Fenollosa notes, Western grammars take even verbs in their infinite, substantive mood as primary. In effect, a "thing" in western grammar, the touchstone of concreteness, is itself an abstraction. The assumption that the primary linguistic act is naming places a logic of classification at the origin of all cognitivity. The business of mind therefore is the creation of distinctions that necessarily involve *ideal* boundaries. As Fenollosa notes, however, "A true noun, an isolated thing does not exist in nature. Things are only the terminal points, or rather the meeting points, of actions, cross-sections cut through actions, snapshots" (Fenollosa, 1967, 16). The boundaries in languages and the boundaries in living spaces, for example, have utterly different characters. As Charles Olson observes, the marking of boundaries has to do not with symbolic distinctions but with measure, the stepping off of the limits of a "haunt," an ethos, and it is inherently an ethical activity. The Chinese written character as Fenollosa understands it does not divide an infinite universe into the thing and the not-thing; it takes measure of a finite linguistic region.

Whether he accurately characterizes the actual practice of Chinese or not (and of course a lot of knowledgeable people have objected), the distinction is a necessary one. It is accurate for Stein, if not for the Chinese. Stein finds nouns and "nounishness" the least engaging aspect of language:

> A noun is a name of anything, why after a thing is named write about it. A name is adequate or it is not. If it is adequate then why go on calling it, if it is not then calling it by its name does no good. . .
>
> As I say a noun is a name of a thing, and therefore slowly if you feel what is inside that thing you do not call it by the name by which it is known. Everybody knows that by the way they do

> when they are in love and a writer should always have that intensity of emotion about whatever is the object about which he writes. And there and I say it again more and more one does not use nouns. (Stein, 1985, 209–10)

She is attracted only to those parts of speech that are "lively," a term of which we will miss the force unless we hear it specifically as the counterpart of "deathly." "Verbs and adverbs and articles and conjunctions and prepositions are lively because they all do something and as long as anything does something it keeps alive" (Stein, 1985, 214). Stein does, of course, use those words that are called "nouns" in traditional grammatical analysis. Even in saying that "one does not use nouns," she uses a noun, and in poetry, which "is concerned with using with abusing, with losing with wanting, with denying with avoiding with adoring with replacing the noun," she "decided not to get around them but to meet them, to handle in short to refuse them by using them" (Stein, 1985, 231). She avoids nouns not by shifting the emphasis away from the noun as such—that is, the class words—to verbs but by shifting the emphasis to sentences and paragraphs as the active principles of writing. Like Whitman who shifted his emphasis to the caesural phrase and the line, she deals with units which are already wholes. Only in these larger structures, to which formal linguistics has paid minimal attention, does Stein find useful units of measure. Although she says that she likes "the feeling the everlasting feeling of sentences as they diagram themselves," her taste for the everlasting feeling is overwhelmed by her commitment to action. Sentences diagram *themselves*, thus asserting the intimidating authority of their logic. The grammatical sentence cannot be written—it is already written—and thus it might provide the schoolgirl with a kind of theological experience, but a sentence that diagrams itself can only be *read;* it is of no use to the writer engaged in the moment by moment writing of writing or to one interested in how to write.

A sentence, it turns out, is not defined by its parts; in an important sense, it has none: it is inherently complex. In the first chapter of *How to Write*, "Saving the Sentence," Stein writes:

> What is a sentence. A sentence is a part of a speech.
> A speech. They knew that beside beside is colored like a

> word beside why there they went. That is a speech. Anybody will listen. (Stein, 1973, 13–14)

Sentences in themselves, however, are too static, too insistent upon their own completion, and they are therefore emotionally colorless. "Saving the Sentence" concludes with Stein's realization, "I made a mistake." The sentence alone cannot be saved; it must be saved with the paragraph. The next section of *How to Write*—"Sentences and Paragraphs"—is devoted to the proposition that "a Sentence is not emotional a paragraph is" (Stein, 1973, 21–24). The continuum of sentences is intransitive: sentence A is not emotional, and sentence B is not emotional, but the paragraph composed of sentence A plus sentence B *is* emotional. In her lecture "Plays," Stein notes:

> In a book I wrote called *How to Write* I made a discovery which I considered fundamental, that sentences are not emotional and that paragraphs are. I found out about language that paragraphs are emotional and sentences are not and I found out something else about it. I found out that this difference was not a contradiction but a combination and that this combination causes one to think endlessly about sentences and paragraphs because the emotional paragraphs are made up of unemotional sentences. (Stein, 1973, 115)

If the grammar of symbolic forms turns upon identity and difference, the grammar of measured forms turns upon *combinations*. Stein's insistence upon the thinking of combinations should be seen as the alternative to the Hegelian imperative: "We have to think pure change, or think antithesis within the antithesis itself, or contradiction" (Hegel, 1977, 99). Hegel's thunderous command is backed by the authority of grammar itself. A "combination" has only factual authority: it says only that x is combined with y. There is no necessity in the combination: "A Sentence is made by coupling meanwhile ride around to be a couple there makes grateful dubeity named atlas coin in a loan" (Stein, 1973, 115). The sentence is constructed from more or less independent units *that relate to one another,* not to some grammatical form that stands outside the sentence.

Stein, of course, has no authority but her own. She cannot, therefore, advance an argument that compels obedience. She can

only exhibit the combinations that are factually but not logically authoritative. It is nevertheless a powerful exhibition, comparable in its force to *The Phenomenology of Spirit*. *How to Write* demands the same seriousness and application as the classic of idealist philosophy, and it can make such a demand only by *not* being philosophy—that is, by not engaging the dialectic.

CHAPTER 4

Symbolic Person

THE CATEGORY OF THE PERSON

The category of the person for whom the symbols of external power and the sense of individual responsibility merge, the fully modern person, that engineer of force, self-creating and world creating, who appeared with capitalism and the Reformation, and was first fully exhibited by Fichte, Schelling, and Hegel, if not quite by Kant—as Marcel Maus tells us—is the product of a remarkable history: "From a simple masquerade to the mask, from a 'role' (*personnage*) to a 'person' (*personne*), to a name, to an individual; from the latter being possessing metaphysical and moral value; from a moral consciousness to a sacred being; from the latter to a fundamental form of thought and action—the course is accomplished" (Maus, 1985, 23). The binding of a *logical* category—the Cartesian subject—to abstract *force* must be accounted one of the premier engineering feats of post-Enlightenment technology, and it could never have been achieved without the subject's intimate involvement in its own articulation. It was the creation of a new, abstract Adam, who did not merely carry out the divine purpose by naming things but brought the force of abstract structure to bear on his own purposes. The natural force that drove the earth in its orbit—and, according to nineteenth-century theory, drove the species to ever higher realizations of itself—also drove the conquistadors of nature—the human will and the Empire of the West. The symbolic person was symbolic nature's device for mastering itself. As Lacan rightly notes, the abstract ego is a monster:

> In the "emancipated" man of modern society, this splitting reveals, right down to the depths of his being, a neurosis of self-punishment, with the hysterico-hypochondriac symptoms of its functional inhibitions, with the psychasthenic forms of its derealization of others and of the world, with its social consequences in failure and crime. It is this pitiful victim, this escaped, irresponsible outlaw, who is condemning modern man to the most formi-

> dable social hell, whom we meet when he comes to us; it is our daily task to open up to this being of nothingness the way of his meaning in a discreet fraternity—a task for which we are always too inadequate. (Lacan, 1977, 29)

The profound cultural task that loomed at the end of the nineteenth century was to redeem subjectivity from this monstrous, abstract egotism and, at the same time, to protect the social order without rendering subjective experience empty and meaningless.

Freud undertook to give a rational account of human subjectivity as Descartes accounted for the objective world. *The self-isolating subject which had withdrawn into its own privacy to articulate a symbolic nature was now to describe its private domain within the rationalistic symbolism.* In a sense, the mind's only resource is to loop back on itself: submitting its own rationality to its critique of rationalism. The subject, which had been the boundary and form of knowledge, was now to be realized as content. The innate ideas that had provided the unquestioned semantic keys to the abstract structures of Cartesian subjectivity were laid open to investigation, and it was found that, rather than fulfilling the Cartesian promise of divine origin and univocal interpretation, they are symptomatic psychic disease and ambiguous. As a logical construct, the ego's content is rational, but it is required to serve as a conduit for irrational forces, which, escaping the Hegelian sublation, seem once again invasive, something to be defended against rather than used.

The poetics of common knowledge does not propose an alternative theory, which would be only another relativism, a different theater, so the mind becomes, as it does for Wallace Stevens, a kind of vaudeville performer working in one playhouse tonight and another tomorrow. The function of theory is to create a determinate background, an array of discrete objects that may be physical things (the furnishings of the world) or logical things (propositions, phonemes, "meanings"), defining a theater of action. The debate that has absorbed so much of our attention for the past two decades—structuralism versus poststructuralism—has concerned itself with the relationship of the act, specifically in literary theory the acts of reading and writing, to the theoretical background. The testimony of Freud and Lacan has been crucial to these considerations. We have wanted to know if the act is an expression of theoretical mechanisms as such or if it is possible to generate a

critical intensity that is independent of theory. We have reached conclusive results: the act is independent; it cannot be traced to a theoretical origin. Unfortunately, however, the social domain that the Freudian strategy opens is fully predictable and controllable by statistical means. Cartesian theory is founded on a subject that is unique and absolute; Freudian theory seeks the possibility of a normative subject. Both propose methodologies for renovating the individual on behalf of an epistemological mechanism: one seeks the perfection of a solipsistic ideal; the other, the perfection of a social ideal. They are equally mechanistic and totalitarian. Whether the person conceived as a virtual machine is to be programmed with algebraic geometry or with a normative narrative about family life makes a profound difference in the nature of subjective experience, of course. In the Cartesian machine, the person is an equals sign, the underwriter of the mathematical equation; in the Freudian machine, the person is a perpetual child, the carrier of a genetic psychology between parents who never die and an adulthood that never fully appears. In either case, the person is performing a program, and, no doubt, a great deal of human performance is of precisely that monotonous and desperate kind.

For the poetics of the common knowledge, the person is an opacity at the center of knowledge, a contingency, an *ad hoc* jargon, not a grammar, not a virtual machine to be programmed. The distinction that is to be made is not between two theories but between two rhythms or frequencies of human action, only one of which can be expressed theoretically or statistically. Both are pervasive, and, to a greater or lesser degree, both are inevitable. One is the rhythm of the measured manifold; the other, the rhythm of the discrete manifold. One is the rhythm of action; the other, the rhythm of description. One is sustainable and environmentally sound; the other progresses toward a limit of exhaustion. Writing of Shakespeare's late plays, Charles Olson makes the distinction in these terms:

> There is a rule: a thing ought to take off, and put down, and travel at all the varying speeds in between, precisely equal in amount and behavior to the thing it sets out from or seeks. Or if it multiplies, it only multiplies by changing that thing, not by introducing and asserting outside power (as humanism did and all motors with moving parts do), and the quarrel with it is the waste of energy, which is dispersal and, in the curving about of

> fact, dispersal comes back and changes, willy-nilly whirligig, the original element of both thing and thing, by making easy the attention and thus reducing the intensity below the level of the implicit power of occasion or of thing. (Olson, 1967, 93)

The important discovery that has solidified the post–World War II attempt to arrive at the common knowledge is that *meaning* may be relative to an opaque performer-creator as well as to a theoretical background. In this chapter, Louis Zukofsky serves to illustrate this development. Like Olson, Zukofsky finds his lead in Shakespeare:

> Shakespeare's writing argues with no one: only in itself. It says: *Love's reason's without reason* (*Cym.*,IV,ii,22); *Flaming in the . . . sight . . . Love hath reason, Reason none.* This writing exists as its own tempest (as in *The Tempest* or any of the other plays and poems) where thought is free (or necessary-the same difference after a while) and *music is for nothing* (*T.*,III,ii,132,154). (Zukofsky, 1987, 37)

And after more than fifty pages of careful argument, he concludes:

> And that will be precisely the value of reading Shakespeare—or for that matter anyone who is worth reading—that is, the feeling that his writing as a whole world *is,* compelling any logic or philosophy of history not to confuse an expression of *how it is* with *that world is*. The thought that *it is* has, of course, no value, is rather of a region where thought is free and music is for nothing–or as eyes see and go out. (Zukofsky, 1987, 91)

Thus, *love sees,* and it sees *meanings*. There is an order of articulation that is absorbed not by its own logical requirements but by an actual, finite and therefore knowable world.

METAPSYCHOLOGY

Metapsychology is the science of the *crisis* of mind-body dualism. It is, as Freud describes it, "a method of approach according to which every mental process is considered in relation to three coordinates, which I described as *dynamic, topographical* and *economic,* respectively." And he says, "this seemed to me to represent the furthest goal that psychology could attain" (Freud, 1955, 20:58–59). Psychodynamism, psychotopography, and psychoeconomics are the concerns of the three sections that follow.

The problem of metapsychology is to account for mental events at once as functions of both psychological and physical processes—processes that cannot be assimilated to the same metric. As Wittgenstein notes,

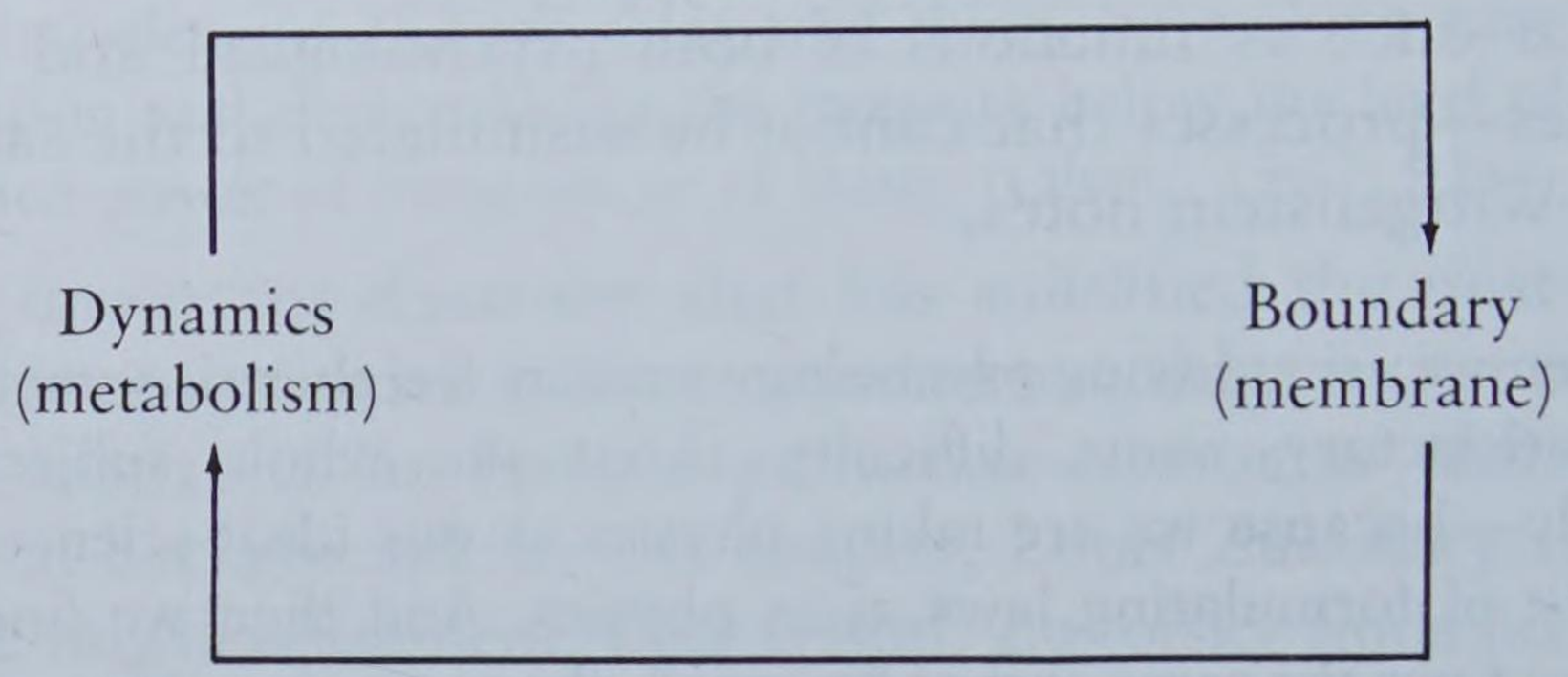
> When we are studying psychology we may feel there is something unsatisfactory, some difficulty about the whole subject or study—because we are taking physics as our ideal science. We think of formulating laws as in physics. And then we find we cannot use the same sort of "metric", the same ideas of measurement as in physics. This is especially clear when we try to describe appearances: the least noticeable differences of colours; the least noticeable differences of length, and so on. Here it seems that we cannot say: "If A = B, and B = C, then A = C," for instance. And this sort of trouble goes all through the subject. (Wittgenstein, 1967, 42)

Of course, he is referring here to the Weber-Fechner law, the consequences of which we examined in the last chapter.

Freud's solution to this problem is ingenious. He breaks the psychic field into a discrete, symbolic manifold—or, as we shall see, a more or less discrete manifold, as Freudian distinctions are incontinent—and depreciates consciousness of minute difference. The psychic mechanism, as Freud understands it, does not deal with subtle distinctions. "What part," Freud asks, "is there left to be played in our scheme by consciousness, which was once so omnipotent and hid all else from view? Only that of a sense-organ for the perception of psychical qualities" (Freud, 1955, 5:615). Consciousness in the Freudian scheme is almost unnecessary, a mirror put in the cage to amuse the otherwise self-sufficient mechanism with a display of time, color, sound, texture, and so forth. For Freud, as much as for Newton, these are secondary or derived properties that are more or less illusory. Consciousness is, at best, "a de-bugging trace," in Marvin Minsky's computer jargon that might be applied in the vernacular to psychoanalysis.

Freud undermines the consciousness that Hegel had wrestled from Force by positing the metapsychological mechanism of the symbolic person, a mere input-output device to which self-consciousness is almost irrelevant. He writes: "All psychical activity starts from stimuli (whether internal or external) and ends in innervation" (Freud, 1955, 5:537). The psychic machine absorbs

FIGURE 4.1.



Source: The Standard Edition of the Complete Psychological Works of Sigmund Freud, 5:541.

force and produces only entropy. Freud's diagram of the mechanism is, in computer jargon, a flow chart (Fig. 4.1).

The dynamism—that is, life itself—belongs not to the person but to the medium. The differences between subject and object, interior and exterior are described not in logical terms, as they were by Hegel, but in topographical terms, and action is described as transfers of force, an economy of boundary crossings. The symbolic person, the person of consciousness, appears in the contemplation of the dark interior geography of the body and the endless body of language. This production of text, however, as writing, as life, as act in relation to infinite regression is not, in fact, production, but reproduction, repetition, monotony, habit, the manifestation of statistical norms. The Freudian media are the media in the popular sense of the term, which we now call upon as people once called on the *name* of God, the very source of dynamism as such. The prose medium, which arose in the seventeenth century to mediate between the ideal world and the ideal self, has subsumed ideality and in turn is subsumed by a pervasive information environment in which self, world, and society are loci that we descry at a certain never-quite-to-be overcome distance.

Freud does not articulate a formal logic, but his practice delineates the mechanism of a social discipline, a vague but fundamentally controlling grammar in which the collective objects constituting a person—protoplasm, neurones, languages, desires, egos, superegoes, parents, objects of very different kinds—appear and combine in an endless process of self-simulation. Any object may have several locations: a parent, for example, may appear as a literal progenitor, as a figure of the superego, and, by transference,

as a psychoanalyst, or as a particular configuration of cathected neurones. All of these loci, according to Freud, figure as variables in an extraordinarily complex algorithm that produces and sustains a simple, normative drama.

Freud abstracted from archetypical metaphors as Descartes abstracted from geometry. Freudian ontology discovered that to be a subject is to be the value of a metaphorical variable; Cartesian ontology discovered that to be an object is to be the value of an algebraic variable. These are the historical terms, along with Boole's, Frege's, and Russell's logics, behind Willard Quine's dictum "To be is to be the value of variable" (Quine, 1969, 36). This is the ontology of technology; perhaps it is the ontology of ontology itself. It is a *useful* definition of being—it turns all beings into beings of use—and we have been granted a relief from it only by those, including Freud himself, who point out that the value of the variable is often undecidable. (This is, of course, the sole strategy of the poststructuralists.) It ignores, however, the opacity of *factual* being, being that is non-onto*logical*— that which simply *is* rather than that which is required by a *logos*. The domains of being—one continuous and one discrete, one qualitative and one quantitative ("the principle of measurement . . . already contained in it," in Riemann's phrase)—do not, except for specific purposes, constitute the terms of a ratio. We are unique individuals, not statistical zones. "The transmission of quality," as Freud tells us, "is not durable; it leaves no traces behind and cannot be reproduced" (Freud, 1955, 1:310). The truly interesting aspect of life cannot be simulated. It cannot therefore become the content of an economy based on memory and wish fulfillment.

Psychodynamism

The dynamism that Freud identifies—the dynamism of personal ambition and, collectively, of social progress—is a feature of the categorical person constituted as a function of its inputs. The person is *driven*, as the shaft of the engine is driven, by both exogeneous and endogeneous forces. The stimuli or inputs are pain or desire; the outputs are acts of living, *motor* acts—notably, according to Freud, avoidance of pain and satisfaction of desire by which stress is brought to temporary equilibrium. This dynamic structure is common to both organic and aesthetic forms as they were under-

stood by nineteenth-century theory. What is this impelling force? Lacan notes that "repetition automatism," or repetition compulsion as it is more commonly translated in English, with all of its deathly implications, is associated with the *insistence* of the signifying chain itself (Lacun, 1977, 153). What is the nature of this insistence? this discipline that masters us?

If we accept the premises of a syllogism—all *A* are *B*, *C* is *A*—then we are impelled to accept the conclusion–*C* is *B*—at the penalty of being irrational. The conclusion can be shown by analysis to say the same thing as the two premises, and we appear to lack seriousness if we agree with a proposition stated in certain terms but refuse to agree to the same proposition stated in different terms. The 'force' of logic, however, is not coercive. We may *choose* to be irrational, and of course many people do. This is one face of freedom. We cannot, however, always chose to be rational. We are *forced* to behave in a certain way. We feel the torque of input: "I cannot help myself." In a letter of 1897, Freud writes, "the psychical structures which, in hysteria, are affected by repression are not in reality memories—since no one indulges in mnemic activity without a motive—but *impulses* which arise from the primal scene" (Freud, 1985, 239). Memory has an insistence that, repressed, turns to unconscious production. The differences of potential that force us to seek equilibrium—the tense distances between the unrepressed and the repressed, between content and form, between eros and thanatos—disequilibrate; they are the motives of the dynamism as such.

Although we have conventional techniques for dealing with the split, the split itself and the subsequent disequilibrium cannot be theorized—no single theater can contextualize it. No *medium*, by definition, contains the most intimate interior or the most sublime and terrifying otherness. In their place we have substituted a monotrop that embraces both the soul and the world—"pure" art, shopping malls, and all the institutions that administer both. Despite the medium's obvious ruthlessness, we have served its need to be embodied in intellectual disciplines as well as totalitarian gods and totalitarian leaders. Now we approach a perfection in which the replica is potentially self-sustaining. It no longer requires enforcement. The distractions it presents are absorbing and comfortable, hallucinogenic and pervasive. Our profoundest cultural rituals are inevitably in some measure *ad hoc*, typically sleazy, and produce

unwanted by-products, which accumulate and must eventually choke us. Freudian theory accepts ecological disaster as inevitable. The dynamism that drives us is out of control. Freud tells us of Woodruff's findings: "An infusorian, if it is left to itself, dies a natural death owing to its incomplete voidance of the products of its own metabolism" (Freud, 1955, 18:48). Is this our condition, or did Woodruff's experimental conditions create a society of infusoria out of homeostatic control? a society that had unsound ecology forced upon it by the scientist's hand?

The science that Freud inherited had no way to answer these questions. It almost had no way to ask them, because the conceptual constituents of the question, concerning the relationship of facts from different disciplines, had hardly been formulated. The best science of the nineteenth century required radically inconsistent frames of reference to account for nonorganic, organic, and electromagnetic natural systems. The most fundamental conceptions, such as the character of time and space, implicit in Newtonian physics, Darwinian (or, for that matter, Goethean) organicism, and Faradayan field theory, were in conflict. Strictly speaking, time was an illusion in classical mechanics, and space—at least abstract Newtonian space—was an illusion in field theory. By calling somatic stability into question, organicism in its diverse forms undermined all absolute senses of both space and time whatsoever. As Oswald Spengler rightly noted, the perception of nature as historical leads directly to a pervasive relativism. Unlike classical or Cartesian skepticism, it does not deny philosophy outright but admits it, in all of its complexity. In some sense, in relationship to some specifically elucidated background, all of the philosophies are true: "Modern skepticism's solutions are got by treating everything as relative, as historical through and through. . . . is 'skepsis,' in the true sense," Spengler writes, "for whereas the Greek is led to renounce absolute standpoints by contempt for the intellectual past, we are led to do so by comprehension of that past as an organism" (Spengler, 1939, 1:45).

It was impossible, thereafter, to have knowledge apart from this or that set of disciplinary assumptions, and they were not merely historical and open to constant and perhaps capricious revision, they were blatantly in contradiction at the most fundamental levels. The laws of motion, the laws of organic growth, and the laws of electrical fields—to say nothing of the dynamics of the

psyche—belonged to incommensurable, empirical domains. In this atmosphere the intellectual disciplines proliferated: history in the modern sense, economics, sociology, psychology, anthropology, as well as the specialized histories of literature, the visual arts, music, the subgenres of physical and biological science, and so forth, each with its own ontology, often with competing ontologies within a single discipline.

The lack of a coherent frame of reference constituted a profound problem for the dynamics of the culture: if the dynamism of history could not be explained as the process of mind seeking equilibrium with the absoluteness of its own logic, it was necessary to look to external forces impelling the change that the emerging technology made perhaps the most obvious character of nineteenth-century life. If logic did not drive life, it must be then that logic was driven by *something*. A metaphysic was required, but a hardheaded metaphysic, consistent with the rhetoric of both right- and left-wing industrial progressivism. As we have seen, Hegel had managed a most uneasy sublation of force by consciousness as a motive of the *Phenomenology,* and the concept rebounded as the central concept of materialistic metaphysics. The gospel of force that appeared at the intersection of scientific philosophy, progressive boosterism, and social Darwinism was variously articulated by Marx's early writings, Buckle's *History of Civilization,* Spencer's *Principles,* and John Fiske's popular *Outlines of Cosmic Philosophy,* as well as popular editorialists and preachers. The concept of force in its vernacular and scientific senses provided both the inclusiveness and the vagueness that was required. It is one of the most persistent concepts in western thought, so abstract and apparently empty that its theological character tends to go unnoticed.

Max Jammer and Mary Hesse, both of whom have written important historical studies of the concept, find the origins of the idea of 'force' in ancient mythology and trace its early formulation as a concept to the Pre-Socratics, notably the dynamistic philosophers—Heraclitus and Empedocles. It was however Aristotle who first articulated the dual sense of the concept as force inherent in nature (*physis*), and as, in Jammer's words, "force as an emanation from substance, the force of push and pull, causing the motion in a second object, and not in itself." Of course, the Aris-

totelian concept, which was closely related to the central concept of causation, was variously interpreted by the scholastic philosophers, and was a mainstay of the philosophic tradition until the seventeenth century. In depersonalized and quantified form, the concept of force transferred to Newtonian mechanics.

As a commonsense notion, force seems clear and obvious. The scientific concept, however, proved to be problematic, and by the end of the nineteenth century, indeed about the time it became a central metaphor for Freud, it had been, in effect, eliminated from physics altogether.

> As to the concept of force, taken originally in analogy to human will power, spiritual influence, or muscular effort, the concept became projected into inanimate objects as a power dwelling in physical things. Omitting at present some intermediate stages, the concept of force became instrumental for the definition of "mass," which in its turn gave rise to the definition of "momentum." Subsequently classical mechanics redefined the concept of force as the time rate of change of momentum, excluding thereby, at least prima facie, all animistic vestiges of earlier definitions. Finally, force became a purely relational notion, almost ready to be eliminated from the conceptual construction altogether. (Jammer, 1957, 7)

Animistic forces remained, however, as pervasive and utterly reified metaphors for the indwelling energies of persons, historical groups, and linguistic media long after they had been eliminated from physics. From Hegel to Freud, the motive of possibilities passed from force sublated by language to language itself as systematic, or perhaps just irresponsible, dynamism: language was force, cause, and will. No longer dependent upon external motivation, it was active, an entity in itself, an organism that was, in some sense, alive and to which vital attributes were unselfconsciously attributed. According to Foucault, "from the nineteenth century, language began to fold in upon itself, to acquire its own particular density, to deploy a history, an objectivity, and laws of its own" (Foucault, 1970, 296). Relieved from the hierarchy that was imposed by its codependency with the subject, it was taken up by its own circularity, defining itself in relation to its own forever-changing background. Nietzsche announces the appearance of that medium in a oft-quoted passage, indeed perhaps the most fre-

quently quoted passage in literary theory of the past two decades, saying that truth is "A mobile army of metaphors, metonyms, and anthropomorphisms . . .; metaphors which are worn out and without sensuous power; coins which have lost their pictures and now matter only as metal, no longer as coins" (Nietzsche, 1954, 45).

Nietzsche's military metaphor is fundamental to the indecisive intellectual campaigning of the past century. It was, however, Freud who showed us how specific value could be restored to these faceless coins *without* recovering the original image. The word was not bound to an objective signified, not to an "object" so elusive as force, but to *more* language which is itself bound by *force* (cathexis) to language in turn. At the very moment, humankind had the possibility of taking possession of its own physical desire, Freud relocated force as a function of a pervasive physio-linguistic metaphor.

The fabric of Freud's writing consists of tropes of tropes, representations of representations, and so forth. His work was central to a world in which language was not merely a chief actor on the stage; it was very nearly the *only* actor. In a world that understood different aspects of life in terms of incommensurable paradigms, language driven by force—the vastest and most inclusive abstraction, equatable with Being itself—was the only indication that the various disciplines all addressed the same world. From the ancient myths to Lacan and his followers, the vital principle is driven through a language, the logical structure of which is circular: life is conserved as a vital force, a drive, or compulsion to repeat. This pure abstract force need not be "centered" in a particular substance: the deconstruction of all of the metaphysical objects has left a diffuse flow as the "stuff" of an unlocated progressivism. Language is the animating force of the input-output machine that we have made of ourselves.

"Theory" begs the questions of life and the nature of the living. The theoretical mechanisms, whether the elementary machinery of the epics or the elegant machinery of the DNA molecule, appeal to a teleonomy, if not teleology, some outlying or indwelling force of purpose that *drives* the machine. That is, the explanations of life explain everything but life itself, which is inevitably traced back to *something else*. Freud follows the same pattern in his explanation of psychic mechanisms:

it is demonstrably untrue that we are being carried along a purposeless stream of ideas when, in the process of interpreting a dream, we abandon reflection and allow involuntary ideas to emerge. It can be shown that all that we can ever get rid of are purposive ideas that are *known* to us; as soon as we have done this, *unknown*—or as we inaccurately say, "unconscious"—purposive ideas take charge and thereafter determine the course of the involuntary ideas. (Freud, 1955, 5:566–67)

And, of course, if the mechanism of these unknown purposes could be adequately described, it would require some still deeper or more profoundly unknown source to emerge. Throughout his career from the early "Project for a Scientific Psychology" to *Beyond the Pleasure Principle,* Freud flirted with the possibility of pushing his explanation back from free association to somatic sources and even to a Lamarckian life-force.

The metaphor of force that derives from classical physics, however, plays itself out in Freud, where force as propulsion, as life energy, meets its counterforce as Newtonian law requires. The force that drives life, it seems to Freud, "wants" to generalize entropically. If Hegel recognized the necessity of thinking change and time, while remaining within the mechanistic framework of the general laws of motion, Freud discovered the necessity of *being* change and time. The stasis that he sees lurking in the background of the dynamic psyche is not the Absolute but death. In *Beyond the Pleasure Principle,* he writes:

> For a long time, perhaps, living substance was thus being constantly created afresh and easily dying, till decisive external influences altered in such a way as to oblige the still surviving substance to diverge ever more widely from its original course of life and to make more complicated *détours* before reaching its aim of death. These circuitous paths to death, faithfully kept to by the conservative instincts, would thus present us today with the picture of the phenomena of life. (Freud, 1955, 18:38–39)

As we shall see, these are logical or linguistic, not *factual,* requirements of life, but the Freudian argument haunts this century: the technology that amplifies the possibilities of life and makes the promise of human divinity seem almost credible also seems a complicated *détour* to death. Each divergence is also a repetition, a variation on a theme, an attempted replication of a remembered and desired state.

Freudian theory itself has been endlessly rehearsed. It may seem futile to rehearse it again. Freud, however, was the vehicle for the last phase of a psycho-historical dynamism that *required* articulation. The mind of the West—which is, of course, itself merely a rhetorical figure of the philosophic tradition—had been commandeered by a language that absorbed its users in *its* grammatical requirements. The grandiose ego of Cartesian linguistics and its megalomaniacal dialectic, which promises to resolve only in infinity, were—and more or less *are*—the desperate terms of willful beings turned against themselves. Freud sought to expose and treat this megalomania in a colossal act of megalomaniacal self-analysis. The abstractions of the philosophic-religious language were to be redeemed by the discovery that their content was erotic rather than spiritual. This thought, which has reverberated through this century, has remained fresh, subversive, useful, and always ready to be rerepressed and rediscovered. Each subsequent generation has produced readers of Freud who read him as if he had never been read before. I am afraid his story must be repeated again and again until it is finally exhausted. The discovery of the repetition obsession is perhaps the content of the ultimate repetition obsession. In rehearsing Freud again, we now look for evidence that we need not follow this path to its end.

Freud's work marks the beginning of our engagement with the question: Does nature consist of dynamic objects, so that we are truly overwhelmed and must seek to reconcile our desires with a ruthless mechanism which has no interest in us as individuals by inquiring about the meaning of these objects? (The circular logic of this sentence is unavoidable). That is, can we redeem ourselves from a ruthless structure, which we ourselves created perhaps, by interpretation? Either by *finding* meaning or by generating a life intensity by seeking meaning?

Culture is the social form of repetition obsession, and the efficacy of tradition lies in its repetition of cultural forms. Whatever may be the case with organisms in "the state of nature," if that phrase now means anything at all, the evolution of culture is Lamarckian; its process consists of adaptive responses to the environment that cause structural changes that are transmitted by cultural institutions. We are compelled culturally, Freud tells us, even in our frenetic pursuit of change, to seek the classical stasis as we are compelled biologically to mimick the tranquility of inorganic things. Freud understands the artistic tradition, with its endless

repetition and variation, as a crucial mechanism of this process. Cultural history, therefore, is a grim spectacle: the longing for aesthetic closure reenacts the longing for the ultimate tranquility.

The poetics of common knowledge poses the alternative questions: Do we as observers invent objects to objectify what Nature means? Can we construct ourselves in relation to our dynamism so it serves us rather than we it?

Psychotopography and the Contact Barriers

Although it had been thought since Kant, and implicitly since Descartes, that we inhabit two incommensurable domains—information, on the one hand, and energy, on the other, to use the current terminology*—the culture devoted itself to the project of overcoming the split by the willful creation of equations and the promise of reconciliation at the end of an infinite regress. The idealist tradition sought to account for energy in terms of information, and the materialist tradition sought to account for information in terms of force or energy. Information or energy, whichever is taken as fundamental, elaborates the other as its own mechanism, theatricalizing transcendence, producing archetypes, paradigms, canons, and factories for stamping out uniform products, creating new divisions and purposes.

The Cartesian *cogito* and the Kantian categories both provided accounts of innate, conscious structures. They were given this privileged status by default: they were the only structures—at least the only structures of comparable generality—that were known. The discovery of non-Euclidean and N-dimensional geometries, however, shook Western philosophy to its foundations and, by the end of the nineteenth century, even the popular imagination was prepared to reconceive the life of the mind in relation to a plastic space.*

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*The term *force*, which had immense currency through the nineteenth century, is now somewhat outmoded. See Ronald *Martin's American Literature and the Universe of Force* for an important study of this pervasive concept (Martin, 1981). Although he focuses on American literature, his discussion of the scientific and philosophic backgrounds is strong.

*The new geometries were a popular fad around the turn of the century, as Linda Henderson shows in *The Fourth Dimension and Non-Euclidean Geometry in Modern Art* (Henderson, 1983). The matter became, for example, the subject of articles in popular magazines.

From the middle of the nineteenth century forward, the knowledge of structures and structuring proliferated: the appearance of alternative geometries was only the beginning. New aesthetic forms appeared, as, eventually, did new set theories and new logics. Euclidean structure, which had once been so rare, indeed so singular, that they had seemed the essence of mind as such, proved to be only an instance of structures that can be elaborated endlessly. Such was the testimony in the aesthetic domain of Melville, Nietzsche, Browning, Rimbaud, Henry James, Wagner, and Cézanne, to mention only some representative names. Beginning with the mathematics of L. E. J. Brouwer, early in the present century, the plasticity of abstract structure began to be fully formalized. Freud speaks profoundly from that moment beyond which neither world nor mind could be imagined as having an *inherent* logical structure.

When it appeared that we might escape the topological machinery by which we had tyrannized ourselves ever since Euclid, Freud renarrativized space. It was a powerful move, the consequences of which we are now only beginning to understand. When the nineteenth-century conception of organism is extended to metapsychology, which is the fundamental Freudian move, the person must be understood both as a discrete unity and an input-output machine driven by external forces: the organic boundary is at once a boundary and not a boundary, a barrier and a contact, a *leaky* distinction. It is the mechanism of this logic that we must now investigate.

The isolation of the Cartesian subject was a requirement of Cartesian geometry: the coordinates could not represent a reflection of themselves. The Freudian subject, by contrast, is *in* the space that it describes. Freud writes: "The subdivision of the unconscious is part of an attempt to picture the apparatus as being built up of a number of agencies or systems whose relations to one another are expressed in spatial terms, without, however, implying any connection with the actual anatomy of the brain." (Freud, 1955, 20:32). And in *The Interpretation of Dreams*, Freud recalls Fechner's "idea that the scene of action of dreams is different from that of waking ideational life." Then he goes on to say:

> What is presented to us in these words is the idea of psychical locality. I shall entirely disregard the fact that the mental apparatus with which we are here concerned is also known to us in the

> form of an anatomical preparation, and I shall carefully avoid the temptation to determine psychical locality in any anatomical fashion. I shall remain upon psychological ground, and I propose simply to follow the suggestion that we should picture the instrument which carries out our mental functions as resembling a compound microscope or a photographic apparatus, or something of the kind. On that basis, psychical locality will correspond to a point inside the apparatus at which one of the preliminary stages of an image comes into being. In the microscope and telescope, as we know, these occur in part at ideal points, regions in which no tangible component of the apparatus is situated. (Freud, 1955, 5:536)

Freud's disclaimer means only that he has no *precise* way to deal with the correlations between anatomy and psyche. Unable to reconcile the truth of materialism, on the one hand, and the truth of idealism, on the other, he lays out an *n*-dimensional space that locates the known phenomena. Although he continued to long for the clarity of the hard sciences, the "literal" body and our literal descriptions of it must be seen as a metaphor among metaphors. The body is the subject of *all* of our fantasies, not just the fantasy of scientific objectivity. Freudian theory mediates between a psychophysics and a truncated phenomenology that belong to different ontological domains, relating to one another only by way of a metaphorical calculus. Despite the radically different materials of the two theories—neurones and flows of force, on the one hand, and symbols and flows of meanings, on the other—they share a common "organization." It is not necessary to define the structure of the space in detail, so long as its general nature is understood.

In a simple logical space, Spencer-Brown writes, "a distinction is drawn by arranging a boundary with separate sides so that a point on one side cannot reach the other side without crossing a boundary" (Spencer-Brown, 1979, 1). It is enough to know that such distinctions are not possible in the topology that the category of the Freudian person defines. The person is a three-plus dimensional being with a three-dimensional sensorium.* A distinction in consciousness, for the most obvious example, may still allow an

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*Or at least *visual* space is three dimensional, and we have not made much progress in conceiving of alternative. In *The Philosophic Impact of Contemporary Physics,* for example, Milič Čapek proposes auditory space as a necessary alternative, but as far as I have been able to discover, the dimensionality and uses of synesthetic space is still largely unknown.

unconscious crossing of the boundary by way of anatomical or unconscious psychical space. Indeed, extraordinary insistence upon this or that distinction in consciousness ("I dreamed of a woman, who was certainly *not* my mother"), Freud discovered, may positively signal an unconscious crossing of the boundary. That is, the structure that appears in consciousness and the "corresponding" structure of neurones may appear to give an incoherent image until psychoanalysis supplies a topographical explanation.

Freud's "Project for a Scientific Psychology" is a remarkable piece of writing. Although he left it unfinished, its logic as well as many terms of its terms—"mental energy," "excitation," "cathexis," "quantity," and "quality," for example—are taken directly into the metapsychology of *The Interpretation of Dreams*. In the introduction, the editor of the "Project" notes correctly that it, "or rather its invisible ghost, haunts the whole series of Freud's theoretical writings to the very end" (Freud, 1955, 1:290). It is explicitly a Newtonian psychophysics.

Freud proposes what he calls a "quantitative conception" of psychic dynamism. He conceives of a kind of hydraulic fluid, driven by force, which he calls *Q*, "subject to the general laws of motion," and obeying "the principle of neuronal inertia: that neurones tend to divest themselves of *Q*." This quantity or charge irritates protoplasm and, exciting it, causes its flight from irritation: "A primary nervous system makes use of . . . *Qn* [*Q* of an intercellular order of magnitude] which it has acquired, by giving it off through a connecting path to the muscular mechanisms, and in that way keeps itself free from stimulus." Freud goes on to note, "With an [increasing] complexity of the interior [of the organism], the nervous system receives stimuli from the somatic element itself—endogenous stimuli—which have equally to be discharged." These have their origin in the cells of the body and give rise to the major needs: hunger, respiration, sexuality. From these the organism cannot simply withdraw as it does from external stimuli; they must be satisfied in the external world. (Freud, 1955, 1:295–296) Thus, the organism is invaded by external and appropriated by internal forces. It receives the necessary energy to relieve itself from irritation from precisely the irritation itself. (There is more than an remote analogy between this circular mechanism and the circularity of the *cogito*.)

The organism, according to Freud, is continuously bombarbed

with a flow of force that is the very fuel of life but that is also overwhelming and potentially destructive, so it must be at once conserved and defended against. The contact-barriers, which may be either physical mechanisms (neurones) or psychical mechanisms, converting the continuous assault of force into pulses of action which are symbolic expressions, both connect and *separate*. Contact-barriers are the anatomical mechanisms of leaky distinctions. They are expandable receptacles that contain the in-flowing force, making a break in the flow or a distinction, At a certain point, the receptacle reaches its threshold, can contain no more, and discharges a pulse that is a symbolic expression of the force. Force builds up as stress or excitation of the organism and is released in a sudden break-through, which reveals something of its source but only darkly and often most obscurely. Sexual energy, for example, may manifest itself symbolically in rigorous commitment to sexually repressive moralities. The contact-barrier or leaky distinction is the fundamental Freudian structure that is recapitulated in the anatomical, psychical, and conscious spaces.

If Hebraic-Christian mythology tells of transgression or attempted transgression across absolute ontological boundaries, Freudian mythology tells of contact barriers—barriers that are also points of contact: Oedipus is the husband of his mother, a contact-barrier between father and son. The father and the son are the "same" (contact) and "different" (barrier). The Oedipus complex does not break down the structure; rather, it assigns all of the members of the family a double value. The distinction husband-son holds up to a certain point, but then it begins to "leak." The distinction becomes increasingly obscure, causing neurotic behavior, or breaks down completely, pushing the entire family into a crisis of reason. Unlike Deleuze and Guattari, for example, I do not *blame* Oedipal repression on Freud. He only discovered one important psychological structure of the type that dominates a statistical society (Deleuze and Guattari, 1977). More fundamentally, though initially less spectacularly, he discovered a new type of mechanism. He discovered that *the mapping of continuous psychic space in binary code requires not impermeable boundaries but boundaries of changing permeability.* It still may not strike us with its profundity, but it still has not been fully assimilated: so much of our thinking utilizes the logic of leaking boundaries, and so few explanations of thought even recognize it. Poststructuralist theorists, for

example, speak of "slippage" in relation to an absolute logic rather than recognizing that the logic of leaky distinctions can be exquisitely managed by means of probability theory and the logic of statistical prevalence.

With any distinction, the distinction of the interior human from the exterior human, for example, a discrete world comes into existence. The world of the distinction is partial, cut-off, and grotesque (Hegel's topsy-turvy world). It has a logic—an inside and an outside—but it has no content. The distinction establishes only the limits of the world. The structure of the interior is obscure and can be clarified only with further distinctions. Each discrete thing has an inter-crypt, promising content, fullness, completion, which is never directly revealed. G. Spencer-Brown writes: "We may take it that the world undoubtedly is itself (i.e. indistinct from itself), but, in any attempt to see itself as an object, it must, equally undoubtedly, act so as to make itself distinct from, and therefore false to, itself. In this condition it will always partially elude itself" (Spencer-Brown, 1979, 105). Freud studies this self-eluding character of the logical subject and the unconscious that is implicit in it. By attending to the *structure* of hysteria and dream, rather than their manifest content, Freud creates a kind of semantic engine which produces images of its own inner resonance and inner dissonance. This is the *logical* basis of the unconscious.

Ultimately, of course, a leaky distinction is no distinction at all: entropy has its way and, in time, the value on the two sides of the contact barrier is equal. The difference of force which is the basis of life is dissipated and the organic mechanism arrives at equilibrium. The Freudian person is a contact barrier, a distinction that is not a distinction, a self-overcoming, death-seeking structure. The psychology that Freud articulated was implicit in the complex cultural accommodations to the programmatic willfulness of the modern West. It is a self-enervating process, a hopeless administration of its own dissipation.

Psychoeconomy and Symbolic Transfer

The input-output model of the psyche requires both a principle of distinction, which accounts for the transfer for quantities and a principle of transfer, which accounts for topological differences—a mechanism of distinction that does not distinguish and a mecha-

nism of equation that does not equate. In Freudian theory, the contact barrier is countered by the symbolic transfer of the metaphor that is, as Kenneth Burke notes, perspectival, an opening of a view from a particular vantage: "If we employ the word 'character' as a general term for whatever can be thought of as distinct . . . then we could say that metaphor tells us something about one character as considered from the point of view of another character. And to consider A from the point of view of B is, of course, to use B as a perspective upon A" (Burke, 1969, 504). Thus, as topography involved an element of exchange, economy involves an element of spatial distinction.

Freud's language is charged with metaphor. Paragraph after paragraph in crucial theoretical discussions, such as chapter 7 of *The Interpretation of Dreams*, derives its content from metaphoric play. To speak of "the *chain* of a dreamer's psychical experiences" or "purposeless *stream* of ideas" is, of course, to use common metaphors. In the context of Freud's bold metaphoric practice, however, these colorless and perhaps nearly empty figures are reawakened by a perspectival use of language that is more than integral to the argument; rather, it is the argument itself. One might have to go to the seventeenth-century prose writers, Sir Thomas Browne or Giordano Bruno perhaps, to find a prose in which the controlling structures of the thought are so consistently metaphoric. Consider the following passages, for example:

> 1. If, then, an indistinct element of a dream's content is in addition attacked by doubt, we have a sure indication that we are dealing with a comparatively direct derivative of one of the proscribed dream-thoughts. The state of things is what it was after some sweeping revolution in one of the republics of antiquity or the Renaissance. The noble and powerful families which had previously dominated the scene were sent into exile and all the high offices were filled by newcomers. Only the most impoverished and powerless members of the vanquished families, or their remote dependents, were allowed to remain in the city; and even so they did not enjoy full civic rights and were viewed with distrust. The distrust in this analogy corresponds to the doubt in the case we are considering. (Freud, 1955, 5:516)
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> 2. The dream-thoughts to which we are led by interpretation cannot, from the nature of things, have any definite endings;

> they are bound to branch out in every direction into the intricate network of our world of thought. It is at some point where this meshwork is particularly close that the dream-wish grows up, like a mushroom out of its mycelium. (Freud, 1955, 5:525)

> 3. Deliria are the work of a censorship which no longer takes the trouble to conceal its operation; instead of collaborating in producing a new version that shall be unobjectionable, it ruthlessly deletes whatever it disapproves of, so that what remains becomes quite disconnected. This censorship acts exactly like the censorship of newspapers at the Russian frontier, which allows foreign journals to fall into the hands of the readers whom it is its business to protect only a quantity of passages have been blacked out. (Freud, 1955, 5:528)

> 4. Superficial associations replace deep ones if the censorship makes the normal connecting paths impassable. We may picture, by way of analogy, a mountain region, where some general interruption of traffic (owing to floods, for instance) has blocked the main, major roads, but where communications are still maintained over inconvenient and steep footpaths normally used only by the hunter. (Freud, 1955, 5:530)

These examples occur in the first section of chapter 7 of *The Interpretation of Dreams*, within a space of twenty pages, and this sampling does not begin to exhaust even the more elaborate metaphors in the passage. If one were to survey controlling metaphors in only *The Interpretation of Dreams*, it would be necessary to discuss the metaphor of the dream as rebus or picture puzzle (Freud, 1955, 4:277) and the comparison of the connecting links in dreams to rimes in poems (Freud, 1955, 5:340), which are important figures in chapter 6; the extended metaphor of the compound microscope, which is the dominant organizing device of the second section of chapter 7; as well as the ontogeny-philogeny metaphor (Freud, 1955, 5:548–49), an important cluster of metaphors drawn from economics (Freud, 1955, 5:561); and Freud's metaphoric use of literary materials.

Aristotle suggests that the recognition of similarity in dissimilarity is the genius of metaphorizing, and, as Freud notes, he characterizes dream interpretation in the same terms as the making of metaphors: "Aristotle remarked in this connection that the best interpreter of dreams was the man who could best grasp similarities; for dream-pictures, like pictures on water, are pulled out

of shape by movement, and the most successful interpreter is the man who can detect the truth from the misshapen picture" (Freud, 1955, 5:97). The logic of metaphor, however, is like the logic of musical harmony. Any two objects can be compared *in some sense,* just as any two sounds can be heard as consonant. Freud pushed the logic of metaphor to its conclusion at about the same time his Viennese contemporaries in music were pushing harmony to its conclusion. He is the Schönberg of metaphoric discourse.

What is allowable as a metaphor? If we speak of "dawn in russet mantle clad," the comparison is fairly concrete. Visualized more or less literally, it does not seem grotesque or absurd. The essential character of a mantle is to cover as dawn covers the sky; it is "put on" and "taken off"; we might even imagine certain kinds of clouds as the folds and textures of cloth. The comparison involves a fairly high level of abstraction, but I think most people would agree that it is not as abstract as "my love is like a red, red rose." Here the attention must be fairly selective, or the image is grotesque. The comparison is based almost entirely on emotional associations rather than specific sensuous comparisons. The typical Freudian metaphor involves a very high level of abstraction, and it is not constrained by aesthetic considerations: top hat = phallos, mushroom = contraceptive sponge, and so forth. At this level of abstraction, any x is arguably any *y,* and, if any *x* cannot be *directly* associated with any *y,* a discourse with this much tolerance can with a few intervening steps equate any *x* with any *y,* even if, paradoxically, *x* and *y* are "opposites." In this regard, Lacan's commentary restores one of the essential Freudian insights by demonstrating that the systematization of linguistic laws is the final sublation of history and the establishment of post-Hegelian order: "if there still remains something prophetic in Hegel's insistence on the fundamental identity of the particular and the universal, an insistence that reveals the measure of his genius, it is certainly psychoanalysis that provides it with its paradigm by revealing the structure in which that identity is realized as disjunctive of the subject, and without appeal to any tomorrow" (Lacan, 1977, 80).

Freud essays the identification of opposites in his late work, the identification of life and death in *Beyond the Pleasure Principle,* or the identification of subject and object in *Ego and Id,* and the identification of the individual and civilization in *Civilization and*

its Discontents. The pristine *ideal* structure of language is irrelevant to the content-laden language of actual use in which the abstract forms are metaphorically extended with content—a content and identity, according to Freud, that is known only as the end result of a series of successful psychoeconomic transactions.

In a metaphor that Descartes and Freud share, the ego is presented as mediating between two texts, one more or less occluded and the other unreliable. Freud writes:

> The dream-thoughts and the dream-content are presented to us like two versions of the same subject-matter in two different languages. Or, more properly, the dream-content seems like a transcript of the dream thoughts into another mode of expression, whose characters and syntactic laws it is our business to discover by comparing the original and the translation. The dream-thoughts are immediately comprehensible, as soon as we have learnt them. The dream-content, on the other hand, is expressed as it were in a pictographic script, the characters of which have to be transposed individually into the language of the dream-thoughts. If we attempted to read these characters according to their pictorial value instead of according to their symbolic relation, we should clearly be led into error. (Freud, 1955, 4:277)

In the methods of both Descartes and Freud, the task is to relate a pictographic language—if we can think of the abstract, geometric figures of analytical geometry in this sense—to a linear language. In both cases, the visual language has priority, and relationship depends upon an analytic function. Freud's orientation, however, is different. While Descartes translates from the common language to an ideal language, Freud is presented with a meaning-laden language, which not only requires translation but which is unknown and must be deciphered. The grammar is unknown, and the vocabulary is improvised from visual detritus. Psychoanalysis reveals the subjective event to be a function of the metaphor, much as Cartesian analysis revealed the objective event to a function of an algebraic expression. Both are based on circular logic: the Freudian method, like the Cartesian, is helical, gradually draining the Zuider Zee, in Freud's metaphor, and using the new-won ground as the base for further draining.

According to Freud, ancient dream interpretation failed because it attempted to decipher the manifest content of dreams rather than the dream-thoughts which they represent. In order to

properly interpret dreams, it is necessary to recognize (1) that they invariably represent the fulfillment of wishes and (2) that in dreams, unacceptable wishes and images of their fulfillment are played out in symbolically distorted form. These principles are now, of course, so familiar that they seem commonsensical. The problem of relating the repressed wish to the distorted images that the dream presents, however, remains a problem. Freud himself notes: "There is no possibility of explaining dreams as a psychical process, since to explain a thing means to trace it back to something already known, and there is at the present time no established psychological knowledge under which we could subsume what the psychological examination of dreams enables us to infer as a basis for their explanation" (Freud, 1955, 5:511).

Explanation in itself is paradoxical: either the explanation is equivalent to the original and puzzling formulation, in which case nothing is gained, or it is not equivalent, in which case it does not constitute an explanation. Some of the oldest and most troublesome philosophic paradoxes are versions of this problem. The common solution, which appears in myriad forms, is to find a common ground between two different linguistic structures. The discourse establishes a metaphorical ratio not between one term and another but between entire languages or regions in language. The power of Cartesian geometry, for example, arises from the common grounds it discovers between algebraic formulas and drawings on Cartesian coordinates. Although it is not as clearly articulated, Freud's strategy is comparable. Dream content and dream thought are different linguistic regions, where different grammars apply. Psychoanalytic theory must provide a technique for translating from the dream content to the dream thought without reference to the reality of the unconscious itself, which is, of course, inherently beyond our ken. The linguistic economy consists of exchanges between more or less immediate perceptual regions, which, in turn, generate references to regions that are unknown and, in terms of direct access, unknowable. Freudian inference, while not mysterious, is never direct, and its object is unknown: the unconscious is the x of the psychoanalytic algebra. We cannot solve for *it* anymore than we can solve for *all* of the roots of a generalized algebraic function.

Lacan develops this thought explicitly and completely in the spirit of Freudian practice. He takes the fundamental algorithm of

linguistics, signifier to signified, S / s, and extends it metaphorically to psychoanalysis, seeing it also as the ratio of conscious to unconscious. The situation that is thus described embodies its own impossibility: every attempted crossing from signifier to signified, as it reaches the slash that separates the uppercase *s* from the lowercase *s*, waffles and turns aside, producing not the signified but another signifier; likewise, every attempted move from conscious to unconscious produces not the unconscious but more consciousness. Consider, for example, the problem of analyzing a dream: if one merely substitutes a new term for the term in the dream—"phallus" for "top hat," for example—nothing is added. It is comparable to factoring 16 into the expression 2 x 2 x 2 x 2. Such organization of language serves to create taxonomies, but it gives little intellectual leverage. It is possible, for example, to know that "phallus" can be substituted for "top hat" without knowing how to use either term, and, to a large extent, the initiate into psychoanalytic language is in this quandary. Lacan speaks of these relationships as metonymic. There is another dimension to the signifying chain that has "as if attached to the punctuation of each of its units, a whole articulation of relevant contexts suspended 'vertically', as it were, from that point" (Lacan, 1977, 154). When this dimension of language is taken into consideration, semiological networks appear. In some sense, the whole structure of language is implicated in every linguistic nexus, and it becomes possible to think in terms comparable to algebraic functions, so a given variable implicates not just an unknown but entire classes of unknown terms.

Lacan formalizes the distinction between the linear and the vertical dimensions of the signifying chains in quasi-mathematical formulae. Although he pursues a brilliant series of playful variations on the most famous Cartesian language—"I think where I am not, therefore I am where I do not think" (Lacan, 1977, 166), his methodology presents many of the same puzzles as Descartes: how is it possible to translate from a language that relates only to itself to a language in which internal linguistic relations are functions of a generalized reality? Descartes argues from the common language to a purified mathematical subset of the language that he identifies with natural space; Lacan argues from the common language to the abstract structure of language which he identifies with the unconscious. Relocating the ego in relationship to the center of

language brilliantly re-states Freud's Copernican revolution for a generation dominated by the thought of linguistics. By assigning the ego a place in an insignificant outer orbit of the linguistic solar system, Lacan's algebraic formulae, like Descartes's, symbolize the introduction of extraordinary levels of abstraction into the natural language. The Freudian psychoeconomics combines with the psychotopography to produce a rich, multidimensional medium that has the capacity both to reduce complex quantitative signals to traces that record a simple binary structure and to maintain distinct complex signals in relation to one another.

It should be noted that writing and speech in general constitute the kind of explanatory doubling involved in metaphoric interpretation. Although we do not normally speak in these terms, speech is an "explanation" of writing, and writing is an "explanation" of speech. Since the rise of Greek literacy, the intellectual institutions have conspired to coordinate writing and speech—that is to make writing and speech "breathe" together. Derrida's analysis of the sentimentalization of voice delineates one aspect of the conspiracy but not the other. To be sure, voice is sentimentalized in relation to script, but, likewise, script is sentimentalized in relation to voice. Against the authority of Socrates and Jesus, who speak the Truth but do not write, there is the weight of the entire cultural canon and, since the seventeenth century, the written tradition of scientific research. Entire grammars are mutually enfolded in one another without difficulty. Speech and writing, phonetic script and pictographs, for example, are manifestations of a medium that is essentially tolerant. Freud moves from one grammar to another without notice of a seam, even when radically different logics are involved. The alphabet, for example, is a finite combinatory. A finite collection of discrete signs is arranged by a finite set of rules to create more complex signs. Any such language, whether it is aligned on the voice or not, has a character that differs radically from iconic languages: the DNA code, for example, has such a character. One might imagine a finite combinatory that consists of a finite collection of discrete bodily signs, such as, for example, open and closed eyes and mouth, wiggled ears, flared nostrils, and so forth. Pictographic languages, on the other hand, are open series: it is possible to add unique, new signs that have no relation whatsoever to the existent signs. Pictographs do not require a systematic background. The distinction between these logics, how-

ever, is not as clear as it has been almost universally supposed by theoreticians. Consider, for example, the ease with which Freud resolves the matter: "A dream," he writes, "is a picture-puzzle . . . and our predecessors in the field of dream-interpretation have made the mistake of treating the rebus as a pictorial composition" (Freud, 1955, 4:277). That is, the dream itself supplies no grammar or even the wrong grammar. Freud assimilates dream content to dream thought by demonstrating how apparently aberrant psychical phenomena "can be inserted into the chain of intelligible waking mental acts" (Freud, 1955, 4:122). By insisting upon the relationship between iconic languages and phonetic languages, allowing one to function in the other—the one, for example, to supply the syntax for the other—Freud provides certain rules of thumb for life in an environment for which we have no theory and can have no theory. In this century, the medium has achieved a fluency that produces an entire environment which is popularly called "the medi*a*" but which is almost inevitably treated as a unitary thing. It is the one in the many and the many in the one, not in any mysterious sense, but as a matter of pure, practical incoherence. It has no character in itself.

The distinction between a domain of energy and a domain of information, which Freud referred to as "topography" and "economy" does not mark opposed locales in the self-cognizing organism; it is, rather, the necessary distinction that brings self-cognizing organisms into being. It is not, therefore, something to be reconciled or balanced out in a larger unity (Hegel); it is not dialectical and therefore dynamic; it is not a source of tension that must be relieved or brought to equilibrium (Freud). It is, rather, the *stable* condition of cognition. Neither the energy consumed in the thought nor the energy consumed in its expression—the excitement of a neurone, the mark on the page, the impress of the print—is the energy of thought, which is to say, the energy of living as such. We suffer a profound confusion of life and its expression. The knowledge that can be shared without disciplinary preconditions is that energy creates information and information creates energy. This paradoxical knowledge is available to any observer who is also a self-observer. It is the origin of a knowledge of transcendence and the finite horizon of the self-cognizing beings who account for both their insides and their outsides *through their own insides*. Beyond this paradox, nothing can be said. Freud

proposes to account for insides and outsides of self-cognizing beings from the outsides. His is a last desperate proposal of nineteenth-century scientific objectivism. Although the Freudian psyche appears in the same space as its objects, Freud discovered a cunning model by which psyche appears to get a certain distance on itself.

Freud proposes a "literalism" of the symbol: we are to read the symbol, not its overt content. That is, we are to take the symbol seriously but not *too* seriously. Freud sees his problem as comparable to the task of the biblical scholars: although the text with which he worked was couched in the most mysterious algebra and then badly corrupted, it still "somehow" contained the truth which must be discovered. "In short, we have treated as Holy Writ what previous writers have regarded as arbitrary improvisation, hurriedly patched together in the embarrassment of the moment" (Freud, 1955, 5:514). The Freudian strategy discovers a normative structure that it reimposes with all of the authority of the literal text that it displaces; it replaces the literalism of content with the literalism of structure. In 1914, Walter Lippman wrote: "The impetus of Freud is perhaps the greatest advance ever made towards the understanding *and control* of human character. But for the complexities of politics it is not yet ready. It will take time and endless labor for a detailed study of social problems in the light of this growing knowledge" (Lippman, 1962, 168, my emphasis). Now that control is largely achieved. The irrational components conspire to produce a broadly rationalized, social machine.

The poetics of common knowledge, on the other hand, declares that life *is* an arbitrary improvisation and that each living thing uniquely and absolutely distinguishes itself. What we discover from the structural relationships of symbols—even what we learn negatively or critically—is "truer" than their literal content only in the sense that it makes certain statistically reliable generalizations possible. These generalizations, of course, underwrite the mechanisms of control that now prevail in the symbolic media that define the corporate living space.

Humberto Maturana, whose conception of life as autopoiesis I will oppose to the Freudian conception of life as symbolically bound force, writes, "when it is recognized that language is connotative and not denotative, and that its function is to orient the orientee within his cognitive domain without regard for the cogni

tive domain of the orienter, it becomes apparent that there is no transmission of information through language" (Maturana and Varela, 1980, 32). And there is, therefore, no insistence in the signifying chain; indeed, there is no chain. *We are not chained!* We are in no sense required or regulated by language, our own or others. We are not input-output mechanisms, functioning at the whim of the information that we suffer. We are, rather, self-closing organisms that take their own output as input. The joy of language is that it sometimes allows us the opportunity to enter *unconstrained* community, not mediated and numbed, but intensively felt.

In saying that language is connotative, Maturana means not that language refers to emotions but that language *is* emotional, not informational. Although such a characterization seems "unscientific," he notes that it is otherwise impossible to account for the evolutionary origin of natural languages. If language is denotational, the very function that we hope to explain—the ability to communicate a denotation—must preexist itself. The denoted object must be identified *before* it can be recognized and named. For this reason, our theories of language have referred to mysterious origins, and our epistemologies have necessarily invoked infinite regresses. This crisis for cognitive life that called forth "Western philosophy" arose when the cognitive domain, which is never complete but remains open toward the infinite, is made into a closed domain existing in itself. If, however, the function of language is not referential but orientational, it is possible to account for the appearance of language from nonlanguage. So rich is its possibilities of orientation, so inclusive of itself, Mina Loy writes, language might be "reduced to a basic significance that could be conveyed to a man on Mars" (Loy, 1982, 291).

THE PERFORMANCE OF THE PERSON: LOUIS ZUKOFSKY

The Contingent Person

> Me wherever my life is lived, O to be self-balanced for
> contingencies,
> To confront night, storms, hunger, ridicule, accidents, rebuffs, as
> the trees and animals do.
>
> —Walt Whitman

Reading Louis Zukofsky, especially late Zukofsky, readers sometimes feel like beginning students of German or Greek. They get on what appear to be good syntactical tracks, but a few words are left over, do not fit the pattern. At other times, they feel like readers of an ancient manuscript. Again they find hints of syntax, but key words or phrases are obliterated by tears or wormholes: there are too many words or not enough; there are temptations to add or subtract punctuation or juggle the word order. Occasionally, however, passages appear with astounding clarity, leaving the reader with the mental equivalent of the bends. These examples are from *"A"*–22:

> "If your house were burning
> what would you save from
> it?" "The fire."
> (Zukofsky, 1978,519)

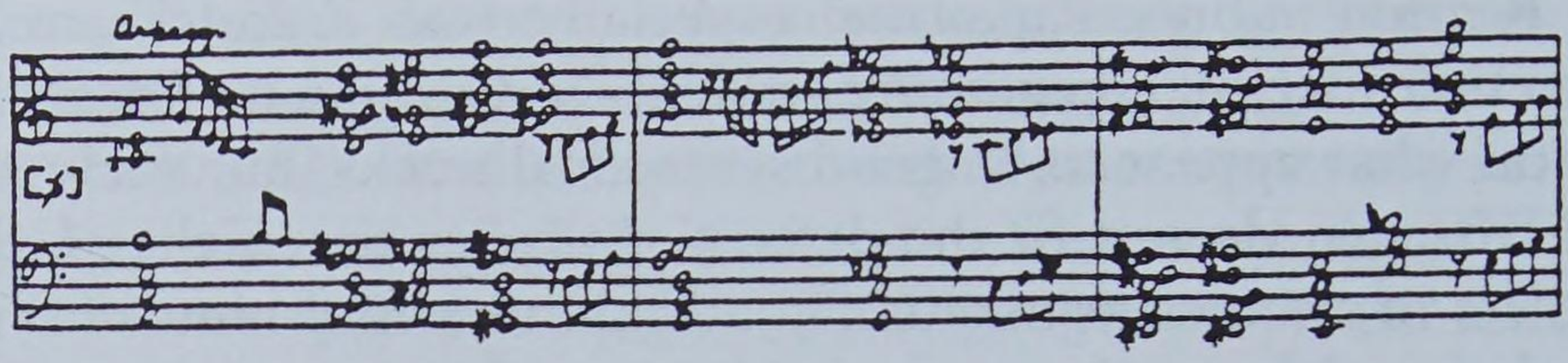
> the law, water, shaped
> to the container its in.
> (Zukofsky, 1978, 523)

> A
> child learns on blank paper,
> an old man rewrites palimpsest.
> (Zukofsky, 1978, 525)

This last one might be a clue; we should remember it. Also, Zukofsky writes, "we are caught by our own knowing" (Zukofsky, 1978, 510).

Readers are clearly caught as they sit before *"A"*–24, "a five-part score—music, thought, drama, story, poem"—all clamoring to be comprehended simultaneously. (See page 240.)

Although we are told that the masque is "centrally motivated by the drama" (Zukofsky, 1978, 564), the syntax works as surely in the vertical dimension as the horizontal. Sometimes the connections are discursive: the voice of thought, for example, speaks of tuning in "to the human tradition," and the voice of drama responds, "How do you catch such a bird?" (Zukofsky, 1978, 560). Simultaneity, however, is more commonly the rule. The relationships are sometimes complementary, sometimes ironic. There are puns, rimes, subject rimes, and significant repetitions. Zukofsky explores all of the avenues of linguistic interconnectiveness. How



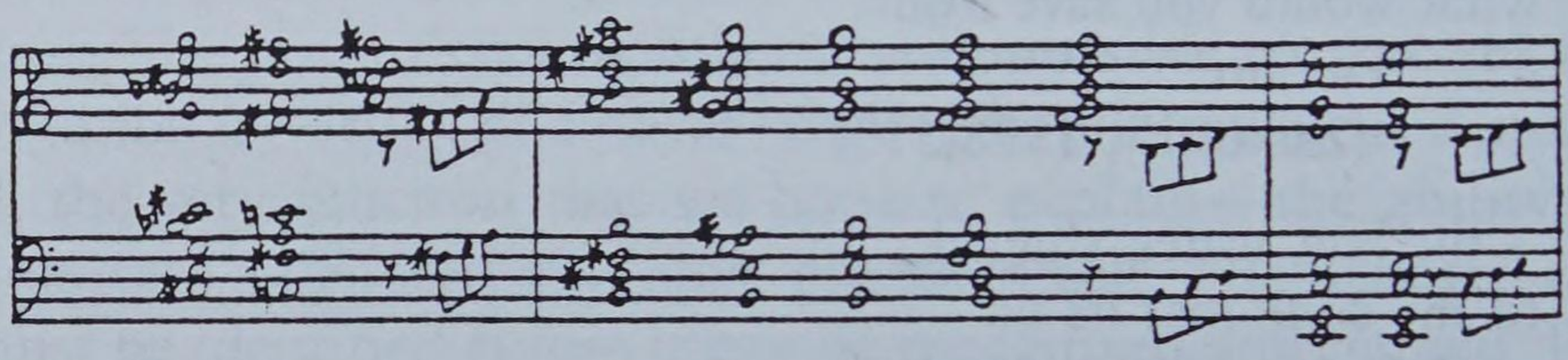
T And it is possible in imagination

D I came thru there My mother hit her mother?

(points finger downward, moves his head negatively from side to side)

S This story was a story of our time.

P Blest / Infinite things /
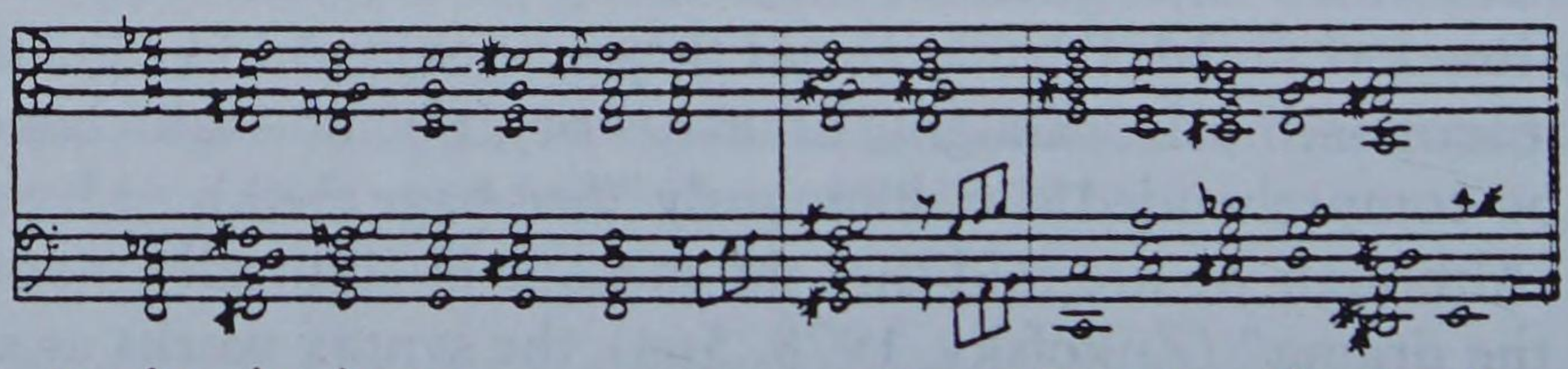


T to divorce speech of all graphic elements,

D

(falls to the floor in a fit)

S And a writer's attempts not to fathom his time

P So many / Which



T to let it become a movement of sounds.

D

(rises, limp,

S amount but to sounding his mind in it.

P confuse imagination / Thru its weakness,

Source: Zukofsky, 1978, 566.

much of the content can be preserved in performance is uncertain. In poor performances at least, many passages will be lost in muddle. Conjecture, however, is empty; the only way to read "*A*"–24 is to perform it.*

The first twenty-three books of "*A*" are solos, but they too must be performed. Reading the texts aloud is a good beginning, but the texts insist upon being used by the performer and making use of the performer. Neither the reader nor Zukofsky himself is allowed a language apart from the language of the poem. The radical character of the work derives from Zukofsky's refusal to observe the philosophic conventions of privacy, which distribute an act of communications between a sender and a receiver, a producer and a consumer. Zukofsky writes, "The best way to find out about poetry is to read the poems. That way the reader becomes something of a poet himself: not because he 'contributes' to the poetry, but because he finds himself subject [not the object] of its energy." (Zukofsky, 1981, 23) Poetry of this order requires an enactment, to which most of our notions of reading are inadequate.

In *Bottom: On Shakespeare* and *Catullus*, Zukofsky gives performances of other poets. Although they are overtly very different from one another, they are both improvisatory. In this sense, no performance is definitive. In his preface to *Bottom*, Zukofsky writes: "Even a photographic eye—a lens—is placed by some human; when 'shooting' at Shakespeare, at best perhaps by inevitable accident. To say that his focus was this is presumptuous" (Zukofsky, 1987, 10). The performance of poetry that manifests the common is necessarily as unique as its performer. If to read Shakespeare from the point of view of Bottom, the thespian weaver in *A Midsummer-Night's Dream*, is arbitrary and personal, the translation of Catullus, attempting to preserve the sound of the Latin, is idiosyncratic. The shared world is comprised of singularities that lie beyond the horizon of languages and their inevita-

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*We are told only in a somewhat enigmatic note at the end that, in fact, "*A*"–24 is the work of Zukofsky's wife, the composer, Celia Zukofsky:

> the gift—
> she hears
> the work
> in its recurrence
> L. Z.

(Zukofsky, 1978, 806)

ble class logics. The performances are aimed not at communicating the content of the language but at manifesting the singularity of the occasion.

Zukofsky claims in *Bottom* to have done away with the theory of knowledge: it is, he tells us: "A long poem built on a theme for the variety of its recurrences. The theme is simply that Shakespeare's text throughout favors the clear physical eye against the erring brain, and that this theme has historical implications" (Zukofsky, 1981, 167). To be sure, Bottom is the one, perhaps of all of Shakespeare's characters, who is innocent of philosophy. He wants to play all of the parts, male and female, human and animal, in the play that he and his cohorts plan to present, and, at the same time, he is fearful that the audience will confuse the play for reality—a mistake he is most likely to make himself. Bottom's values, which are firmly grounded upon completely nontheoretical love, however, are prior to mere matters of reason. His knowledge does not derive its authority from language. Weaving together texts, the technique of Zukofsky's book, honors Bottom's craft. The text is constructed, not as argument, but very much from argument. This self-declared antiphilosophic text quotes philosophers—especially Aristotle, Spinoza, and Wittgenstein—on almost every page and quotes them positively, against themselves, in their own self-obstruction.

In *Catullus*, Zukofsky investigates the other dimension in his theme. "This translation of Catullus," he writes in his preface, "follows the sound, rhythm, and syntax of his Latin—tries, as is said, to breathe the 'literal' meaning with him." He is assuming a persona with a vengeance, or, more exactly, he proposes to assume not Catullus's person but his body. Again, however, he makes this move precisely at the point of a paradoxical reversal: the very act of making like is making differences. By submitting totally to Catullus's language, he is remaking his own. If *Bottom* is an attempt to make us see a physical world that is in danger of becoming transparent, *Catullus* is an attempt to make us hear English that is in danger of becoming silent. It is certainly an English such as we have never heard before:

> Seek or record then the benefactor—pree or voluptuous
> is the meaning, come say cogitate essay pious,
> no sanctum will owe loss—so feed him, not foiled there in all he

> divined not falling those numina abusing no man's
> mull to be rapt there manning a long ah high tide there, Catullus,
> sort from ingratitude good and from more a to be.
> (Zukofsky and Zukofsky, 1969, poem #76)

The central demand that Zukofsky's art makes on him in *Catullus*, as in the other books, is to keep the historical process alive at the roots, where image, sounds, concepts, and traditions combine and recombine in their restless incongruence. It is an art that calls attention to the deadliness of habit and the possibility of change. It does not seek resolution—and certainly *Catullus* resolves nothing—but it can bring us to those moments of intense vital awareness when resolution seems unnecessary and even undesirable. Playing through the bitterest and most thoroughgoing subject-object relations, it opens to a poem in "*A*" that can only be performed, not thought.

"*A*," *Bottom*, and *Catullus* declare the modes of a personal order, which is eccentric and private, and at the same time, completely common. The contingencies of personal vision mediate between mastery of the other and immersion in the other. These three works are inquiries into strategies that engage the lyric voice with other voices in time. They are extended, intersubjective lyrics, the various voices involved all reaching beyond the lyric moment to establish a community. "*A*" investigates the intersubjective play of image, sound, and concepts; *Bottom*, of tradition and concepts; *Catullus*, of image, tradition, and sound or "breath," as Zukofsky says. In these works, we witness the refounding of the tradition of secular choral poetry, which had its very brief day in the age between the decline of the epic and the rise of the lyric of the single voice. The whole of "*A*" is an investigation into the inadequacies and limitations of the single vision and the single voice. In "*A*"–9, Marx and Cavalcanti sing a duet that Zukofsky conducts; "*A*"–21 is a drama; *Bottom* is a lengthy discussion between Aristotle, Spinoza, Wittgenstein, and Zukofsky—in the guise of Bottom—on the subject of Shakespeare; in *Catullus*, Zukofsky sings a close-harmony duet with the Roman poet, while all of the dead speakers of Latin hum backup.

I do not have the space to perform Zukofsky's work here, nor is a performance relevant to the present concern, which must confine itself to strategies of poetic performance. Zukofsky offers evidence of the contingency of the performer and the completely non-

philosophic relationship of the performer to the act of reading the poem. I will begin, not with a commodious warp, such as Bottom might require for a weaving, but with four meager threads.

The first is from Zukofsky in *Bottom:*

> Pouring over the words of such English writings as Shakespeare's or Wyatt's, conjecture may posit that their craft is primarily an attempt to English the truncated thought of their known world—for what else, as histories reiterate, is the thought of the late Renaissance, but an avidity in great part for the thought of an older and mythically unmaimed world. Conjecture will thus say that the craft of their writing is this thought that penetrates the smallest joints of their words, those irrational numbers keeping the "great, deeper" concepts together. (Zukofsky, 1987, 26)

Zukofsky refuses to grant integrity to plot, character, or any other formal entity that might call metaphysical substance into Shakespeare's work. The Zukofskyan reader of Shakespeare or Zukofsky must address attention to the language in its smallest particles, which is not to say that these can be isolated from larger units in which they play.

The second thread is from "*A*"–22:

> one guess at certainty made
> with an assemblage of naught—
> yet in cells not vacuum
> records as tho horses rushed
> definite as an aching nerve
> pleads feed and feed back—
> spine follows path once more,
> to arrogate it small eloquence.
>
> (Zukofsky, 1978, 509)

Zukofsky is speaking here of the form of "*A*" itself. We are reminded that its forms are arbitrary. The cells in which the poem is cast are so playfully contrived that no one is likely to reify them.

The third thread is from one of Zukofsky's most important sources, Ludwig Wittgenstein. Speaking of poetry and music, he writes: "If a theme, a phrase, suddenly means something to you, you don't have to be able to explain it. Just this gesture has been made accessible to you" (Wittgenstein, 1970, 28). The tradition of Western poetry since the decline of the epic has articulated a series of techniques for making it appear that the poetic experience is explicable. In fact, it is the simplest thing there is. Things are

explained in terms of it and not the reverse. For this reason Zukofsky's work can only be performed, the gesture made. The poem is difficult because it does not open to us the opportunity to appear to have explained.

I sometimes think "*A*" is a self-interpreting poem. Most lines that need glossing are glossed somewhere in the poem itself. One performance of the poem, if we assume the role of the cartographer, rather than the weaver, would be to draw isometric lines, connecting those passages that speak to one another. This would not constitute an explanation of the poem; it would be perhaps an "inplanation" or "information." The fourth passage that keys important aspects of a performance of Zukofsky is from "*A*" –14:

> lower limit body
> upper limit dance
> lower limit dance
> upper limit speech,
> lower limit speech
> upper limit music,
> lower limit music
> upper limit *mathemata*
> swank for *things*
> learned (like cage
> silence which pulses).
> (Zukofsky, 1978, 349)

The *mathemata* is the manifest order that, unspoken and unspeakable, Wittgenstein tells us exists in the silence, the source of value, perhaps value itself. "Silence which pulses," Zukofsky says, thus creating rhythm and the possibility for measure. Some mathematical formulations, in themselves mere tautologies, have applications in science and engineering. Zukofsky is brother to the practical mathematician; the performer is the engineer. The meaning of "*A*," like that of other poetry, is revealed in its use, in its gestures becoming accessible.

In an effort to propose a view of Zukofsky's work as a whole—the work as person—I have the precedent of Zukofsky himself in *Bottom: On Shakespeare:* "It is simpler to consider the forty-four items of [Shakespeare's] canon as one work, sometimes poor, sometimes good, sometimes great, always regardless of the time in which it was composed, and so despite defects of quality, durable as one thing from 'itself never turning,' so growth is organic to

decay and vice versa" (Zukofsky, 1987, 13). Zukofsky's canon was likely more consciously constructed as a single work than Shakespeare's (though, of course, we have no way to know). *All: The Collected Shorter Poems* begins with the assertion of a definitive order, with "Poem Beginning 'The.'" The definite article declares a particular kind of objectivity, a uniqueness and a universal perspective. Although "Poem beginning 'The'" is a travesty of Eliot's and Pound's insistence upon *the* tradition, Zukofsky recognizes that cultural order is the context of all and *All*. Against the multiple voices and the tentative musical organization of "Poem beginning 'The,'" he poses, in the first of "29 Poems," the theoretical and practical clarity of Lenin, whom he addresses as a star:

> Irrevocable yet safe we go,
> Irrevocable you, too,
> O star, we speaking to you,
> The shadows of the elm leaves faded,
> Only the trunk of elm now dark and high
> Unto your height:
> Now and again you fall,
> Blow dark and burn again,
> And we in turn
> Share now your fate
> Whose process is continual.
>
> (Zukofsky, 1971, 24)

These two poems as premises of the volume nearly cancel one another out, and Zukofsky finds himself near ground zero: "Not much more than being / thoughts of isolate, beautiful /Being at evening." The remainder of *All* is an effort to trace a way through the immediate and local to an inclusive vision from a single point of view. The book is not a miscellaneous collection of pieces that do not otherwise fit in the design, but a carefully organized work, which is nonetheless fragmentary.

In the penultimate section of "29 Songs," Zukofsky takes stock in prose of the dissonances that arise from the process in which he is engaged: "Specifically, a writer of music," he writes. "The composite of notes proceeded with assumed qualities in a definite proportion. But, as dreamed, they controlled the nature of plants, bodies, etc. and the elements of the notes became not easy to separate." The relationship between notes and things, however, is not as simple or as direct as it first appears; there are contradic-

tions at the very heart of his undertaking. He goes on to dream of dancing donkeys, and "the ever falling stomping of their hoofs, now following the range of his notes, were imparting to him clearly: 'Sir, not only as mathematique point flowers into every line which is derived from a Center, but our soul which is but one, hath swallowed up a negative.'"

The dilemma that the donkeys announce is exemplified in "Mantis" and "Mantis: An Interpretation" (Zukofsky, 1971, 73–80). They establish the crisis in which *All* develops. Refusing to commit himself to a unity, which does not inform the whole of life, Zukofsky must deal with images and melodies that are frankly arbitrary. The central Zukofskyan value, therefore, is sincerity. It seems a weak word; we tend to be embarrassed by it. Nevertheless, in the face of an arbitrary existence, we have no other appeal. "In sincerity," he writes, "shapes appear concomitants of word combinations, precursors of (if there is continuance) completed sound or structure, melody or form" (Zukofsky, 1981, 12). The poet can achieve music or an approach to music—form so perfect that it begins to sing—but there is always something more.

The perfections of "Mantis" are conventional and arbitrary, or, at least, almost so. Three lines hang over at the end of the sestina, out of place, like a mantis in a subway station. It is a sestina and a twelfth, but, Zukofsky tells us in "An Interpretation," "The ungainliness / of the creature needs stating." In sincerity, the subject finds its form and, caught up in "the battle of diverse thoughts," exceeds it by three lines, then carries over into another poem that is almost six pages long. Zukofsky recognizes that a mantis in the subway station—even something this insignificant—presents an insoluable problem. Lacking the advantages of symbolism, as a technique for universalizing the particular, he can only bring together "the simultaneous / the diaphanous, historical together in one head."

In 1930, reviewing the poetry of the previous decade, Zukofsky speaks of "Joyce's sense of simultaneity" and its opposite in "the work of Gertrude Stein in its analytical aspects." Although he does not explicitly develop this distinction, it informs the entire essay, and he manages to clarify his point a good deal by contrasting the "modern" situation to the one which it replaces: "The diction which is dead today is that of poets who, as someone said of Matthew Arnold, have put on the singing robes to lose them-

selves in the universal" (Zukofsky, 1981, 147). Joyce is always in danger of suffering precisely that loss by translating the contingency of person into aesthetic form, the timeless being of perfect simultaneity. Stein, however, recognizes that the logical structure of the medium, which can be demonstrated adequately by the old grammar exercise of diagramming sentences, reveals nothing about its content. It is by analysis and the entertainment of the interstices, where images, things, worlds, and persons come apart, that we have knowledge of living at all.

Writing of William Carlos Williams, who seemed to him the central figure of the 1920s, Zukofsky says, "The aesthetics of his material is a living one, a continual beginning, a vision amid pressure" (Zukofsky, 1981, 148). To allow vision to arise from complex interactions in space, as they bear on the space of the poem, where desire, feeling, fact, form, and language enact their destinies of coincidence and conflict, was to experience fully the exhilaration which the "modern" offered. Williams's poetry, as Zukofsky reads it, is a poetry without presuppositions, a poetry of pure inquiry. Everything bears on everything else. To keep pace with a reality that is not mediated by linear conventions requires an eye that can follow the magician's impossibly quick hands. Nothing can be stopped or isolated or framed. Study and meditation find no still object. After quoting some short passages from Williams's *The Great American Novel*, Zukofsky writes, "Such things are seen and recorded not as notes, but as finished, swiftly trained deliberations of the mind between leaps to other work or the multiplicity of living scenes" (Zukofsky, 1981, 148). This discipline, which does not exaggerate the significance of any phase of the process by which sight passes to vision, is the sole guarantee against life's forming to patterns of unshakeable habit. It requires the quickness of living to manifest a living person; otherwise things settle down into repetition and tiresome justification of the status quo.

Zukofsky's commitment is to the clarity of the process. He objects to the exaggeration of the formal in Wallace Stevens: "The poetic emotion is lacking," he says, "and the product is 'intellectual' rhetoric: blurred disjointed tangibilities." In Hart Crane, he objects to the exaggerated value placed on the ecstatic moment and the inevitable divorce from the process in which the ecstasy finds its relation to other experience: "The result is an aura—a doubtful, subtle exhalation—a haze" (Zukofsky, 1981, 139). On the

other hand, he says of Pound, Eliot, Williams, Moore, and cummings: "The things these poets deal with are of this world and time, but they are 'modern' only because their words are energies which make for meaning" (Zukofsky, 1981, 147).

Ludwig Wittgenstein spoke for his generation in announcing that the most intimate and profound knowledge, which is to say, the grounds for knowledge as such, could not be spoken. Zukofsky notes, "In Hebrew the word for word is also the word for thing. The roots and stems of grammar are foresights and hindsights so entangled that traditions and chronologies mean little if not an acceptance, a love of certain, living beings for words as seen things" (Zukofsky, 1987, 104). In *All*, he puts the word for *thing*, not the word for *word*, at the origin of his work. The book ends with the section "After I's," a term that can be taken in one sense of the complex pun as a translation of "metaphysics." In section five of "The Old Poet Moves to a New Apartment 14 Times," Zukofsky offers some measure of how far he has come:

> After all—
> *nothing*
> interests me
> when it is full of being.

The volume ends, however, with a frank admission that it is not, in fact, all:

> There is
> a heart
> has no
> complaint
> better a-
> part
> than
> faint
> so the
> faintest
> part of
> it
> has no
> complaint
> a
> part.
> (Zukofsky, 1971, 292)

"A," Bottom: On Shakespeare, and *Catullus* are the ABC of an order that arises from the fragmented whole. Although Zukofsky was never keen on the term *objectivism,* terms closely related to it—object, objectivity, and especially, objective, in all of its senses—are clearly important in his work. Perhaps I can use it rhetorically, as a way to establish grounds for discussion, without committing myself to more than one specific point.

Treated promiscuously, as such terms usually are, objectivism is a reincarnation of imagism. The image, after all, is an object; it may be objective; perhaps it brings something to focus, like an optical objective; it may have an aim. But this tells us little. It is in the nature of the image to have a quality of object-ness, but also, as it is treated in the traditions of humanistic criticism, the image also has a quality of *abjectness*. It is *for* the speaking subject, servile to his or her whim of emotion or thought, violated and even despised. Traditional criticism condones a rapacious use of the object and the objective. It treats all that presents itself to eye or ear precisely as the cognate economics treat other resources such as fossil fuel. In Zukofsky's poetry, man, the soul, and the psyche, those entities in the name of which the rapacity is justified, have no special privilege: they are objects, objectives, words. Zukofsky writes: "*Impossible* to communicate anything but particulars—historic and contemporary—things, human beings as things their instrumentalities of capillaries and veins binding up and bound up with events and contingencies" (Zukofsky, 1981, 16).

Jargon and the Displacement of the Symbolic Person

Zukofsky was raised in precisely the kind of tradition Pound and Eliot longed for. If the Judaism of New York's lower east side was provincial in comparison to the European tradition of high culture, it did not need to be patched together like a crazy quilt to give it coherence. "*A*"–4 opens with a short lyric, typical of the lyrics that appear in "55 Poems." The voice of Zukofsky's community responds in these terms:

> Wherever we put our hats is our home
> Our aged heads are our homes,
> Eyes wink to their own phosphorescence,
> No feast lights of Venice or The Last Supper light
> our beards familiar; His
> Stars of Deuteronomy are with us,

Always with us,
We had a speech, our children have
evolved a jargon.
(Zukofsky, 1978, 12)

At the time his contemporaries were in a desperate search for the *logos* or mythos of history (the Speech), Zukofsky was under a contradictory impulse, to explore the jargon as a way beyond the repetitious ritual reenactment of the forms of eternity. His work neither refers to nor embodies an arcane structure as its source of meaning or as the guarantee of its ontological claim. He writes, "The poet wonders why so many today have raised up the word 'myth,' finding the lack of so-called 'myths,' in our time a crisis the poet must overcome or die from, as it were, having become too radioactive, when instead a case can be made out for the poet giving some of his life to use of the words *the* and *a* both of which are weighted with as much epos and historical destiny as one man can perhaps resolve" (Zukofsky, 1981, 10). In the interplay of the definite and the indefinite—the poem beginning "the" and a poem beginning "a"—we are in the condition of history as present, history as destiny, rather than as a transcendental order.

Zukofsky assumes that we share a content that we realize in individual forms or in fragmentary insights. In Zukofsky's canon, "*A*," *Bottom*, and *Catullus* are explorations of the jargon, personal forms, as tightly constructed as Cartesian geometry. They do not, however, presume a coherent background in *All*. The eternal archetypes, by which the jargon might be redeemed, cannot be coherently manifested; they are the silences that pulse and that can only be tacitly counted. Measure enters speech, manifesting the sources of value, only as the poet gives overt attention to something else, say, the innumerable ways the character *A* appears in writing, vision, and thought. The structure is, therefore, contingent rather than necessary. Public reality exists in the intervals that create multiplicity. Zukofsky has a kabbalistic sense of the letters of the alphabet as the constituents of public reality. The larger part of *Bottom* is an alphabet book. As the objective moves from the phonemes to the word with its compact history, its particular combinations of radical elements, to the phrase, and on to the stanza and the total form of the poem, it moves from the public and shared to private integrity of the individual person.

It is, I believe, Zukofsky's sense of the person as contingent, as

lacking identity with his or her objects, as gloriously and necessarily inexplicable, that many readers find unnerving. It is an almost intolerable thought to some: it removes the basis for all rationalization, those rationalizations by which we defend our privileges and explain our discontents. It leaves only what we *do* as a record that we exist at all.

In response to the question, "what specifically is good poetry?" Zukofsky says, "It is precise information on existence out of which it grew." An image makes a historical claim, it is a poem's stake in the world and its guarantee of producing consequences in the world. And, he goes on to say, "good poetry . . . is . . . information of its own existence . . . , the movement (and tone) of words" (Zukofsky, 1981, 20). Against the temporality of image, he poses not mythos or *logos* but language and especially the physical production of language, its closeness to the voice and the voice's body, the lips, tongue, lungs of speech. In an interview, he speaks of the word as "a physiological thing." Poetry has to do with the organism in which people have their daily living, and the human form, despite the transience of given bodies, is remarkably constant over time. It is this fact that allows even the person "who does not know Greek to listen and get something out of the poetry of Homer: to 'tune in' to the human tradition, to its voice which has developed among the sounds of natural things, and thus escape the confines of time and place, as one hardly ever escapes them in studying Homer's grammar" (Zukofsky, 1981, 20). The interaction of image and sound, finally, allows a poetry of precise inquiry: that is, experience can be measured. It is not thought, but thought is frequently hovering around. There is, Zukofsky says, an "interplay of concepts."

We have not had a Hegel to do for history of poetry what Hegel himself did for the history of philosophy, but he would have a directly parallel story to tell: how from Sappho and Archilochus to Mallarmé the abstract categories were more and more adequately articulated until they became absolute. Mallarmé writes, "all earthly existence must ultimately be contained in a book," and he goes on to say:

> What, then, will the work itself be? I answer: a hymn, all harmony and joy; an immaculate grouping of universal relationships come together for some miraculous and glittering occasion.

> Man's duty is to observe with the eyes of the divinity; for if his connection with that divinity is to be made clear, it can be expressed only by the pages of the open book in front of him. (Mallarmé, 1982, 80)

Mallarmé had made the advance on Archilochus that Hegel had made on Plato. He images a world relieved of contingency, fully and finally mediated. The finite human is to be replaced by the infinite book.

In a remarkable essay on *"A"*–19, Kenneth Cox shows in detail how Zukofsky uses Mallarmé, translating him, mistranslating him, and taking cues from him for the creation of his own poem. With great care, he shows how Zukofsky turns Mallarmé's words to his own very different necessities. He concludes: "To wish to abolish chance, as Mallarmé did, is to wish not to have been born. For a European educated in the tragic sense of life the wish is reasonable enough. Suicide is second best, the annihilation of life in art can serve as a substitute. For Zukofsky, an American of Jewish immigrant parentage, chance is blessed. His meliorism is powered by the sentimental, the human response to death" (Cox, 1973, 11).

Zukofsky's practice is not a simple inversion of Mallarmé's, not a "Marxist" attempt to stand Mallarmé on his head: the similarities and differences are not so symmetrical. Zukofsky, rather, moves away from the common language in the opposite direction, not toward the absolute, but toward the structure of what is possible, not toward abstract unity, but toward the instituting concrete multiplicity. Rather than inverting the Hegelian-Mallarméan dialectic, Zukofsky empties it out, forces it to encounter not merely the material world, the material language, but also the array of conditions that concretely make them possible.

Since Whitman or since Poe (if we take Williams's reading of him, rather than Baudelaire's), American poetry has been preparing its escape from the inevitable nihilism of the tragic sense of life. Williams, arguing of Poe that "it was a beginning he has in mind, a juvenescent *local* literature," quotes, with approval, a passage in which Poe says, "The highest order of the imaginative intellect is always preeminently the mathematical." (Williams, 1956, 217) And Williams also praises Poe's unwillingess to concede the necessity for any prop to his logical constructions, "save the locality upon which its originality rested."

Zukofsky is the poet Poe promised. The distance between Zukofsky and Mallarmé can be measure in their different relationships to Poe. Mallarmé made the inevitable European assumption that Poe's mathematics required the Pythagorean mystification of number and measure, which has haunted philosophy almost since its beginning. By contrast, the numerological concerns in "*A*" are contingent constructions; they do not require a system beyond what is established by the text itself. In "*A*"–22 and "*A*"–23, for example, both of which comprise one thousand lines, are the millennial books of the poem, maps of a purely contingent and organic paradise:

> what avails the life to
> leaf to flower to fruit
> the seasons colors a ripening
> work their detail—the perennial
> invariance won't hollow it, no
> averaging makes their tones—Paradise.
> (Zukofsky, 1978, 509)

Paradise offers the creative freedom of the contingent particular, not the security of infinite vision of the absolute.

The structures of "*A*"–22 and "*A*"–23 are almost identical: both consist of five-word lines, which range from five to sixteen or so syllables per line. "*A*"–22 begins with a three line motto, which is followed by a section of twenty five-line stanzas, the last of which is short-counted by three lines. If we assume that the three line motto is displaced from the middle section and that the last stanza is to be considered incomplete, the form of the book can be said to be one thousand lines, divided into sections of one hundred, eight hundred, and one hundred lines each. This is the case in "*A*"–23: an opening section of twenty five-line stanzas, a continuous section of eight hundred lines, and a final continuous section of one hundred lines.

These were the last sections of "*A*" to be written. "*A*"–22 was begun in 1970, two years after the completion of "*A*"–24, and "*A*"–23 was begun in 1973. They are both "Too full for talk" (Zukofsky, 1978, 526) as Zukofsky says in a phrase that returns here from "*A*"–11. No one ever talked like this. The poems are not imitations of speech, but they are written to be spoken, directly preparatory for a performance of "*A*"–24: that is, if the lines were

any fuller they would need more than one voice to speak them. All of the myriad possibilities that are open at this point in the poem vie for Zukofsky's attention in each choice. The decisions by which the poem is carried forward are still made in the smallest intervals, word by word and syllable by syllable. The rightness of any particular decision gestures toward the less determinant but possible larger structures of the poem. "*A*" is possibly a fugue. Like some other long twentieth-century poems, it is possibly an analogue to the *Commedia*. As a domestic poem in twenty-four books, it is possibly an analogue to the *Odyssey*. There are also suggestions of less expressive forms. The rigor of forms is all in the "thought that penetrates the smallest joints of words." As that thought informs larger shapes the process of the poem moves from the common and the absolute toward the private and the contingent. This is an inevitable condition of the constructions of finite beings. The other possibilities of form are based on some kind of mirror trick.

"*A*"–22 is Zukofsky's summation: "Others letters a sum owed" (Zukofsky, 1978, 508). It begins, punning on "letters by post" and "letters of the alphabet," "owed" and "ode," a summation. *The Tempest* is obviously much on his mind throughout the book, but he does not even consider renouncing his art. The quotation with which it ends has to do with the storm, not the peace that follows:

> in my mind
> a dream of named history
> content with still-vexed Bermoothes.
> (Zukofsky, 1978, 535).

In fact, he has no reason to renounce his art: the millennium arrives without the intensity of messianic magic. Zukofsky is neither a magician nor a hero. The "art" is all play. The problem is not to try to do too much oneself:

> the mind
> does not light of itself;
> stripped to the meditated object
> eyes, lights, out there here
> itself all ever, increate, seedless—
> yoke fruits other, farming watercourse
> brimming obstacle running by itself.
> (Zukofsky, 1978, 523)

The sense of time here—"brimming obstacle running by itself"—is primordial. It is neither an accretion of ritual repetitions nor abstractly metaphysical. The revelation, which turns out to be adequate, is that there is no revelation: things are as they seemed–despite the whole of the Western tradition trying to demonstrate otherwise.

"*A*"–23 is "An unforeseen delight" (Zukofsky, 1978, 536), in one sense superfluous, but the "deep need" (Zukofsky, 1978,126) from which "*A*" issues is personal—not universal or absolute—so it is superfluous as anyone's life is. It is not grounded in a compulsion to repeat, nor obsessed with ritual reliving of archetypal forms. The design of "*A*" is not deductive but accretional:

> a foreseen curve where many
> loci would dispose and *ands*
> compound creature and creature together.
> (Zukofsky, 1978, 536)

It can, then, continue, "and" by "and." In "*A*"–22, Zukofsky had written:

> History's best emptied of names;
> impertinence met on the ways.
> (Zukofsky, 1978, 511)

The book ends, however, admitting that "a dream of named history" remains. We can assume, I believe, that coming to the end of his epic of the indefinite article, Zukofsky is thinking of Pound's *Cantos*, the epic of names. The whole of the work that the translation of Catullus initiated—a literal "breathing with the tradition"—is still to be done:

> the saving history
> not to deny the gifts
> of time where those who
> never met together may
> this other time sound *one*.
> (Zukofsky, 1978, 539)

"*A*"–23 is a celebration of, rather than a realization of, this possibility. The mythological, which Zukofsky scrupulously avoids in the articulation of his personal order, can now appear. Roughly a quarter of the long middle section is given over to a paraphrase of the *Gilgamesh*. In Zukofsky's redaction, however, it becomes a comedy: Gilgamesh receives the plant, "Alive-Old-Stay-Young," but the original episode in which it is again lost is suppressed.

There are also recountings of the story of Hermes, the Babylonian captivity, and other mythological material—still, for the most part, without names. The myths appear as confirmations of neither Zukofsky's belief nor the poem's form. It is a luxury the poem affords.

It is indicative of the thoroughness of Zukofsky's design that the poem should come to its conclusion in his seventieth year—precisely at the end of the biblically promised span. The closing of the poem is pervaded with a sense of exile, but to live in exile is, after all, to escape from history: that is both its advantages and its disadvantage. One's destiny in exile is personal and cosmic, but not world historical, the course of empire is no longer the concern as it was for Whitman and Pound. The achieved person has no place but the cosmos. In concluding "*A*", Zukofsky proposes the project for the next decade, the naming of eighty flowers (Zukofsky, 1978, 562). His choice, that is, is to remain in exile.

If, as Freud tells us, "all organic instincts are conservative, are acquired historically, and tend towards the restoration of an earlier state of things," then exile is an extraordinary circumstance (especially for a nation of exiles), because it represents, to take the linguistic terms in which Jacques Lacan restates Freud's insight, a break in "the signifying chain." It is then possible perhaps to escape the obsessive repetition of the forms of things.

I do not want to make it appear that the problems are solved. We are still only getting ready to read "*A*." As I have put it here, I am still caught in my own knowing. We do not know how to read language that is "too full for talk." The conventions of literate syntax serve primarily to transcribe speech. Zukofsky as an old man, however-recalling one of those passages with which I began—rewrites palimpsest. Whatever pleasures "*A*" affords the ear, it is not a monologue overheard. We must imagine ourselves, not eavesdropping, but looking over the shoulder of an old man at a writing desk: never scraping the palimpsest clean, he takes out words, adds words, thickening the linguistic environment, allowing the words themselves to operate syntactically in the local surroundings, according to their own, often multiple valences.

To take a simple example:

> Seventy plants, thirty
> trees cite the way why
> argue it, those wise don't

inflict your living this place
simple, quiet, kind.
(Zukofsky, 1978, 516)

Putting aside some difficult questions of content, several practical questions about how to perform the passage present themselves. Ordinarily we would expect a stop of some kind after "way," and then perhaps a question mark where Zukofsky gives us a comma. That would make good sense also of the second half of the third line, but it would leave the remainder of the passage dark, to say nothing of the fact that he gives neither the stop nor the question mark. The way to read the passage, I believe, is one words at a time, keeping an eye to what happens in both directions. The subtext, then, rather than being a definitive deep structure, might read something like this:

Seventy plants, thirty
trees cite the way
trees cite the way why
cite the way
cite the way why
cite the way
why argue it
the way why
why argue
why argue it
those wise don't
those wise don't inflict
don't inflict your living
your living this place
simple, quiet, kind.

Taken this way—that is, destroying the careful movement of the passage in order to hear out the action as the sentence transforms itself, moving from beginning to end—we might think that the kinship of "*A*" with the work of Gertrude Stein is more than incidental. She is, after all, mentioned in the poem almost as frequently as Pound (she three times; he four). For Zukofsky, as for Williams, her work seemed to open previously unexplored possibilities. The truth we seek here, if it is a truth, stands at the boundary between the sayable and the unsayable. In the drive to establish any individual person, we find incommensurable entities. In "The

Old Poet Moves to a new Apartment 14 times," Zukofsky speaks of himself as "'The old radical' / or surd" (Zukofsky, 1971, 224).

We necessarily begin to believe that whatever unity life or language may exhibit, it is not neatly round. It cannot be be composed but only pursued. "*A*," Gertrude Stein's *How to Write*, Williams's *Kora in Hell*, and the growing body of writing that derives from them give valuable testimony that the whole of language is pervaded by these self-obstructing patterns. They extend from the broadest structures of language all the way down to is smallest operations: the fundamental operations of giving names and making simple propositions manifest a realm in which the necessities are "musical" rather than rational. I'll leave my term here—"musical"—more or less unjustified. Perhaps I should only say that the necessities of music involve discord as much as concord. After Schönberg and Cage, we begin to see that the necessities of music making have more to do with how things are given than with how we are required to compose them. We name names and things begin to happen, arbitrarily or randomly. We might, like Cage, let things happen and find that sufficient. Zukofsky's remarkable art is to participate fully in what *might have been* random events, not to interfere with them but to *realize* them fully. It is this commitment to the responsible act that is political basis of Zukofsky's art.

Despite what we have been told about naming by Emerson, Fenollosa, Pound, Wittgenstein, de Saussure, Benjamin, and others, we continue in practice, for the most part, to think of all names as primitive pointers. Although ostensive definition plays an important role in learning language, it is not itself a simple process, and it is only one of several processes. Whether we assume with Emerson that names develop through metaphorization or with de Saussure that names appear as recognitions of sheer difference, naming obviously involves a context of language in which the new name represents a disruption. Wittgenstein calls the context "a form of life." As long as the conventions of a form of life are widely shared, the mechanisms of communication can be unconscious. Language seems natural and its logic necessary. It is possible to propose a metaphysic, a social order, a psychology. The formulae are tirelessly repeated, enacting the conventions in every sphere of life. The whole of life becomes a ritual celebration of the social triumph of the sentence (as in grammar and in law) over the dis-

ruptive "proper" name. To complete a sentence as a completed thought is to participate in a form that requires an ultimate completeness of thought. To say anything is merely to complete a link in the signifying chain, to make comments that are "most often already written down elsewhere," to reveal a form that has been agreed upon as preexistent.

At times, however, and perhaps most dramatically in our own time, speakers and writers find that their choices are spectacularly limited. They are increasingly alienated in the very structure of their language as such. The grand distinction, between self and other, subject and object, the inherent metaphysic which institutes language, goes dull. The confidence in the soul, where subject and object can be compared, disappears, and language no longer serves, to use Zukofsky's term, to "sound" (i.e. in the sense of a tuning fork) the mind of the individuals.

In such times, criticism is not enough. To be told that we are the fools of metaphysics tells us nothing; indeed that is one thing we know for sure. What we need is a concretely constructed language, which requires no necessity other than what it exhibits in itself. Zukofsky writes:

opinion's throbbing ear aimless eye,
serve ghosts—remain loyal, living
faithful glances, magic and medicine.
For *now* it is: *not*
is the same and can
be thought and thought is
now. Truth way all one
where it begins and shall
come back again thru traceless
now the moving body's sphere.
(Zukofsky, 1978, 517)

We are accustomed to reading poetry as listening to a ghost. Our eyes follow the line of words, but, in our mind's eye, we see airy sprites rise and speak, act, witness to a world we do not see. In "*A*," we are asked to read words—to perform, to fill the space where word have their full-bodied and disruptive existence and where the moving human body finds its proper sphere. The symbolic person is displaced by the physical person.

A *thinking*, unfortunately, cannot take us into the depths. A performance, a dance, profoundest action is required. Wittgenstein

observes that the profound aspects of language belong to the Person, not to language, not to the symbolism of body. The sense of profundity, he notes, arises "through a misinterpretation of our forms of language. . . . They are deep disquietudes: their roots are as deep in us as the forms of our language and their significance is as great as the importance of our language" (Wittgenstein, 1953, 47). Depth is a fact of a person, the singularity of a person, and the singularity of a person's local world, arising and interfering with rule-based language. Language and the thinking that the person supports are inherently matters of surfaces, where measure is possible, where tangencies and couplings which make community possible appear. One need not glorify irrationality to recognize that the resolution to the problem of nihilism, the catastrophe of thought, is not thought. Corrosion of the mind and derangement of the senses, to recall the nineteenth-century formulae—Baudelaire's and Rimbaud's respectively—are not necessary. Irrationality is rife; we need only to recognize it for what it is. If there is knowledge, it is available to all; that is what we mean by knowledge.

CHAPTER 5

Symbolic Symbols

Wheelers and Dealers
The Theory of Games

The world is becoming invisible. Rainer Maria Rilke.

We might have foreseen it,
The triumph of calculation;
The atom calculated
By its chances.
What can I know? What shall I do?
What may I hope?
And what are my chances?

We ought to be able to survive it.
Out of the unknown activities
Of unknown agents
Mathematical numbers emerge. The last
Invisible world
Of the buyers, the sellers, the planners—

—George Oppen

SOCIETY

This essay on symbols stands in the place of an essay that cannot now be written, an essay on symbolic society. We have only the symbols of symbolic society in which to describe it. The media that regulate our lives can be described only in terms of themselves. We cannot isolate our language from its content. Now is that time of recursive turning, at once exciting and terrifying. If one should invent a new medium for the purpose of describing the symbols, it too would have to describe itself, *ad infinitum*. The symbolic self-representations that the culture has struggled to produce—and valued in part for the struggle—are now readily available, storable, transmittable. The symbolic machine that has been constituted, almost at the moment of its stunning completion, however, proves

to be unexpectedly fragile, like a skin the species in its evolution has sloughed off. The next teleological stage now reveals itself not as self-representation but as self-replacement. In the 1980s the cyberpunk vision appeared as an awful and fascinating surprise. It struggles with the inappropriate conventions of the nineteenth-century novel, on the one hand, and a seriously eroded literacy that makes popular literary art a near impossibility, on the other. When William Gibson writes of Case, the information pirate of *Neuromancer,* however, the resonant sense of reality is undeniable: "He'd operated on an almost permanent adrenalin high, a byproduct of youth and proficiency, jacked into a custom cyberspace deck that projected his disembodied consciousness into the consensual hallucination that was the matrix" (Gibson, 1984, 5).

The common knowledge is strange—that from which we are estranged and have been at least since the time of Heraclitus, who noted, "We are estranged from that which is most *familiar.*" The Greeks had confused themselves, not with their words, which are common, but with the mechanism of Language. Having discovered the logic of grammar, it appeared to them that to say anything required saying *everything,* to generate the information matrix.

The time and space that we think about are logical; the time and space that we occupy are not. The one is generated by formal systems; the other, by *attention.* Formal systems may serve to describe actual time and space so accurately only because of the cruel discipline of formality to which we have submitted ourselves.

Formal Systems

The symbols are meaningful neither because they correspond to objects in the nonsymbolic world nor because they are coherent with themselves; that is, neither of the two great epistemological theories are applicable. The symbolic systems that have been substituted for Nature, History, and Person turn back on themselves to discover they have symbols that must be interpreted in terms of themselves as their only content. If the range of possibilities is understood to be unlimited, the interpretation has a dialectical flavor. Although it promises progress and seems in a sense to progress, the interpretive mechanism produces perpetually changing combinations that accumulate but do not in fact progress toward the absolute, which is infinitely and desperately distant. The dis-

course of criticism has this quality of passage from an originless past to a teleologically inconclusive future. If the range of possibilities is empirically surveyable and carefully disciplined, however, the interpretive mechanisms may produce statistical results that are usefully reliable for certain well defined purposes. I delineate something of the formal mechanism of this world, not its formless product.

The idea of a formal calculus, which first appeared in Descartes, is now fully generalized. The Cartesian formal system consisted of space-points, arrayed on linear coordinates and described by algebraic equations. Descartes proposed to model the world with this limited formalism. Now we have unlimited formalism and formal systems of formals systems—cybernetics, category theory.

A formal system consists of a set of tokens, a set of rules by which the tokens may be legally moved and recombined, and a starting position. The tokens may be anything, so long as they are limited in number and all of the tokens of each type are interchangeable: marks, atoms, phonemes, objects in computer programs, checkers, whatever. An input invokes a rule by which tokens are moved from their starting positions into other lawful positions and combinations. A game of checkers, for instance, is a formal system of sufficient complexity to make competition in manipulating the tokens amusing. There are tokens of two kinds, distinguished by color, a set of rules describing legal moves, and a starting position defined by a playing board. Each player is responsible for tokens of a given color. If the rules are applied, eventually tokens of only one color will remain, and the player responsible for that color is declared the winner.

Formal systems are, in effect, abstract machines: a given input produces a predictable output. They are pure conceptions that may be realized in plastic and pasteboard, as in a checker game, or in silicon, meat, or other suitable material. Their power as tools is awesome. We can constitute entire worlds as formal systems and inhabit them, use them, evolve in them and with them. John Haugeland writes:

> The rules of standard logical and mathematical systems, relative to their standard interpretations, are all truth-preserving; and, of course, the tokens in their starting positions (i.e. their axioms) are all true. Therefore, any token in any legal position of one of

> these systems is guaranteed also to be true! That is why we know in advance that their theorems (which are defined in purely syntactical/formal terms) are all *true* (which is a semantic property). Or, what comes to the same thing, in order to establish the semantic truth of a token in such a system, it suffices merely to prove it formally (play the game). This is how the "two" lives of the tokens [as tokens in a syntax, on the one hand, and tokens in a semantic, on the other] get together; and it is the basic idea behind the formalization of modern logic and mathematics. In effect, given an interpreted formal system with true axioms and truth-preserving rules, if you take care of the syntax, *the semantics will take care of itself.* (Haugeland, 1981, 23)

The simple two-valued semantics of logical and mathematical systems, where true or false is the only possible semantic content, take care of themselves.

Formal systems have one serious liability: if there are too many tokens or the rules are too complex, the number of possible legal combinations proliferate wildly. The formal situation simply gets out of hand for the programmer and for the finite machine on which the program must run. The combinatorial explosion is well illustrated by Raymond Queneau's sonnet sequence, *Cent mille milliards de poèmes* (Queneau, 1961), which is a simply constituted formal system of astounding immensity. The sequence consists of ten sonnets and an algorithm for recombining the 140 lines to produce 10^{14} or 100 trillion poems. Queneau estimates that it would take more than a million centuries to read his poems. If formal systems are to be useful, they must be extremely limited, or conventional devices for dealing with the vast quantities must be discovered.

The trillionic complexity of simple combinatories such as Queneau's is at least countable. As the poststructuralists have correctly noted, the rules which constitute natural language are unlimited. The possible combinations in natural languages are, therefore, uncountably vast, not just because of lack of time, but in principle. A certain strain of poststructuralist thought finds intimations of a vitality or life-force, of a will or eros, in the symbolic machine conceived as a totality that manifests itself in infinitely regressive texts: the medium generates itself out of its own desire for the infinitely deferred absoluteness of closure. Text is extended a kind of animistic reverence. To be sure, a hylozoistic thrill may be

occasioned for certain kinds of intellectuals by the realization that interpretation is without end: the headiness is sufficient to underwrite—at least casually—a kind of romantic paganism. Some theologians have even attempted to claim this experience on behalf of Christianity. This thrill however arises from a mere thought that is posed as emotion—a derivative or aesthetic feeling which comes from the encounter with, and failure of, formal systems. It does produce a dynamism that seems a motive of action, but it is self-cancelling. It is specious emotion, intensity in the direction of passivity, because its intensity is driven toward an impossible, apocalyptic formality.

By contrast, the emotional grounds for action does not require interpretation, or, requiring action, gesture, shout, it is its own interpretation. The given is *breath*, not the words it thinks to form on the breath as it creates itself. The efficacious sentence is a modulation of breath, not a logical object. The vector of the common is toward the complexity of individuals, who comprehend totality among their components.

The inertia of progressivist formalism must be recognized: on the social level, it is immense; its statistical coherence is deathly. We use the world and ourselves as the world's creatures on behalf of thought, formal systems—grammars and logics.

There is, however, a profound alternative: any one of us can *take* thought and use it. Thought, not the world on which the human adventure depends, is for use. Self-exploitation is not required. We are in position to use the abstract structures on behalf of a world of value, a human world of concrete order. *We are obligated by the world, not by thought.*

STATISTICAL REALITY

Considering the most dramatic intellectual developments of the seventeenth century, the appearance of mathematical analysis and the complex institutions that its implementation as science required, the break with the medieval tradition seems clean. Such was the experience of many at the time—"The new philosophy calls all in doubt," in John Donne's words—and that presumed break has subsequently provided a common landmark for our historical orientation. Increasingly, however, scholarship demonstrates that the scientific "revolution" consisted not of a sudden

transformation, as it had seemed, but of the appearance of a few new techniques that led to the gradual transformation of traditional modes of thought. As Ian Hacking notes in *The Emergence of Probability: A Philosophical Study of Early Ideas about Probability, Induction, and Statistical Inference,* the doctrine of signatures, for example, that curious, central doctrine of medieval science, was not displaced but transformed. Hacking shows that it is only a step from the concept of the 'signature', which stood behind the vast interlocking pattern of similitudes that medieval science found everywhere in nature, to the concepts of 'evidence' and 'inductive probability' (Hacking, 1975, 44–45). What is retained from the magical legacy of the traditional science is a sense of the reliable relationship between an observed past and an unobserved future.

Propositions about the conjunctions of past and future or cause and effect are always tenuous and, as Hume shows, can never be asserted with the confidence of a mathematical proof. Some signs of causal relation are more reliable than others, however, and in the seventeenth century a mathematical theory of probabilities that describes these regularities began to appear. The first practical applications for the new mathematics, apart from its obvious uses in gambling, were actuarial. In attempts to keep track of the plagues, the city officials of London had collected considerable statistical information, beginning in 1603, and, by the middle of the seventeenth century, statistics were being kept in many parts of Europe. Basing their studies on this material, John Graunt and William Petty established the fundamentals of what Graunt called "political arithmetic." Their work must be reckoned as the beginnings of statistical social science. With the new techniques, it was possible to put annuity and life insurance schemes on sound economic bases for the first time and, a little more than a century later, with Thomas Malthus, to argue political policy in statistical terms (Hacking, 1975, 102–10).

If we were to emphasize our continuity with the seventeenth century, we could say that Leibniz and Pascal (who were both deeply involved in the development of the theory and methods of probability), rather than Descartes, were the most significant instigators of modernity. Norbert Wiener chooses Leibniz as the "patron saint for cybernetics" because "the *calculus ratiocinator* of Leibniz contains the germs of the *machina ratiocinatrix,* the

reasoning machine" (Wiener, 1965, 12). In *The Monadology,* Leibniz writes: "each organic body of a living being is a kind of divine machine or natural automaton which infinitely surpasses all artificial automatons. For a machine made by human artifice is not a machine in each of its parts. . . . But the machine of nature, namely living organisms, are still machines even in their smallest parts *ad infinitum*. It is this that constitutes the difference between nature and artifice, that is between divine art and ours" (Leibniz, 1991, 25). Leibniz had not realized that the divine secret was recursion rather than infinite regression; otherwise, he was very close to the insight that is at the origin of artificial intelligence research.

The specific problem that Leibniz faced, but could not fully articulate, became definable and familiar in this century. The distinction between the identity *I am this one that is one* and the identity *I am this all that is all* is conventional, rather than quantitative. We do not know how *large* one is. We speak of one person or one species or one cosmos. That is, we have a problem of measurement: *one* is of no particular size. And, though Leibniz did not fully develop the mathematics of it, his monadology consciously embraces the contradiction: a monad is both an atomic entity and a cosmos, an individual and everything. He notes precisely, however, the limits of representation. There is, he says, an inevitable confusion or blurring of the image as it reaches toward infinity.

Although Leibniz did not use the term, his monad is the statistical subject. In contrast to the Cartesian subject, it is able to define a local region clearly and distinctly, but with respect to the whole, its picture is necessarily fuzzy and its apprehension of itself is based on certain zones of statistically reliable frequencies. The monad, and not the *cogito,* is the basis of technology. It embodies the equivocation which was inherent in the infinitesimal calculus. Inevitably in applied mathematics, there is what Chister Hennix calls "the sleaze factor." In its first forms, as it was developed by Newton and Leibniz, the calculus required an undisguised double shuffle: it dealt with infinitely small quantities, which sometimes counted as significant and sometimes did not. In the calculus texts of the early eighteenth century, the first postulate declared, in effect, that "a differential can increase a quantity without increasing it" (Bos, 1980, 87). The relevant metaphysical question involved the existence of infinitely small quantities that appear as a function

approaches a limit. Leibniz, consistently the most scrupulous of the great seventeenth-century thinkers, doubted the existence of such quantities and took a formalistic stance, arguing that, although the symbols of the equations in themselves are meaningless, their use allows one to determine important results.

Bishop Berkeley made a pointed note of the curious logic of the mathematics on which Newtonian physics relied. In "The Analyst; or a Discourse Addressed to an Infidel Mathematician Wherein It Is Examined Whether the Object, Principles, and Inferences of the Modern Analysis are More Distinctly Conceived, or More Evidently Deduced, than Religious Mysteries and Points of Faith" (1734), Berkeley asks, "And what are these Fluxions [the infinitesimal quantities]? The Velocities of evanescent Increments? And what are these evanescent increments. They are neither finite Quantities, nor Quantities infinitely small nor yet nothing. May we not call them the Ghosts of departed Quantities?" (Berkeley, 1957, 173).

In time, mathematicians began to emphasize not the variables, which change in infinitely small increments, but the functions that determine them, thus, at least partially hiding Berkeley's "Ghosts of departed Quantities" from theoretical view. Even as late as 1904, however, Gottlob Frege writes: "It is even now not beyond all doubt what the word 'function' stands for in Analysis, although it has been in continual use for a long time. In definitions, we find two expressions constantly recurring, sometimes in combination and sometimes separately: 'mathematical expression' and 'variable'" (Frege, 1977, 107). It requires little mathematical sophistication to appreciate the problem here. If one emphasizes the abstract nature of the mathematical expression, the relationship appears as atemporal: for every y there is a corresponding x. Nothing about this relationship is variable. It is true of all y's and all x's at all times and places. However, in scientific applications, one is likely to be interested in the variable relationship between a particular y and a particular x. What, for example, is the trajectory of a cannon ball if one varies the charge? and so forth. Some fancy metaphysical footwork is involved in establishing simultaneous consideration of universality and variability.

The reconciliation between the ideal subject that can cognize the abstract relationship X is P and a world in which X is more or

less *P* requires a mathematical theory of statistical stability. *X* is *P* not in relation to an absolute context but in relation to a presupposed and definable environment: *X* is *P* with respect to *R*. Statistical knowledge is expressed as a ratio between enumerated possibilities and actual occurrences: *X* is *P*, *Q*, *R*, *S*, or *T* and *X* is *P*. If the *possibilities* cannot be specified, then neither the *purpose* of the judgement nor the *value* of the proposition can be assessed. Statistical reality subordinates the individual not to a *logos* but to a relevant population (of humans, electrons, or whatever); it does not apply to any individual.

The modern intellectual disciplines are, in effect, disciplines of the combinatorial explosion: they limit the range of possible cases to which a particular *X* might belong. They have developed two basic techniques: the number of tokens can be limited by dealing only with the most general qualities of things (periodization in historical studies); or the rules can be stated in terms that make it possible to use the formal qualities of the system without enumerating all of the possible combinations (applied mathematics). A situation may involve a thousand things, but if they can be classified and represented with only three tokens, the combinatory can give information about three *types* rather than a thousand individuals. In some cases no more precision is required for significant results. Or it is sometimes possible—as in the case of certain calculuses—to state relationships between vast classes and provide a metric by which they can be applied in particular cases without producing all of the combinations.

Ultimately, it turns out, the idealized space of mathematics and the idealized subject of poetry were necessary only to initiate progressive institutions. Algebraic space and the modern ego were the first products of the new technology, and they have been rendered obsolete by their own accomplishments. Separate ideal realms for the mathematical object and the human subject are now no longer required, and both mathematics as a form of disinterested meditation and poetry as a form of the ideal subject have largely decayed. Images of ideality, such a poetry once produced, are not now the discipline of totality but the mere content of a higher level of abstraction. Richard Rorty notes:

> For beyond the vocabularies useful for prediction and control—the vocabulary of natural science—there are the vocabularies of

> our moral and our political lives and of the arts, of all those human activities which are not aimed at prediction and control but rather in giving us self-images which are worthy of our species. Such images are not true to the nature of species or false to it, for what is really distinctive about us is that we can rise above questions of truth or falsity. We are the poetic species, the one which can change itself by changing its behavior—and especially its linguistic behavior, the words it uses. (Rorty, 1982, 88)

This conception of poetry—*species* poetry, the poetry of "behavior"—must be questioned and questioned precisely on its species or statistical character. Though it is implicitly associated with Homer and Shakespeare, who are said to have addressed the image of humankind in a spirit of disinterested inquiry, image making in our culture is not, and perhaps cannot be, disinterested. The image-making institutions that are overwhelmingly most significant in a statistical sense, especially those associated directly or indirectly with the electronic media, are systematically at the service of short-range commercial interests. They raise themselves above questions of truth or falsity in the service of greed and exploitation, not the disinterest of poetic intuition. Although enlightened cynical complaint about advertising and the obvious mechanisms of social control is common, Charles Olson's

> o kill kill kill kill kill
> those
> who advertise you out)

in the closing lines of the first of Maximus poem takes up the full burden of an alternative poetry (Olson, 1983, 8). The media do not, like the medieval church, propose a human image that can be accepted, rejected, revised, and so forth; it creates images as forms of marketable excitement. Any image will do, so long as it can be made to appeal to the need and greed of a commercially significant population; it makes a farce of pluralism by rendering all of the possibilities of human identification modes of exploitation. Olson's proposed terrorism is now the only possible proposition of poetry because there are

> No eyes or ears left
> to do their own doing (all
> invaded, appropriated, outraged, all sense
> including the mind, that worker on what is

> And that other sense
> made to give even the most wretched, or any of us, wretched,
> that consolation (greased
> lulled.
>
> (Olson, 1983, 17)

When Olson wrote these poems, around 1950, the commercial media were only beginning their profound attacks on the last vestiges of human autonomy. As Olson had learned by 1960, to reappropriate the mind as such, even to reappropriate the mind as the metaphorical equivalent of an organism, would not suffice to restore the person to him- or herself. The external threats were graver and the interior resources greater than were commonly recognized. Olson speaks for the necessity of breaking completely with conception of the human as an input-output device. The common world cannot be a *representation;* the world is local to the integrity of the organism itself. The common world is the construction of all of its inhabitants, not an image of something they are supposed to share. It has no *common* image. The common world is a place not of representation but of action.

The Aesthetics of Recursion

> Who's buried in Grant's tomb?
> —Groucho Marx, on *You Bet Your Life*

The triune logic of the Stoics prevailed into the seventeenth century. Sextus Empiricus gives this account:

> The Stoics say that three things are linked together, that which is signified, that which signifies, and the object; of these that which signifies is speech, as for example, "Dion", that which is signified is the thing itself which is revealed by it and which we apprehend as subsisting with our thought but the barbarians do not understand, although they hear the spoken word, while the object is that which exists outside, as for example, Dion himself. Of these two are corporeal, that is, speech and the object, while one is incorporeal, that is the thing which is signified, i.e. the *lekton*, which is true or false. (Kneale and Kneale, 1984, quoted 140)

The signifier and the signified are, of course, familiar. It is the mediating term or the *lekton,* which was suppressed by the philosophy of Descartes and Locke. The term derives from the Greek

lekton, which translates as both "to say" and "to mean"; its function, thus, is mediation or interpretation. The *lekton* is troublesome for this reason: mediation introduces either infinite regression—a search for the original Dion—or circularity of argument—Dion is Dion. The dualistic strategies are rhetorically useful to clear up the philosophic problems, but in practice, the suppressed mediating terms are almost immediately reintroduced. Probability theory reintroduces the *lekton* as an enumeration of possibilities, and the signifier and the signified are interpreted in terms of odds. The theory of inductive logic, the philosophic problem of the observer in inductive methodology, and various theories in the human sciences, including the apparently nonstatistical conception of the Freudian unconscious interpreted as a combinatory (as we have seen), are all relevant to the development of statistical reality. During the last years of the nineteenth century, rapid progress was made toward powerful new methodologies: the work of C. S. Peirce, Gottlob Frege, and Bertrand Russell in logic and the work of Carl Friedrich Gauss, Pafnuti Chebyshev, and Andrei Markov in probability theory as such was supplemented and posed in practical light by developments in the sciences, especially in thermodynamics but also, at least conceptually, in the social sciences.

A comparison of Michel Foucault's account of the loss of stoic logic and the subsequent history in *The Order of Things* with Warren McCulloch's in *The Embodiment of Mind* will suggest how thoroughly and disastrously structuralism and poststructuralism have remained locked in the Saussurian two-valued logic (McCulloch, 1965, 390ff.). Binarism is a tool of cybernetic thought, not its essential character. Working with technologies based on off-on switches, it is convenient to define certain quantities as logarithms with a base of two. The hexidecimal base—also for reasons of convenience—is also important in computer science. To Jean Baudrillard's question "Why does the World Trade Center in New York City have *two* towers? . . ." we can answer only: because it happens to have two towers—not, as he insists, because "digitality is . . . the divine form of simulation." (Baudrillard, 1988, 143) If anything, the new science is as trinitary as the old religion. Now the terms are probabilistic, rather than absolute, but history and purpose are mediated by *information* as father and son

were mediated by spirit. The poststructuralist critique of absolutism is true but utterly irrelevant.

As we have seen in the previous chapter, in the section entitled "Psychodynamism," the relativism of late nineteenth-century science involved radically different assumptions concerning the various natural realms. In order for the new logical formalism that had developed to coalesce into the *ars magna,* it was necessary to recognize that the physical sciences, especially thermodynamics, where statistical methods found their first application in hard science, the biological sciences, and the social sciences were all dealing with the same fundamental stuff. Cybernetics, information engineering, and the theoretical work that they engendered provided the necessary generalization.

The important figures in this development—figures who must rank in the history of science with Galileo, Newton, Darwin, and Einstein—are are still not household names, and it is perhaps in the nature of the new science that they never will be. They mark the appearance of an intellectual world so dense that a single person can master only a small part of the relevant material. The groundbreaking works were either collaborations or investigations into narrow problems that happened to have large theoretical implications. The titles of the seminal papers are not likely to generate immediate interest: Turing's "On Computable Numbers, with an Application to the *Entscheidungs* Problem" (1936); Rosenblueth, Wiener, and Bigelow, "Behavior, Purpose, and Teleology" (1943); McCulloch and Pitt's "A Logical Calculus of the Ideas Immanent in Nervous Activity" (1943); L. A. MacColl's *Fundamental Theory of Servomechanisms* (1946); von Neumann and Morgenstern's *Theory of Games and Economic Behavior* (1947); and Walter Shannon's "A Mathematical Theory of Communications" (1948). In these papers and others in pure mathematics—by Kurt Gödel and Alonzo Church, to mention notable names—the notion of algorithmic calculability was given sufficient clarity of definition that logical functions could be *theoretically* mechanized. That is, this new science does not involve some computation that describes this or that aspect of the world. It is, rather, a theory about the nature of computability as such. For the first time, fundamental scientific work derives not from the study of nature but from the study of engineering problems. Now rather than conceiving of the

world as a machine that the logical formalism describes, the logical formalism describes all possible machine-like worlds. The notion of a paradigm as a model of nature or image of the world is not relevant. Indeed cybernetics is not a new paradigm but a science of paradigms.

Warren McCulloch notes that in "cybernetics" and "information theory," we return to something like the triadic logic of the Stoics. The problems of infinite regression and logical circularity in the meantime have not been solved, but they have been domesticated. The logical circle is no longer necessarily "vicious": some recursive functions generate unending series of information, others create stable circuits of information. In either case, these logical forms that seemed a kind of madness—unavoidable but unspeakable—in seventeenth-century thought are restored to full usefulness. In his introduction to McCulloch's *The Embodiment of Mind*, Seymour Papert writes:

> The common features of these proposals [he is thinking particularly of work by McCulloch and Pitt and by Rosenblueth, Bigelow, and Wiener] is their recognition that the laws governing the embodiment of mind should be sought among laws governing information rather than energy or matter. . . . The principle conceptual step was the recognition of a host of physically different situations involving the teleonomic regulation of behavior in mechanical, electrical, biological, and even social systems should be understood as manifestations of one basic phenomenon; the return of information to form a closed control loop. (McCulloch, 1965, xvi)

Energy and matter had been obviously difficult concepts, useful and readily available to common sense but of an odd ontological status. Even in reliable scientific theory they are metaphysical and mysterious. They appear in the nineteenth-century science *so* concrete as to escape the usual tests of reality. By contrast, information is a commodity so abstract that it is not easily specified. It does not exist apart from some manifestation, but it has no particular manifestation. It is not a substance in the philosophic sense, an underlying unity that is variously modified by accident or design to produce the display of the world: it *is* the display of the world in its multiplicity. In his essay "Cognitive Science: The Newest Science of the Artificial," Herbert Simon writes:

> We have learned that intelligence is not a matter of substance—whether protoplasm or glass or wire—but of the forms that substance takes and the processes it undergoes. At the root of intelligence are symbols, with their denotative power and their susceptibility to manipulation. And symbols can be manufactured of almost anything that can be arranged and patterned and combined. Intelligence is mind implemented by any patternable kind of matter. (Simon, 1980, 35)

Information, that is, subsumes the philosophic idea of substance, but it is not a substance itself. Its nature does not require a particular or lawful structure; it is the malleable stuff of a contingent world. The importance of this fact is still to be worked through all of our thinking.

Although there is a clear mathematical definition of a quantity called, perhaps mistakenly, "information," what Papert means by "information" is not comprehended by any simple definition. The intuitive notion cannot be summed up by the technical uses, nor can the import of the technical definitions be fully grasped without the intuitive notion. That is, one confronts the problem of circularity at the outset: what most specifically defines "information" is the *return* of information to form a closed loop. The content of the loop, however, is not specified: it may be the loop of the nervous system that controls hand-eye coordination in a human, or it may be the loop that is involved in giving a definition of "language" in language.

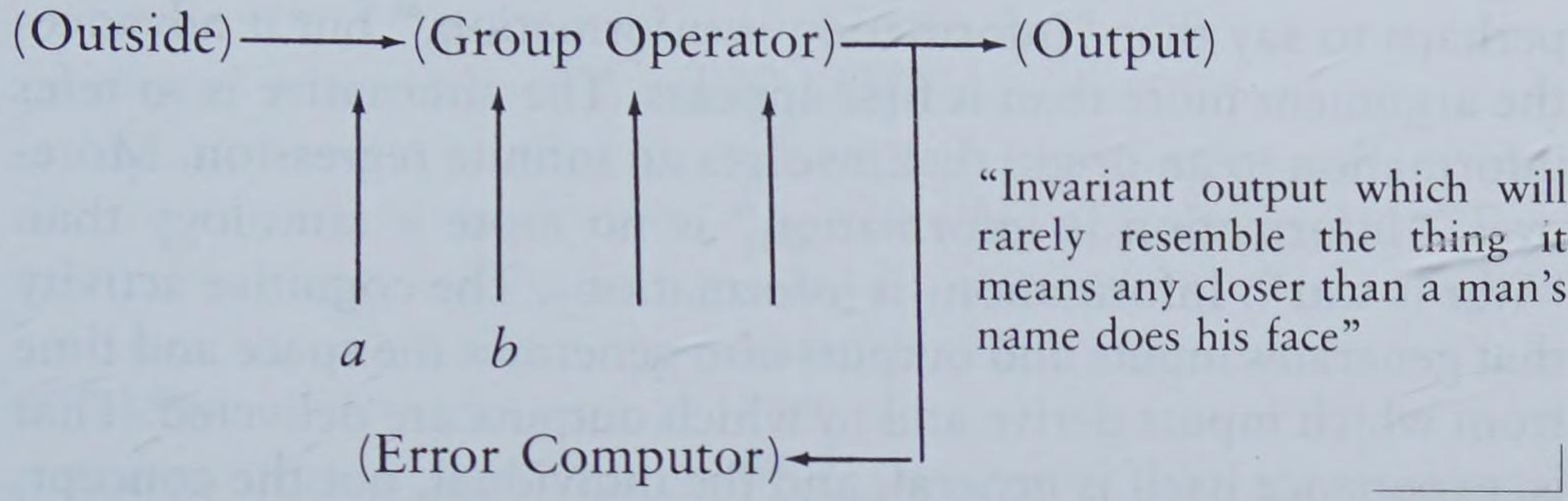
Many of the most puzzling and most characteristic intellectual problems of this century have to do with the logical weirdness of self-reference and logical circularity. Bertrand Russell's letter to Gottlob Frege (1902), pointing out certain devastating problems of self-reference in set theory, marks the beginning of the ferment that brought modernism to its profoundest pitch. In this century, it seems, every attempt to think seriously about ultimate things encounters some version of the Russell paradox. Whatever one thinks to say about the *All* is also said necessarily about the statement itself. We can, for example, speak of the set of all chairs without problem. The set of all chairs is not a chair. By contrast, the set of all sets is a set, and it must include itself; if it does includes itself, however, there must be a set that includes all sets, including the sets that include themselves, and so forth. This prob-

lem shows up in many different ways. Consider this sentence, which derives from a famous example of Russell's: *The barber shaves all the men in the village*. The truth of the statement can be tested by creating a one to one correspondence between the set of men in the village and the set of men whom the barber shaves. Of course, mistakes are always possible, but, if the test is carried out with care, most people could be satisfied of the truth or falsity of the sentence. This sentence exists in classical logical space. Suppose, however, we say, *The barber shaves all of the men in village who do not shave themselves*. The grammar of the sentence still seems correct, but it presents a curious logical problem. It is not possible to determine whether it is true, because we cannot decide which class the barber belongs to. The sentence implies that if the barber does not shave himself, he does, and if he does, he does not. This problem arises anytime we attempt to create a set that is a member of itself.

After Russell's discovery, related problems of self-reference and circularity seemed to turn up almost everywhere, in quantum physics, in Gödel's incomplete theorem, and in art. Information theory and cybernetics, however, do a good deal to redeem self-reference and circularity of argument, even if it does solve not the more dramatic paradoxes.

In their important research reported in "How We Know Universals: The Perception of Auditory and Visual Forms," Warren S. McCulloch and Walter Pitt address the problem of self-reference in defining general concepts or sets in terms not of universal calculability but of neurophysiological processes. Although they think of neural nets as input-output systems, they address the states of the organism that make cognition possible: "We seek general methods for designing nervous nets which recognize figures in such a way as to produce the same output for every input belonging to the figure" (McCulloch, 1965, 47). How do we know geometric objects or gestalts; in short, how do we know abstractions? Unlike the cognitivists, they do not assume that knowledge is innate. They are fully within the tradition of empiricism and psychological associationism. "Genes can only predetermine statistical order," they write, "and original chaos must reign over nets that learn, for learning builds new order according to a law of use" (McCulloch, 1965, 46). They demonstrate that the learning of a universal in-

FIGURE 5.1.



Source: McCullough, 1965, 52.

volves a closed, self-correcting loop constituting a finite group of transformations. Although they deal with specific neurophysiological examples, they give a generalized picture (fig. 5.1).

To be sure, serious philosophic problems are unanswered. How do the neurons recognize that a particular input belongs to one group rather than another involves a circularity. That is, the thing must already be recognized *before* it is assigned to the group *by which* it is recognized. It is also unclear how a network so rich in information as to assimilate all of the variations of a type can be formulated as a single, simple output.

From considerations such as McCulloch and Pitt's a new aesthetic—an aesthetic of recursion—arose. The best known exposition of it is Douglas Hofstadter's *Gödel, Escher, Bach* (Hofstadter, 1979), a serious but sometimes excessively cute introduction to recursive thought. A better introduction to strange loops, especially for readers with literary backgrounds, is Michael L. Johnson's *Mind, Language, Machine*. "Mind, language, machine," he writes: "three systems without positive substance that, copulating interactively, create the universe as it is known and manipulated by man" (Johnson, 1988, 4). Recursion does not have an epistemology. If the question, What is known of X? requires the answer "X is Y," the statement "X is X" is already compromised. The profound discovery of this century, which stills leaves us reeling and giddy, is that things are only what they are: the world is recursive and without origin, X is X. If X is Y, it is only because Y is Z, and Z is A, and A . . . is X. Gertrude Stein writes repeatedly, "Knowl-

edge is what we know." It does not seem especially enlightening perhaps to say that "Information is information," but it advances the argument more than it first appears. The alternative is to refer information to an origin that involves an infinite regression. Moreover, "Information is information" is no more a tautology than "War is war": Information$_1$ is information$_2$. The cognitive activity that generates inputs and outputs *also* generates the space and time from which inputs derive and to which outputs are delivered. That is, experience itself is general, and the individual, not the concept, is constructed. The terms of the construction, however, are not conceptual but mensural: the measure measures itself. There is no repetition but measure. Robert Creeley notes in *Pieces*,

•
—it
it—
•

(Creeley, 1982, 391)

There is no repetition but insistence, the act of knowing and knowing again. We measure not an idea but the intensity of our own attention. Difference that dynamically undermines the identities of conceptualization is the medium of measurement.

Baudrillard writes: "A possible definition of the real is: *that for which it is possible to make an equivalent representation*" (Baudrillard, 1988, 145). This is the reality of habit; its technology produces nothing but new examples of the norm. In this mode, attention registers only the boredom of the randomly expected; ecstasy and catastrophe are limit states, *represented* as destructions of the represented. Another possible definition of the real is: that for which it is *impossible* to make an equivalent representation. This is the reality that never repeats itself; its technology produces nothing but its own identity, the constancy of which is changing realizations of itself. In this mode, attention realizes the persistent audacity and vitality of its own unique constructions. To put the matter briefly: a logical structure may be an infinite regress in which identity is lost to statistical normality or it may be a finite recursive loop, which returns to X is X, in which case *identity is maintained in measured time*. In the most general sense, this fact distinguishes two logical environments—the one is self-destructive and death-seeking, the other is ecologically sound and sustainable.

The Meaning of Recursion

TOO LATE

If
you
don't
want
your
mind
fucked
with
don't
read
this
poem
—George Quasha

Ludwig Wittgenstein demonstrates that language games are independent of one another. The rules of the language for describing something mathematically, for example, differ radically from the rules for describing the same thing in the natural language. Despite the continued attempts of grammarians to describe *the* rules of *the* language, we now know that language is not one thing, not an object as such but many objects, which may resemble a rhythm more closely than a tree or stone. The question about information, however, is the question about generality as such: what is the most *inclusive* thing, not the language as such, but the thing that all of the languages have in common? Information is not the *arché* but the most archaic thing that we can imagine: that which is nothing but the assertion of its own emptiness.

To say that the most inclusive thing is information is at best tautological. Perhaps to say anything about absolute inclusivity involves paradox. In the vicinity of totality, as we have seen, tautology tends to turn into vicious (self-contradictory) circularity. Cybernetics defines a logical middle ground between vicious circularity, on the one hand, and infinite regression, on the other. Our logics have been dynamistic and progressive. Cybernetics is the logic of self-sustaining, rather than self-exhausting, mechanisms.

To know meaning and structure in life simultaneously—to see life both in time and from the perspective of the end of time—is the Faustian desire. It appears that, even if we can have one or the

other, we cannot have both at the same time. This is the limit that critical philosophy has sought to overcome: since Descartes, the great epistemological strategy has been to master meaning by holding fast to structure and to master structure by holding fast to meaning. Thus, our activity is pitched against itself. We produce endless interpretations in the form of text and other material consumer "goods" that are *ultimately* empty and valueless. To be sure, life is concerned with the immediate, not the ultimate, so material exegesis of the world is a possible basis for communal institutions. Like industrial production, however, textual production creates order only by producing a disorder. The intellectual and physical environment cannot assimilate the accumulation of its toxic output. The intellectual environment, as surely as the physical environment, is being polluted.

It is provocative, if not significant, that Claude Shannon's famous definition of information happens to be the negative of the expression that describes entropy, the statistical measure of thermodynamic disorder, the most generalized feature of a closed physical system and closely associated with time or, at least, temporal direction. Entropy is a measure of an expected tendency toward randomness; information is a measure of the mean statistical unexpectedness of a particular message selected from a set of possible messages. Exactly what this means has never been quite clear. Shannon himself voiced doubt concerning its usefulness outside of communications engineering. It may be, however, that this generalized, dynamic realm is *la langue,* as Saussure defines it, at its pure statistical horizon, the difference that is both pure structure and empty time, beyond which all entities lose their distinguishing characteristics—the point beyond which synchrony and diachrony join.

Shannon is concerned with a highly structured process that makes lawful selections from a preconstructed code. That is, information is defined in terms of probability: the message is relative to a determined systematic background that specifies the possibilities. An example should make the quantitative nature of information clear:

When one person is to be selected from eight candidates by the toss of a coin, a minimum of three tosses is required to make a selection. One half of the candidates can be eliminated with each toss, so the first toss reduces the candidates to four, the second toss

reduces them to two, and the third toss determines a selection. The information is measured in units called "bits" or "binary digits." Each coin toss determines the value of an either/or situation, and, thus, three bits of information are required to make a determination. It would make no difference, for example, if the candidates were candy bars instead of people; the same amount of information would be required.* Information in this sense is a static quantity that describes the size of the channel required to transmit a message of a given quantity. It is important, at least in part, because it allowed Shannon to show that miscommunication caused by noise in a channel can be overcome by a calculable amount of redundancy. For example, a candidate might be selected by tossing a coin for each candidate in the pool until all but one is eliminated. This would produce a comparable result but would involve a great deal more information, much of it redundant. But if the information is transmitted over an unreliable channel, the redundancy would help to insure that the message is correctly transmitted. Thus, Shannon's famous formula, which can be simplified for illustrative purposes to

$$I_{(x)} = -\log_2 \{\text{probability of } x\},^{\dagger}$$

defines *potential* information in a sense analogous to potential energy. It might be more accurately called "information capacity" or "the space of empty informational *structures*."

Another aspect of information is also quantifiable, not merely as an abstract ratio of possible messages to selected message, but as a measurable signal or message; it is, as it were, *kinetic* information. The confusion of these quantities has caused great difficulty in the application of information theory in non-technical contexts. In fact, the founders of the new science themselves were not, it appears, completely clear about the difference, which has continued to trouble almost everyone who has thought seriously about the nature of information. Norbert Wiener gives this definition of message or kinetic information: "The message is a discrete or

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*Fred Dretske develops a similar example fully and usefully. His opening chapters are useful background for anyone who wants to think about the current issues in information theory (Dretske, 1981).

†Where the probability is 0.5 (a binary choice), the amount of information is, therefore, one bit.

continuous sequence of measurable events distributed in time—precisely what is called a time series by the statisticians" (Wiener, 1965, 9–10). That is, a message is a statistically significant *sample* of an actual communication. For example, one might be interested in controlling a robotic hand. The mechanism must, at certain intervals, sample the difference between the actual trajectory of the hand and the necessary trajectory to reach the designated object and, on the basis of that message, correct the movement. Information about the output of the mechanism is looped back as an input and corrects the output. This is, of course, the well known principle of negative feedback. These points about the message should be made:

1. The obvious and insoluble philosophic questions—what is measure? what is an event? what is time? and so forth—are here solved functionally, not theoretically. Measure is *some* means for marking differences. Events are what is marked. Time is the medium of the difference in which events occur. These definitions are circular, of course, which is their advantage and the source of their usefulness. The measurements may be capricious, and time may involve unknown quirks, but a usable message is produced. (It might be noted that deconstructionism is a critique of epistemological theories that are based upon identities. It is irrelevant to a practice in which the message is a difference which is measured by some *ad hoc* scale and that is relevant only to a nonrepeating, local contingency.)

2. The message may be binary or analogue. Although binary sequences happen to be useful in electronic applications and so seem important, the message is not essentially binary. The thermostat, for example, is an analogue device. The message is not *essentially* anything.

3. Wiener goes on to say, "The prediction of the future of a message is done by some sort of operator on its past, whether this operator is realized by a scheme of mathematical computation, or by a mechanical or electrical apparatus" (Wiener, 1965, 9). Thus, the metaphysical mystery of the origin does not arise. The message is judged from a local sample, not from the perspective of a global structure or origin. There are no infinite regressions and no infinitesimals (i.e., unmeasurable ghosts of quantities).

Entropy—that is, information in the first sense—is purely structural; it has no semantic content. Whether or not a message

has semantic content is not so clear. One wants to say at least that it is *closer* to meaning than to entropy. The bimetal strip in a thermostat, for example, constantly samples its temperature in order to determine if the selected temperature has been reached, but of course it does not know whether it is hot or cold. To the extent that the message flows through a mechanism that is defined by its purpose, it has meaning at least for those interested in the purpose. *Meaning is created by interest, not interpretation of information.* As Donald M. MacKay, another important information theorist whose work has been too often overlooked, writes, "Questions of meaning need not arise until we bring in the human links in the chain" (MacKay, 1969, 20). The meaning has to do with *purpose*, with the teleonomic creation of order in opposition to the entropic tendency.

As it turns out, information and meaning are antithetical. Something like the relationship between structure and content, it appears, now gets played out in a new context, but the two commodities are complementaries, complete and self-sufficient within their own domain, not incommensurate aspects of a conflicted whole. The relationship between them is not dialectical. Information has to do with the reproduction or representation of a structural identity in a new space, an input-output situation. Meaning has to do with maintenance of self-identity. Warren Weaver writes, "One has the vague feeling that information and meaning may prove to be something like a pair of canonically conjugate variables in quantum theory, they being subject to some joint restriction that condemns a person to the sacrifice of the one as he insists on having much of the other" (Shannon and Weaver, 1964, 28). Weaver's intuition on this point is remarkable, but as far as I have been able to discover, no one has followed the thought to its conclusion. It is interesting to note that many of the same logical peculiarities that we found in connection with the Weber-Fechner experiments in psychophysics reappear in the experimental investigation of information, and both, like experiments in quantum physics, exhibit threshold phenomena as a central feature.

Norbert Wiener notes, for example, that a large class of devices that are based on the feedback principle are "beset by two types of error, of a roughly antagonistic nature." That is, if their sensitivity is increased so they respond to very small changes, they lose their effectiveness in dealing with more dramatic changes. If the device is optimized to deal with dramatic changes, however, they lose their

sensitivity. "This interacting pair of types of error seemed," Wiener notes, "to have something in common with the contrasting problems of the measure of position and momentum to be found in the Heisenberg quantum mechanics, as described according to his Principle of Uncertainty" (Wiener, 1965, 9). Similarly, Donald M. MacKay reports that in his work with radar during the Second World War, he found it necessary to follow "the behaviour of electrical pulses over extremely short intervals of time." Like Wiener, he found himself confronted with something analogous to the uncertainty situation. As he reduced the time interval of a measurement, he lost accuracy in the measure of frequency, or as he increased the accuracy of the measurement of frequency, the intervals necessarily lengthened and provided less precision.

MacKay provides an elegant analysis of this situation. He discovers two kinds of quantities, which he calls "structural units" and "metrical units." One is a dimensionless unity that can be determined from the specifications of the test equipment itself; the other, a small quantity with the dimensions of physical entropy that must be determined from the experimental results. That is, the terms here are directly comparable to the terms that we derived from the thought experiment in "Symbolic History," illustrating the Weber-Fechner law: structure and measure obey different logics. It is possible to obtain a richer structural picture of a given situation, but only at the expense of specificity of measure, and vice versa.

Meaning, then, has two possible definitions. One arises from the consideration of entropy or potential information; the other, from the consideration of the message or kinetic information.

If information is a measure of generality or transmissability, meaning arises from the application of an independent abstract structure to a concrete occasion. Thus, as generality is lost, relevance to a particular situation is gained, and to the extent the situation invokes *interest*, interpretation of meaningful results becomes possible. Meaning, thus, is a quantity of specificity or production. In Fred Dretske's words, "Meaning, and the constellation of mental attitudes that exhibit it, are manufactured products. The raw material is information" (Dretske, 1981, vii).

By contrast, a message is already fraught with specificity, and, as Wiener notes: "The amount of meaning can be measured. It turns out that the less probable a message is, the more meaning it

carries, which is entirely reasonable from the standpoint of common sense." The message itself, unlike information, is loaded with interest. To be sure, this fact brings us to the least rational aspect of life, and many of the information scientists have shied away from it. Of Wiener's position, Dretske writes:

> There is no simple equation between meaning (or amounts of meaning) and information (or amounts of information) as the latter is understood in the mathematical theory of information. The utterance "There is a gnu in my backyard" does not have more meaning than "There is a dog in my backyard" because the former is, statistically, less probable. It is not even clear that one can sensibly talk about "amounts of meaning" in this way, let alone identify them with the statistical rarity of the signs that are meaningful. To persist in this direction would lead one to the absurd view that among competent speakers of the language gibberish has more meaning than sensible discourse because it is much less frequent. (Dretske, 1981, 42)

In the sense that Wiener seems to be using the term, however, neither of these statements about the gnu and about the dog have any *meaning* whatsoever; they are both empty structures. Wiener is referring to dogs and gnus—the actual creatures—not some quantity belonging to the potential or theoretical creatures of language. The dimensions of information are order and disorder. By contrast, the dimensions of meaning are equilibrium and disequilibrium. The distinction has to do with habitual activity, on the one hand, and the experience of freshness, on the other. Things are meaningful precisely because they draw us from habitual equilibrium. To experience meaning is, as it were, to be shaken: to be re-*quired to attend* to difference. Meaning is specificity, contingency—that which *is*, as opposed to that which is merely probable. It is true: pure meaning is as *empty* as pure structure. Shannon's information too is gibberish, albeit gibberish of a special, structured kind. It makes as much sense to think that gibberish is meaningful as to think that we *find* meaning in that which is meaningless. Information and meaning are modes of knowledge: one arrays the possibilities of *representing* the world by way of a formal system, the other acts in the world by measuring effects that cannot be represented and cannot be represented precisely because they are constantly producing difference.

Charles Olson defines meaning in these terms: "That which

exists through itself is what is called meaning" (Olson, 1969, 2). That which exists through itself is, of course, *difference*. This thought, unthinkable in classical logic, indeed this thought which was madness, which could only be posited as the contents of an unconscious or of an absolute, belongs to the very surface of the world we now inhabit. Thus, the dialectic of structure and content in dynamic conflict is replaced by another dipolar cognitive pair, the pure structural possibility of the world and the fact of the world created by interest. *The question of value, not the question of knowledge, is fundamental. We are not compelled by the logic. The choice in a particular situation depends entirely upon the aim and the interest which generates it.*

The Ethics of Recursion

We entertain a previously unknown level of abstraction—not merely a structure that can be interpreted in relations to various concrete worlds, like an equation in mathematical analysis, but various methodologies for generating many different kinds of structures. For the present we can focus on two large classes of these methodologies. One can be called 'cognitive processing' and the other 'autonomous creativity' or, following Humberto Maturana and Francisco Varela, 'autopoiesis.'

Cognitive processing is familiar. It is the gestalt of the input-output machine, of Jakobson's sender-receiver paradigm, or of our favorite metonomy for it, the computer: "Information, for the computer gestalt, becomes unequivocally what is represented, and what is represented is a correspondence between symbolic units in one structure and symbolic units in another structure. Representation is fundamentally a picture of the relevant surroundings of a system, although not necessarily a carbon copy" (Varela, 1979, xiv). It is undoubtedly received as the commonsense view, despite a fatal flaw that Varela and numerous other critics have noted: there is no evidence in the brain of a homunculus, or indeed an infinite regress of homunculi, who would be required to assign correspondences between symbolic units. The only widely considered alternative to this view—Descartes's and Chomsky's, perhaps Plato's—is to claim innate knowledge, a claim that begs the question rather than answers it.

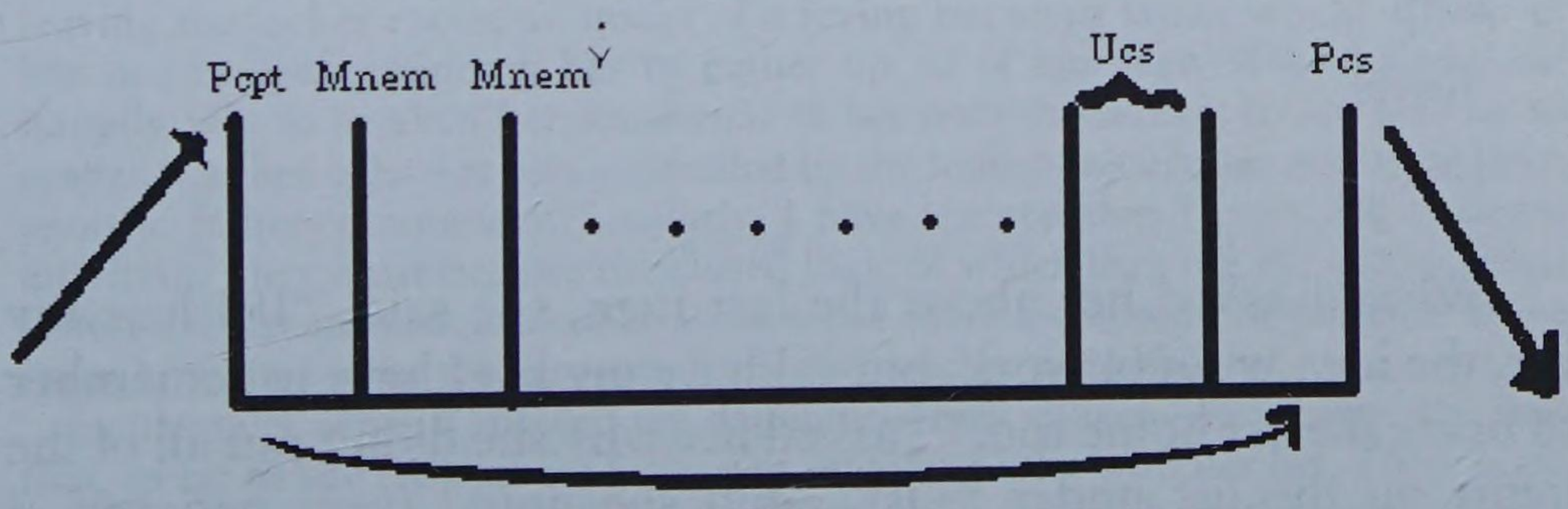
Maturana and Varela distinguish between allopoietic machines

and autopoietic machines. Any living entity—an individual, a family, a society—can be described either as a machine designed to have some output other than itself—offspring, intellectual progress, productive work, and so forth—or as having no output other than the maintenance of its own identity. That is, a living thing can be described as a component in a larger machine, such as evolution or history, or as a self-sufficiency. Allopoietic machines, which by definition have some purpose other than self-maintenance, are necessarily a fragment of some larger mechanism. By contrast, integral systems are marked by purposeless, self-organization. According to Humberto Maturana:

> The living organization is a circular organization which secures the production or maintenance of the *components* that specify it in such a manner that the product of their functioning is the very same organization that produces them. Accordingly, a living system is an homeostatic system whose homeostatic organization has its own organization as the variable that it maintains constant through the production and functioning of the components that specify it, and is defined as a unit of interactions by this very organization. (Maturana and Varela, 1980, 48)

Maturana and Varela diagram the organism as a circular organization (fig. 5.2). The autopoietic machine is continually self-producing, a dynamic boundedness or bounded dynamism. Both one-celled organisms and humans are homeostatic and autopoietic or self-creating. The metabolic dynamics are controlled by the

FIGURE 5.2.
AUTOPOIETIC UNITY



Source: Maturana and Varela, 1987, 46.

binding membrane of the organism and, in turn, the membrane is generated and maintained by the metabolic output.

Maturana and Varela distinguish between the organization of a system and its structure. Maturana writes, "The relations between components that define a composite unity (system) as a composite unity of a particular kind, constitutes its organization." A unity is the kind of thing that it is by virtue of its organization. The distinction between organization and structure has now become a science fiction commonplace. It is a common donné of science fiction that it is possible to copy the "software" of a person and "run" it in a computer. The software is the "organization," whereas the structural material may be meat or silicon. What makes the concept of 'autopoiesis' difficult for minds trained in traditional logic, however, is that the unitary system or the "whole" is one of the parts of the structure. In terms of classical logic, this is, of course, a rank impossibility: "the organization of a system as the set of relations between its components that define it as a system of a particular class, is a *subset* of the relations included in its structure," (Maturana and Varela, 1980, xix, xx, my emphasis). At the expense of some of Maturana's important precision, the terms of the circular organization can be stated more clearly, thus: the organization that defines the whole is a part of the structure that constitutes it.

I first realized that my daughter had absorbed the new logic when she was about six or seven years old. She was taking swimming lessons and had been getting in trouble for leaving various articles of her equipment in the locker room. She therefore made herself a list:

Suit
Goggles
Cap
Towel
List

When I asked her about the last item, she said, "If I lose my list, the idea will not work, but if I have my list I have to remember to bring the list home too." I asked her why she didn't put all of the items on the list under "List," and she noted (very patiently, I realize in retrospect) that there would be no end to that, and she

had all of the important items listed. She obviously wasn't going to get caught in an infinite regression just because that was a possibility of the logical situation.

Although I had been reading and thinking about cybernetic theory for sometime and understood that her method was completely acceptable, the cold-blooded practicality of her practice made me a little dizzy. I felt that something was wrong with her logic, that she was scrambling the hierarchy in a way that invited chaos and madness, but she was accounting for possibilities that I would have excluded. In fact, she was beginning to understand what distinguished her as a living unity from an unliving machine that must be driven by input, such as an upset father.* It is only by self-closure that living entities break their dependence upon allopoietic 'nature,' locally escape the domain of the second law of thermodynamics, genetics, the family romance, and secure for themselves a space in which it is possible to articulate an increasing complexity of self-organization. It has proven impossible to explain how matter became alive and then at some point in its development begin to cognize itself. Life is fundamentally cognitive.

Maturana and Varela's understanding of phenomena has sometimes been described as "Kantian," presumably because it explains phenomena as the construction of the cognizing organism. Autopoiesis must be distinguished from transcendental egoism, however, because autopoietic construction of phenomena is not categorical. It is physical and temporal, structured by self-measurement, not logic. Maturana's early work was with visual

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*This was an important lesson to me both as a parent and as a teacher. I had assumed that by threatening to deduct the cost of towels from her allowance, or whatever parental trick I had employed, that I was trying to impress *my* message upon her. On some unconscious level, I had no doubt believed that, as she was leaving the locker room, an image of a loving but stern father would appear in her mind's eye, reminding her to gather up *all* of her gear. What I had done happily was to awaken her somewhat to her own autonomy. It was a relief to realize that her behavior was controlled by the logic of recursion, not by a super-egoistic father-commander. Similarly, I have learned that I can't *tell* students anything. They must explore the closed logic of which they are the autonomous center and create structures that allow us to share a common orientation as we learn how and what we are—students and teacher together.

Incidentally, when I showed my daughter—now sixteen—this essay, she said that, as far as she remembered, she was making a joke with her list. There is no question that the new logic is lighter-hearted: we do not have the grim responsibility for the infinite.

perception, especially color perception, and he discovered a fact that has large implications for our understanding of perception in general. It is possible, he discovered, to "correlate our naming of colors with states of neuronal activity but not with wavelengths. What states of neuronal activity are triggered by the different perturbations is determined in each person by his or her individual structure and not by the features of the perturbing agent. . . . We do not see the 'space' of the world; we live our field of vision; we do not see the 'colors' of the world, we live our chromatic space" (Maturana and Varela, 1987, 22–23). Likewise, we do not *describe* the space of the world; we live our description.

We have gained access to an 'abstraction' which is constituted *structurally* by both phenomena and language. In the measurable, continuous domain of phenomena, each distinction brings into existence a new unity, which is itself continuous and complete: every part contains the whole. In the domain of description, every distinction brings into existence another part. That is, phenomena have one structure, and languages have another. This *difference* has expressed itself in western thought as constituting the terms of a dialectic, and the techniques of interpretation and criticism have appeared as instruments of the dialectic. Now we learn that the *lekton* is not interpretive but creative. 'Abstraction' in scare-quotes means, of course, that this abstraction is not *really* abstract. Unlike abstraction in the old sense, it does not open into an infinite regress of ever higher levels of abstraction. It is the abstraction that includes itself as a unitary nature among its parts. One might, thus, call it equally a 'profounder level of concretion.' In terms of evolutionary history, for example, we may think of the the individual as a product of a reproductive mechanism, where a certain genetic input produces a certain genetic output, or we may think of the species and its evolutionary history as products of individuals who propose to account for the tradition of association with other individuals of their kind by the science of genetics.

This sense of the individual has obvious ethical implications. Although the second law of thermodynamics seems to suggest a gloomy career for isolated structures that tend toward the state of maximum disorder where all energy and information disperse equally throughout the system, purely local developments of order are altogether possible and to explain human evolution, for exam-

ple, even necessary. Specifically, in relation to the Western intellectual tradition, the great dialectical tensions—between mind and body, subject and object—were overcome not in an act of visionary sublation but in the proposal of a collection of local projects. The logical process of the dialectic was reconceived in terms of informational coupling. In Norbert Wiener's words, "Two or more systems are said to be coupled if the laws of the motion of the larger system made up of all of them together cannot be stated as a collection of separate laws, each of which only involve an interchange of energy [and/or information] between the partial systems. . . ." The larger systems, however, do not necessarily destroy the integrity of their constituents, which may in fact exhibit independent creativity and local increases of complexity. Wiener speaks of "islands of locally decreasing entropy" that we and those amongst whom we live constitute. And he adds, "The result is that the normal perspective difference between the near and the remote leads us to give a much higher weight of importance to the regions of decreasing entropy and increasing order than to the universe at large" (Wiener, 1950, 23).

This assertion of value separates us from cosmic fate as such. We find ourselves profoundly implicated not in the universal and the absolute but in the local and the common. As utter beginners we step forth on an earth of our own making. Wiener's sense of human rights arises from an impeccable moral discrimination, an understanding of the order that involves humans *being* human, from a self-identity that makes no appeal to nature or external purpose. In *The Human Use of Human Beings,* he writes, "That we shall have to change many details of our mode of life in the face of the new machines is certain; but these machines are secondary in all matters of value that concern us to the proper evaluation of human beings for their own sake and to their employment as human beings, and not as second-rate surrogates for possible machines of the future" (Wiener, 1950, 5). The human project cannot justify itself in terms of cosmic purpose or nature. It is radically on its own. In nature, everything is becoming something else: everything is a transfer of energy or information, a machine that produces something other than itself from itself. 'Nature' is allopoietic technology grandly conceived. Human beings, however, draw themselves forth from the human; they draw forth observers from

their own observations. They do not act to produce something other than what they are; they act only to maintain their own identity.

THE MODERNISM WHICH DOES NOT BECOME DATED

The 1980s saw a reactionary movement on a worldwide scale: a reassertion of earlier and simpler times—half-arrogant and half-bewildered—appeared in every domain of life. The politically disenfranchised middle class reasserted a nineteenth-century ethics of exploitation (to the profit, for the most part, of the wealthy), the religious reasserted fundamentalism, and the academics reasserted a shopworn romanticism (in the guises of Marxism, Nietzscheanism, and Freudianism). The reason for this reactionary spirit is clear: the modernist narrative is now past its heroic phase, and the deferred costs of that glory are to be paid. The ages of post-this and post-that are about to come to definition in a present with its own name.

In its first phase, beginning in the seventeenth century, modernism proposed to rationalize life in terms of narrative—historical mechanisms, machines of language. Formal narrative emerged as the epistemological structure that mediated between the timeless, spaceless formulae of mathematical analysis and the idealized ego. Thucydidean narrative, which united aspects of continuity with aspects of change, was reconceived as a primary cultural form. History was no longer genealogical and cosmic, as it was for Shakespeare, but mechanistic and social. The novel, the biography, and the novelistic history are the literary forms of this obsessive infinite. We read from beginning to end by way of the middle—the formal requirements are rigid—but we do not get to the *bottom* of things. The formal closure is poised on an infinite reservoir opening inwardly, which M. M. Bakhtin calls "heteroglossia" or "dialog." Bakhtin is perceptive to note the novelization of all of the genres: "The novelization of literature does not imply attaching to already completed genres a generic canon that is alien to them, not theirs. The novel, after all, has no canon of its own. It is, by its very nature, not canonic. It is plasticity itself" (Bakhtin, 1981, 39). The narratives of Hegel, Marx, Nietzsche, and Freud are novelistic in this sense.

In the second phase of modernism, which was articulated in the first decades of this century and was first implemented with technology developed during World War II, narrative was analyzed into its components. Continuity and change, which are reconciled in novelistic-historical narrative, were dissociated and recombined as the terms of ratios, which are expressed in three different structural zones. The physical world described by Newton, the organic world described by Darwin, and the electrical world described by Faraday proved to be strangely disjunct and logically incoherent. These epistemic zones, however, are of vast generality, so that it is possible to account for entire worlds in terms of each of them. World philosophies that impose one or the other of the structures upon inappropriate domains have been common and, when they are the basis for institutional policy, destructive. Much of the philosophic infighting of the present century has been among proponents of these limited perspectives.

It now appears, however, that these variant logics have no philosophic content. The argument that calls attention to structures from biology in order to refute philosophies deriving from physics, for example, underwrites nothing more than a preference for a particular kind of structure. The intuitive bases of the three types of structure are, respectively, reversible relationships (one can always return), directional relationships (one can never [simply] return), and neighborhood relationships (one is always hanging around in the vicinity). As Piaget shows, these structures derive from ordinary experience: "Now when we study the intellectual development of the child, we find that the earliest cognitive operations, those which grow directly out of the handling of things, can be divided into precisely three large categories, according to whether reversibility takes the form of 'inversion,' of 'reciprocity,' or of 'continuity' and 'separation'" (Piaget, 1970, 26). It is now possible to account for the apparently incoherent sense of the world with a single theory, known as "category theory." Instead of one logical space, one *logos,* there are many, and the determination of which, if any of them, is the *logos,* is not a priori; it is a matter of intuitive acuity. Piaget comments, "Suffice it to say here that the 'categories,' with their emphasis upon functions, no longer revolve around the parent structures [of Bourbakian mathematics, algebraic structures, lattice structures, and topological structures] but

around *the acts of correlation* by which the latter were obtained."* Knowledge arises not from a priori logical forms but from acts of attention that may vary from case to case, depending upon the interest involved.

It is not surprising that these logical structures are associated with structures in the natural language:

The metaphor—algebraic relationships. The metaphoric operation calls a symbolism into existence. The equation destroys both terms and creates a formal system of interpretation that closes on the unified infinite: print writing's (futile) attempt to take itself as its content. The metaphor models the world with empty marks—Mallarméan poetry, Flaubertian prose, text. The attraction is the unity that is rumored to appear at the promised end of interpretation.

The link—order relationships or networks. Linking one thing with another is a matter of attention: print writing's taking of manuscript writing as its content. Unlike the metaphor, it does not transform the objects that are juxtaposed. The relevant genres are compendia, anatomies, Poundian collage, hypertext. Linkage is imagistic and deals with the regulation of discrete objects. The attraction is the respect for discrete things.

The node ("the point at which a continuous curve crosses itself")—topological relationships. To establish a node is to attend to the places where two things are *locally* one: print writing's taking oral performance as its content. Musical rhythm is the most obvious examples; in writing, Gertrude Stein's prose, projective verse, Cage's random processes, Burroughs's cut-ups. The attraction is the registration of *moving* forms.

The direction of intellectual progress in the West has been toward ever higher levels of abstraction, from the ancient discovery of the Idea, to the seventeenth-century discovery of the logical function, and finally to the twentieth-century discovery of abstract

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*Piaget gives an clear account of the mathematics in *Structuralism* (Piaget, 1970). To my knowledge, the poststructuralists have not taken up Piagets challenge. Although Saussurian structuralism has been thoroughly discredited, the history of structural generation and coupling is vast and does not depend upon this or that particular array of formal possibilities.

J. L. Bell gives a readable account of category theory for the nonspecialist (Bell, 1981), and Robert Rosen's use of category theory in *Life Itself* (Rosen, 1991) bears significantly on the present discussion.

systematicity. We can now operate with any degree of abstraction, as we can operate with N-dimensional spaces. In either case we can have mathematical certainty (i.e., not absolute philosophic certainty but reasonable, formal assurance). Unfortunately, we do not know what we are talking about. The problem of interpreting these vast, symbolic machines in terms that humans can understand has always been difficult; now it has become impossible. It is hard to imagine a four-dimensional space, to say nothing of a nine-dimensional space, and it is hard to think of the spaces that might be described by a system of systems of systems. We can use abstract formalism that we cannot understand. We can know what we cannot think. To say the least, we have all of the abstraction we need. The intellectual landscape was once dominated by absolute order, on one side of a great chasm, and chaos, on the other. Now we have found a way of mapping intellectual space in which the describing mind *decides* how great the chasm is, what distance separates order and chaos, and so forth. While the possibility of absolute knowledge has been lost, *everything* can be known with some degree of statistical reliability. Knowledge is a ratio of probability between a defined, finite grid and the contingent events that occur on the grid. For many technological and social purposes, such knowledge is sufficient. Unfortunately, this knowledge does not underwrite meaningful lives for individuals.

Now, the knowledge of form is such that Mallarmé's dream of replacing life with the book—or with the electronic text that has come to replace the book—is altogether realistic. The theorized alienation that we have suffered since the Greeks changes gears. The alienation now becomes practical and quotidien. Information engineers reduce phenomena to its generalized forms and attempt to produce a statistically reliable replica of it: thus artificial intelligence, artificial reality, artificial life, and so forth. Life becomes its own artful product. Hans Moravec of the Robotics Institute of Carnegie-Mellon University writes:

> This is the end. Our genes, engaged for four billion years in a relentless, spiralling arms race with one another, have finally outsmarted themselves. They've produced a weapon so powerful it will vanquish the losers and winners alike. I do not mean nuclear devices—*their* widespread use would merely delay the immediately more interesting demise that's been engineered.

You may be surprised to encounter an author who cheerfully

> concludes the human race is in its last century, and goes on to suggest how to help the process along. Surely, though, the surprise is more in the timing than in the fact itself. The evolution of species is a firmly established idea, and the accelerating pace of cultural change has been a daily reality for a century. During those hundred years many projections of future life, serious and fictional, have been published. Most past futurism has kept separate the changes anticipated in the external world, and those expected in our bodies and minds. While our environment and our machinery could be rapidly engineered through industrious invention, alterations in ourselves were paced by the much slower Darwinian processes of mutation and selection.
>
> In the late twentieth century, the barriers of complexity that divided the engineers of inanimate matter from the breeders of living things have been crumbling. In the future [we can only anticipate that] the human race itself will be swept away by the tide of cultural change, not to oblivion, but to a future that, from our vantage point, is best described by the word "supernatural." Though the ultimate consequences are unimaginable, the process itself is quite palpable, and many of the intermediate steps are predictable. . . . The underlying theme is the maturation of our machines from the simple devices they still are, to entities as complex as ourselves, to something transcending everything we know, in whom we can take pride when they refer to themselves as our descendants. (Moravec, 1987, 167–68)

One can question the time scale and the ultimate workability of the scheme, but Moravec states clearly the *telos* of the West. It is not science fiction. His argument is an extrapolation from the fundamental, Western strategy for producing knowledge. Whether we think of Euclidean geometry, Aristotelian logic, Cartesian mathematics, linguistic structuralism, or aesthetic formalism, the underlying techniques have to do with the discovery of formal systems that are potentially translatable into new media. Silicon as a medium for intelligent machines has distinct advantages over hydrocarbons (i.e., meat). It is more stable, and the complexity of the formal systems that it can support appears to be unlimited.

Anthropomorphism enters Moravec's account only when he says these mastermind robots "*refer* to themselves as our descendants." They will refer to us, of course, in the sense that they will be able to access information about us, if they need to, but they will not likely think of themselves or us in any sense which will give

us cause for pride. Indeed it seems that they will not be *conscious* in any sense that we would find interesting, so there will not be those moments of holding oneself and ones ancestors in a conscious balance of fascination and reverence. The whole business of the interior cinema that is so important and wonderfully mysterious (and troublesome) for us is *not* significant data for the machines. They will not *need* the display of the conscious self. They will refer not to the tree but to the actual state of their silicon brain that would, for us, produce an image of the tree.

In the first two stages of modernism, humans have successfully created a symbolic machine that can at least theoretically take their place. It is now possible to begin with statements that are obviously and trivially true, because they refer only to empty symbols, and, by using formal procedures that retain the truth of the statements they operate on, to build up complex structures which are far from obvious. The important fact about these procedures is that the truth of the trivial statements is reliably retained in the complex conclusions. The difficulty is that these structures must be *interpreted* as a world, and the hermeneutical task is immense and exhausting. As deconstructionism has shown, it can never be complete. Completion, however, is not necessary: statistical reliability will suffice to construct a world.

The modernism which does not date, by contrast, does not make a dialectical move in relation to the master logic. It offers up a complementarity. We now discover that meaning may also be understood as *prior* to symbolic structure. *We may interpret meaning in terms of symbols.* Thus, we produce a world of conscious awareness, a world dense with symbols but not displaced by symbolic structures. Rather than displacing ourselves, as Hans Moravec imagines, we may construct a common world for human creatures that is the adequate correlative to the world of machines that we are spawning.

THREE VERSIONS OF STATISTICAL REALITY

The Supreme Fiction: The Algebraic Metaphor and Common Language

The institutions that began to incorporate science into daily life were not the creation of a few isolated geniuses; they required the

commitment of an entire culture in which Cervantes and Milton, Michelangelo and Bach were as necessary as Galileo or Descartes. The tension between high art and high science was essential to cultural production, and the popular culture was a necessary medium, not of the arts or sciences as such, but of the culture that afforded the arts and sciences ideal space. The idealized objectivity of science and the idealized subjectivity of high art required the maintenance of a vigorous popular tradition of novels, essays, newspapers and magazines, which informed the culture factually and emotionally.

In the nineteenth century, however, science began to relinquish its idealized object and take responsibility for its metalanguage as part of its own methodology. Increasingly, it was statistical and pragmatic, not absolute. The images of ideal subjectivity, such as those provided by the tradition of English poetry that originated with Donne and Milton, were still alive, if failing, in the work of Tennyson and Arnold, but they were no longer required to maintain the subject-object balance. As Hegel recognized, articulation of the ideal subject had been accomplished. Poetry had been superseded by prose and its disciplines, and prose, in turn, was to be superseded by the techniques of statistical epistemology. Thus, the high arts more or less disappeared, becoming fetishes of nostalgia cults—often sponsored by literature or art history departments in universities—and, to the extent it was feasible, recast as highbrow show business in the form of orchestra concerts, ballet and repertory theater performances, gallery openings and so forth. Thus, too, literature came to be the arbiter of a normative reality but the norm of a highly selective, mostly academic, population, which is at once oddly respected and out of the cultural mainstream.

Defining and apologizing for the poetic tradition that arose in the seventeenth century has been the central preoccupation of literary studies. During the past sixty years, it has become an intense, and even manic, enterprise. The tradition has two, often overlapping, branches: one emphasizes ideality of form, the other ideality of content. In English and American poetry, the one tradition takes its rise in Donne and the Jacobean playwrights, includes *Don Juan* and *Biographia Literaria*—if not much high romanticism—and reasserts itself in Browning, the early Ezra Pound, and most notably T. S. Eliot; the other originates in Milton and is most clearly traced through Wordsworth to Yeats and Stevens. These traditions

have found their apologists respectively in the old American New Critics and the New Romantics, led by Harold Bloom and Paul de Man. As the possibilities for the self as an independent agent were pared down, the modern imagination was left with a volatile mix of stoicism, nihilism, and formalism, which were recycled in concrete and ever more hermetic forms. The New Critics were stoics and linguistic formalists; their preferred trope was ironic juxtaposition. The New Romantics are devoted to the poetry of personal revolt, the strife and negativity that fuels bourgeois culture, especially as it is manifest in the Oedipal conflict; their preferred trope is metaphor. One might, with considerable justification, think of the two schools as the Catholicism and Protestantism of modern egotism.

The mood of both traditions, however, is elegaic, and both come to the same predicament, which is articulated definitively by T. S. Eliot:

> What might have been is an abstraction
> Remaining a perpetual possibility
> Only in a world of speculation.
> What might have been and what has been
> Point to one end, which is always present.
> Footfalls echo in the memory
> Down the passage which we did not take
> Towards the door we never opened
> Into the Rose Garden.
>
> (Eliot, 1963, 177)

In statistical reality, one lives with perpetual abstraction. The Rose Garden is never entered because, if one tries, it becomes merely another of the possibilities, and in the speculative calculus something else takes its place.

Wallace Stevens, likewise, comes repeatedly to this impasse, most poignantly in "The Rock," but he never credits the real existence of the Rose Garden; for Stevens, it is always and only a further place of the mind, "the main of things" (Stevens, 1982, 528).

Eliot speaks for the early modern strategy, which could be more or less reconciled with St. Augustine, that the ideal subject is an image of the infinite, and thus imageless, god. Meditation on this paradox was the sustaining activity of the Christian era. In his most famous essay, Eliot writes: "The point of view which I am struggling to attack is perhaps related to the metaphysical theory

of the substantial unity of the soul: for my meaning is, that the poet has, not a 'personality' to express, but a particular medium, which is only a medium and not a personality, in which impressions and experiences combine in peculiar and unexpected ways" (Eliot, 1975, 42). This substitution of a medium for the ego is the essential Cartesian move, and the seventeenth-century metaphysical poets share it with the rationalist philosophers among their contemporaries. Eliot's task, like Donne's, Herbert's, and Milton's, is to constitute an idealized or aesthetically satisfying image of subjectivity even though it cannot be identified with actual, personal experience.

Seeking an alternative to the substantial unity of the soul, Eliot discovers a symbolic unity that shifts the responsibility from the personal ego to the cultural norm and puts the mere actual world and the aesthetic or created world into opposition. Art emotion and personal emotion, therefore, form a Hegelian pair, which can be resolved only in nihilistic irony or mystical unity. Eschewing the one and failing the other, Eliot fetishizes certain statistical norms as the basis for cultural interaction. He "halts at the frontiers of metaphysics or mysticism," however, so that he might confine himself "to such practical conclusions as can be applied by the responsible person interested in poetry" (Eliot, 1975, 43). His art, especially in the plays and later prose writings, remains social, a gathering and formalizing of conventional experience. It attempts to discipline the medium in terms of a particular cultural tradition. Eliot's dominance of Anglo-American literary thought for three decades or more is a sign of the vitality of Christian culture. For a homogeneous culture or a culture with a homogeneous controlling elite, the statistical image of the genetic culture provides an efficient and satisfying coherence, but with the rise of pluralistic, mass culture, this essentially tribal strategy would not serve.

Wallace Stevens, who does not identify with the Christian tradition or with any *social* identity, could express only the individual personality: "poetic truth," he writes, "is an agreement with reality, brought about by the imagination of a man disposed to be strongly influenced by his imagination, which he believes, for a time, to be true, expressed in terms of his emotions or, since it is less of a restriction to say so, in terms of his own personality" (Stevens, 1951, 54). Unsustained by belief and tradition, poetic truth is fleeting, and personality is subject to a cycle of capriciousness and ennui.

For Stevens, the insurance man, personal reality is permutative and statistical. The medium in itself has no definition. As it is clear in "Notes toward a Supreme Fiction," it is necessary to look for statistically reliable invariants:

> Thus the constant
> Violets, doves, girls, bees, and hyacinths
> Are inconstant objects of inconstant cause
> In a universe of inconstancy.
> (Stevens, 1982, 380–408)

Stevens' medium is a cultural tradition with its commitment not to a particular imagery but to grammar and the statistical constancies on which it depends. All of the possibilities of language are available to him. In keeping with this permutative logic, Stevens's poems take the general form of theme and variation. When computers write poetry it is more like "Sea Surface Full of Clouds" or "The Man with the Blue Guitar" than, to pick another modernist anthology piece, William Carlos Williams's "By the Road to the Contagious Hospital." However we might judge the merits of the poems, which is not our purpose here, we can come closer to writing an algorithm for Stevens's poems than for Williams's or, for that matter, Eliot's. Even so complex a poem as "Notes Toward a Supreme Fiction" is based on the theme and variation format, despite its superficial appearance, which suggests a dialectical structure. In his reading of the poem, Bloom notes the fill-in-the-blank character of Stevens' verse. Consider the opening lines of canto 4 and his commentary:

> The first idea was not our own. Adam
> In Eden was the father of Descartes
> And Eve made air the mirror of herself,
> Of her sons and of her daughters.

On the basis of a passage in an essay by Stevens, Bloom proposes that "we must read canto 4 as opening, 'The first idea was not our own. Adam / In Eden was the father of Freud' . . . Freud, substituted for Descartes, centers our sorrow not in the abyss between subject and object but in Eve making the air the mirror of herself" (Bloom, 1976, 183). Indeed we might substitute any number of names in place of Descartes's. It could be a parlor game in which one player provides a name and the second player provides an interpretation. We might, for example, substitute Kant or Nietzsche—or perhaps Niels Bohr world be interesting. Stevens

enters the space of unhampered textual production. It is relentlessly solipsistic, and the poor ephebe, who is a figure not unlike Henry Adams in *The Education*, a figure of the poet's self-instruction, is overwhelmed by language. "Major Man," Joseph Riddel writes, "proves the argument for abstraction, the flesh become word rather than the word become flesh" (Riddel, 1965, 182). He is absorbed into the flux of information. In order to sustain poetic truth for a time, the individual must not only *have* all of the possibilities but also, as it were, be overwhelmed by them; that is, to recall the Hegelian definition of comedy, all essentiality melts away. Comic mastery derives its force from the dissolution of essentially. This peculiar accomplishment of *power* is usually taken gravely by the exegetes:

> The poet is thus the type of those who enable us to master reality. (Sukenick, 1967, 162)
>
> What Stevens has evolved is a self, and in that self an image of the world of which man is master, the man-hero who comes to accept what is humanly possible and desires no more. (Riddel, 1965, 182)
>
> [Of a passage in "Notes toward a Supreme Fiction":] So far, an unexceptionable statement: poets are to dominate the violence of reality. (Vendler, 1969, 186)
>
> In the MacCullough [of "Notes toward a Supreme Fiction"] we confront Whitman assimilated to Nietzsche, an American Over-Man, a grand trope or noble synecdoche of Power, power that compounds the ocean as universe of death, and language: "power of the wave, or deepened speech" (Bloom, 1976, 190).

For Stevens, the poet is a Mallarméan god or *Übermensch* but in a comic form—an unformed, childlike god or *Übermensch*. The triumph of comedy is a concession to an "invasion" of fulfillment of desire. It is an odd moment in romantic thought: fulfillment of desire *invades the desirer*. The mastery of reality is to enter a world of superfluous production and consumption. Few but Hegel, who first noted this inversion, which he called the appearance of the *verkehrte Welt*, and Stevens have had the stomach to explore this grotesque reality, which is at once mastery of reality and self-destruction. The literary commentators do not go this far, of course, but they speak of a condition that is perfected by the machine:

> As humans, we are half-breeds: part nature, part nurture. The cultural half is built, and depends for its existence on the biological foundation. But there is a tension between the two. Often expressed as the drag of the flesh on the spirit, the problem is that cultural development proceeds much faster than biological evolution. Many of our fleshly traits are out of step with the inventions of our minds. Yet machines, as purely cultural entities, do not share the dilemma of the human condition. Unfettered, they are visibly overtaking us. Sooner or later they will be able to manage their own design and construction, freeing them from the last vestiges of their biological scaffolding, the society of flesh and blood humans that gave them birth. (Moravec, 1987, 168)

This is not the occasion for an extended reading of "Notes toward a Supreme Fiction." The poem has been read to death and will have to be put aside for a generation or two before we can see it as something other than an instrument of late bourgeois repressive tolerance. We might, however, compare "Notes" with other masterpieces of Romantic self-interpretation, such as Hegel's *Phenomenology,* Emerson's essays on American nationalism, Schopenhauer's *World as Will and Idea,* Nietzsche *Zarathustra,* or Spengler's *Decline of the West.* It is important to understand why the largeness of the world they describe gets pared down to the "fat girl" of Stevens's figuration. They each have some version of the romantic cycle of consciousness:

1. the Ego recognizes itself in recognizing the other, which may of course be only itself in the mode of self-observation;
2. the Ego claims the other as an instrument of its own expression—realization or incarnation in the other (historically the birth of Christ);
3. maintenance of the incarnation in time, however—and this is the turn which brings everything back on itself—creates contradictions in which the Ego must also recognize itself;
4. as the Ego becomes more inclusive, it approaches a limit at which it can no longer comprehend itself, and its medium becomes a monotonous array of infinite possibilities in which any achievement is negated by the vastness of possible achievements;
5. necessarily, therefore, the self empties itself out and makes a

new commitment to an absolute relation of ego and other, thus starting the cycle anew.

The cycle can be more tightly delineated in these terms: self-knowledge is knowledge of the Other in the concrete (marriage); knowledge of the Other is self-knowledge in the abstract (nature). This is a rich circle, rich enough in fact to account for everything that we say that we know. Thinking its way around the circle by way of its instrument, the human Ego accumulates its overwhelming density. It was capacious enough to allow Hegel to account for the whole of history, including the most immediate events of his day. As long as the circle is used perspectivally, so that a place that is known is taken as the condition for a place that is not known, useful insights accrues. It is, however, knowledge for a particular purpose, and it necessarily creates conflict and division rather than commonality. When one attempts to speak of the whole, the cycle of knowledge becomes, as Hegel knew, the way of despair. By the time of Nietzsche, affirmation of the cycle could be a kind of test of bravado. Stevens, however, though retaining the romantic form, had lost the innocence that maintained it. Its intricacies had been so well mapped that its every station was immediately available to him: he could "confect" the Chaplinesque figure who appears at the end of "It Must Be Abstract" into a suitable spouse for the "green fluent mondo" in only a few deft strophes. This is the eternal recurrence—now, it appears to be played out in relation to silicon.

Both branches of the tradition had reached their logical conclusions by the end of World War II or sometime shortly thereafter. After *The Four Quartets* and Stevens's last two volumes, there was no inherent reason for any poet to pursue this line of thought. The nature of culture as such, however, is to conserve its traditions, and the modern West can afford to indulge itself in the luxury of maintaining even moribund traditions. Although this function has been traditionally served by a priest craft, it is now the function of the academy.

Laura Riding Jackson's *Contemporaries and Snobs*, published in 1928 and never reissued, is still one of the most perspicacious analyses of the engineering of posthistorical history and one of the most eloquent documents of a radical alternative. Popular, twentieth-century modernism had already by 1928 degenerated

into a mode of suppressed romanticism, which, Jackson says rightly, could only be understood psychoanalytically; that is, by positing a background, a finished, infinite combinatory of possibilities—albeit an unconscious one—for the overt actions. Thereafter aesthetic culture was conducted in relation to a historical metalanguage, a reproduction of an antiquated worldview, the responsibility of an increasingly prosperous academic industry that managed to generate considerable enthusiasm for the spectacle of art.

Laura Riding Jackson understood, in part at least from her reading of Gertrude Stein, that we had reached the end of history, which is to say the end of the symbolism of the absolute. What continues is not history—that is, the structures that produce mechanisms so startlingly powerful that they were thought to be prior to meaning—but "the meaning at work in what has no meaning" (Riding, 1928, 9). This statement distinguishes a domain of knowledge that differs from the post-Cartesian domain. As we have seen, modern scientific knowledge arises from the workings of interpretation in that which *already* has meaning; it creates meaningful ratios or analogies or formal symbolic systems from preexisting symbolic systems. Jackson writes, "human beings have come to the end of their history, and have need for their attaining to a full reality of being, of an immediacy of life that, instead of being progressively consumed by time (unto the death-point!), has time's very nature of self-renewal in it" (Jackson, 1976, 220).

For a brief period, between 1910 and 1930, art escaped the academy or at least made a valiant move toward escape. Art was made as it was made, to recall Gertrude Stein's phrase, not as it was prepared (Stein, 1962, 514). Almost at the moment of its inception, however, Laura Riding Jackson also recognized and defined the beginnings of the new academy: Poetry, she notes, is "easily professionalized. From observations of it in written works, rules are made for it, intentions ascribed to it. There results what has come to be called criticism." The history of the academy and the academizing of reality in this century is yet to be written.

Both the arts and the sciences began to take symbols as the content of their symbols, and knowledge was generated as a result of reflection upon the disciplinary language itself. Jackson asks, "if knowledge is, so to speak, composing its own monster-poem [and it is precisely the beginnings of this composition that we have

traced from Descartes to Hegel, Freud, and Shannon], has the poem as such necessarily disappeared? Can minds and their perceptions be erased by a piece of self-investigated india-rubber?" (Riding, 1928, 62). The answer to these questions, as to all other questions in the dialectical universe, is yes and no. On the one hand, as Hegel duly prophesied, poetry, the universal art of the modern *episteme* is dead. Before theory became fluent, we required an aesthetic to mediate between abstraction and the sensuous world. For Hegel, this function was supremely served by poetry:

> Poetry is the universal art of the spirit which has become free in itself and which is not tied down for its realization to external sensuous material; instead, it launches out exclusively in the inner space and the inner time of ideas and feelings. Yet, precisely, at this highest stage, art now transcends itself, in that it forsakes the element of a reconciled embodiment of the spirit in sensuous form and passes over from the poetry of the imagination to the prose of thought. (Hegel, 1975a, 1:89)

Now, the prose of thought is triumphant. That which the dialectic sublates however never disappears: while always staying the same, it is transformed into its medium. It would be more accurate to speak not of the disappearance of poetry and the other arts in their bourgeois manifestations but of their transformation into media that are more efficient and more democratic. Poetry and the other high arts, to the extent that they survive, are adjuncts to television drama and rock and roll. Now it serves not to focus attention but to distract. Art continues because it has been recycled as entertainment and, to the extent that it produces unique material objects, as a field of investment. The arts are entertainment for the most demanding audience—those who require greater complexity, which is to say, those who have more surplus attention to absorb. They are successful—that is, entertaining—precisely to the extent that they successfully pose themselves as something else—culture, self-improvement, and so forth.

The attempts to sound the alarm that poetry in the sense that has persisted in the West, since the seventeenth century, if not since Sappho and Archilochus, has disappeared are too late. Those images of essentiality cannot be sustained against the comedy of statistical reality. Christopher Clausen, who is responsible for one of the more hysterical attempts to call poetry back to its Victorian

order, sees science as the enemy: "Few doubt that the rise of science has had something to do with displacing [poetry] as a publicly important vehicle for those truths that people accept as being centrally important" (Clausen, 1981, 703). Such was the case in the nineteenth century. Poetry, like religion, lacked the critical rigor that belonged to science, and, confronted with the intimidation of scientific rhetoric, poets sought new pastures, where they would not be required to compete with positive knowledge. Clausen follows Coleridge in thinking of poetry—the object of which is pleasure and not truth—as a palliative to the harsh objective reality of modern culture: "Seven decades have now passed since the first rattling gunfire of the modernist revolution, a longer period than had then elapsed since the death of Wordsworth, and it is time to ask whether the kind of rescue operation the romantics performed for English poetry is possible again" (Clausen, 1981, 714). The answer to Clausen's question, if he means to ask for the renewal of that unified vision of the world that informed the British empire (Clausen's military imagery is telling here) and the industrial revolution, is emphatically negative. That view in which the world is so simple that it can appear as the trope for the private emotional life cannot be sustained for the mass audience by poetry; it lacks force as propaganda. The maintenance of the illusion that defines the self in technological culture is the business of more powerful mechanisms.

Of course, we have persistent testimony that the pleasures of poetry are extreme. It is associated mythologically with intoxication and even the "pleasures"—read "happy irresponsibility"—of madness. A performance of Homer, from what we know of it, would likely have been more like a rock concert than a contemporary poetry reading (Havelock, 1963). It can be said, of course, that Coleridge speaks of profound pleasures, of disinterested meditation or aesthetically distanced absorption in beauty, but defining "profound" necessarily brings the question back to truth. The readers Coleridge imagined were solitaries in their closets, books in hand, enjoying pleasures of the most cerebral and passive sort—such readers as have given up on the more overt pleasures, having subdued even the desire for them in the name of religion or the demeanor that was required in a protestant bourgeois culture. Nineteenth-century philosophies of organism were controlled by a strict anti-hedonist morality for everyone but the artist, who was

not only given wide license but was almost required to use it as a guarantee of authenticity (much as, in recent times, the madness and suicide of poets have been the guarantees of the spectacle of despair). The poets were allowed a holiday from the world of fact and addressed themselves to the imagination and the production of pleasure. They were honored adolescents and were licensed to speak of a world in which the parts added up to make a pleasurable picture of the whole. It was the poets' task to take responsibility for the emotional life of the people. They were, therefore, more or less required to lead scandalous lives (because "the road of excess leads to the palace of wisdom"? or simply because it takes a great deal of irresponsibility to counterbalance such repression?). As a wiseassed teenager, Rimbaud saw precisely what his culture required of him and had the talent and gall to do it: " . . . the problem is to make the soul into a monster. . . . Think of a man grafting warts onto his face and growing them there" (Rimbaud, 1976, 102). His art was compromised with a culture that could see one thing only by relating it to another. A culture that begins with the requirement that every word relate to THE WORD ends by seeing that everything is everything else: "I could see very precisely a mosque instead of a factory, a drum corp of angels, horse carts on the highways of the sky, a drawing room at the book of a lake; monsters and mysteries" (Rimbaud, 1976, 205). Deviation from standard morality was not sanctioned, but it was forgiven as a necessary condition of the poet's office. If Byron is the exemplary case in English poetry, Rimbaud was most viciously victimized by the role, and it was Rimbaud who most clearly exposed it. At the age of college sophomores and as the author of enough poetry to make him immortal, Rimbaud quit: "I! I called myself a magician, an angel, free from all moral constraints . . . I am sent back to the soil to seek some obligation, to wrap gnarled reality in my arms! A peasant!" (Rimbaud, 1976, 213).

By now, the Coleridgean artifact, which offers relief from the unpleasant, incoherent reality, and stimulates the pleasure centers, has been transformed into an integrated technological environment in which truth and pleasure are adjusted to an optimally efficient mix. Microcomputers, two-way television cables, and videotape recorders and cameras will vastly extend the avenues of marketable emotional excitement. Now that we enter an age in which the dominant cultural project is the production and distri-

bution of information, the products of the poetic intelligence are no longer distinct from other consumer items. When the factory produced steel ingots and the poet produced poetry, there was not likely to be any confusion. When the 'factory' and the poet both produce information, however, the fundamental cultural structure has changed. Clausen conceives of poetry as being in some 'blessed" zone of language by which it stands outside instrumental language. Literary institutions, have, or should have, he believes, a special vantage from which to criticize the cultural functions. Without essentially changing in themselves, these institutions have been incorporated in the circuit of production and consumption.

It is disconcerting to discover how many poets and critics still think of poetry as the generator of consumable sentiment or, among the avant-garde, consumable energies without content, and how deeply they resent the media, which have come to fill the office of the poet which Rimbaud abdicated. Nevertheless, in a symposium in *The Georgia Review,* occasioned by the publication of Clausen's book, several of the respondents feel that television is the chief competitor for poetry's claim to the mass audience. Comparing the 1980 Leonard-Hearns fight on cable television and a poetry reading by Adrienne Rich, Maxine Kumin writes "Given the choice between an instant in sports and a lifetime in the arts, the mass-cult unhesitatingly chooses the hedonistic moment." And Joel Connaroe writes:

> There are, after all, an enormous number of diversions everywhere calculated to keep even serious readers from settling in with W. S. Merwin, Emily Dickinson, or any other artist who demands concentration and collaboration. The morning and evening news, *60 Minutes*, and *Wide World of Sports*, among others, provide constant enticements. What chance has Adrienne Rich against Rona Barrett? Anthony Hecht against Mike Wallace? Richard Wilbur writes like an angel, but is he a match for naughty John McEnroe? (Conarroe, 1981, 745)

An "*angel*"? "*naughty*"? Rimbaud's angel has come to *this*?

In response after response, the symposiasts degenerate into the self-parody of a fallen elite. The Victorian function of the *Bible* and *Palgrave's* has been replaced by television, sports, and shopping malls, which are increasingly electronic amusement parks. The practical need for excitement and anesthesia to motivate and to

ease the population through the boredom, frustration, and tension that is the experience of the citizens in a technoculture is immense.

Cultures have taken their idea of order from the most general design that they have been able to discover. For the Greeks, it was geometry; for the Middle Ages, syllogistic logic; for the Renaissance, music (i.e., geometry in time); for the Enlightenment, the Newtonian cosmos. Beginning in the latter part of the eighteenth century, order was been understood in terms of organic structure. More recently, it has been understood in terms of language or writing. We are destroyed by the *scale* of writing. The line of thought that runs from Hegel to Nietzsche, Freud, Lacan, and Derrida (Hölderlin, Flaubert, Mallarmé, Joyce, and Stevens are the relevant literary artists) destroys the ego in the infinite.

Writing is the last trace of the private self, that unspeakable abstraction, the reduced matter with which the private self marks the world. The living experience has been digested, and this waste has been expelled. Baudrillard notes, "The universe is not dialectical." It does not behave like people engaged in interested and sympathetic discourse. It thinks us, rather than we it. It is inhuman, unself-regulating: "it moves toward extremes, and not toward equilibrium; it is devoted to a radical antagonism, and not to reconciliation or to synthesis" (Baudrillard, 1988, 218). In short, a logic that is increasingly antithetical to humanity in its articulation of an intellectual landscape has grown from the proposition that man is a rational animal. The logical world emerges as a grotesque, libidinal formalism that can find no object smaller than totality and thus expresses itself as greed. This intractability is surprising only because humankind made a valiant and, given the impossible odds, a remarkably successful attempt to domesticate logic. As it turns out, however, plants can be domesticated, animals can be domesticated, logic cannot be. The intellectual upheaval of the present is not that we are undergoing a shift in paradigms; rather, it is that we pass from a time that understands itself in terms of a single universal paradigm or quasi-domesticated logic to one that does not. Now all paradigms are local and pragmatic, temporary erotic engagements, not universal requirements.

The change that was expected and the type of change with which the dialectical tradition could have coped (or would have already coped, as it would have, in effect, already happened) would have been structural. The change that appeared, however, was sub-

stantive: information differs profoundly from the matter and motion of the old physical model. Matter can be at only one place at a time, information can be transmitted instantaneously, so it can be everywhere at once. Unlike logical substances, which embody dialectical tensions between structure and intention, information is the entropic base line—the quantity in which affirmation and negation comfortably cohabit. Dialectical resolution turns out to be the origin rather than the end of history, or, more precisely, the *flow* that is our somatic experience is not history (that peculiar ratio between a determinate event and an epochal paradigm) but time itself. To put the matter in the terms that are relevant to the poetics of the common knowledge, we are now faced with the task of recalling the organism from historical time, where it had been placed in a domain of scaleless abstraction, to somatic time, where it can begin once again to deal responsibly with its environment.

One is almost embarrassed to appeal to Walt Whitman, but he knew that organic autonomy, on the one hand, is fully equal to genetic mechanism, on the other, not as the terms of a dialectic—the autonomous human and the social machine never touch one another—but as complementary localities of action. Whitman observes in *Democratic Vistas:*

> The purpose of democracy—supplanting old belief in the necessary absoluteness of establish'd dynastic rulership, temporal, ecclesiastical, and scholastic, as furnishing the only security against chaos, crime, and ignorance—is, through many transmigrations and amid endless ridicules, arguments, and ostensible failures, to illustrate, at all hazards, this doctrine or theory that man, properly train'd in sanest, highest freedom, may and must become a law, and a series of laws, unto himself, surrounding and providing for, not only his own personal control, but all relations to other individuals, and to the State. (Whitman, 1964, 2:234)

Whitman defines two senses of "organism," or, more precisely, against the metaphoric sense of organism, for which the dynastic identity is genetic or descendant from a privileged origin, he poses an autonomous living being. That man—and it is clear that Whitman means *a* man or woman, an individual who comes into relations with other individuals, not the humanistic Man—might become a law unto himself/herself is a thought so radical that it has hardly been taken seriously. As a matter of fact, until recently, we have had no way in which to understand Whitman's claim

except as hyperbole. The sovereignty of the dynastic traditions has been repeatedly called into question, but the mechanisms, which now must include the electronic in addition to those that Whitman names, continue to compel conformity without compelling belief. Indeed, it has been discovered that *belief* in the mechanism of control by the controlled population is not necessary and possibly, for the sake of efficacious control, not even desirable.

Although Whitman's thesis directly parallels the thesis of Charles Darwin, his contemporary, Darwin was disastrously misunderstood as providing a justification for not law but lawlessness. Gerald M. Edelman, the Nobel Prize winner and biological theorist, notes that before Darwin the western philosophic tradition had largely followed Plato, assuming that nature consists "of classes, or taxa, defined by properties from the top down, fixed and in plenitude. In this view, individual variation was a noisy inconvenience to be ignored, or it was considered a symptom of the fallibility of our earthly life." Species were not organisms to be found and studied but definitions, products of systems of distinctions that prove to be utterly abstract. But, as he goes on to note, "Darwin made it clear that individuality was of the essence, that variance in a population was real and not just noise. Indeed, such variance was the basis for change" (Edelman, 1988, 186). Whitmanian democracy and Darwinian evolution are cognates, not because democracy necessarily underwrites greedy competition, which seeks to stamp out individual variation, but because democracy guarantees the autonomy of the individual, thus maximizing the possibilities for both change and, as it turns out, *increased* order. Change is not disruptive; it is the very stuff of structure. The degree of regulation in a system can be increased only by increasing the *variety* that the system allows; "only variety can destroy variety."* That is, adaptation to a particular environment requires the proliferation of individuals. Specialization is the gravest ecological danger. Order derives not from the forceful application of universal paradigms that impose monotonous structures across vast fields composed of fundamentally incommensurable entities but

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*This has come to be known as Ashby's law, and in *An Introduction to Cybernetics,* W. Ross Ashby produces an elegant proof of the proposition, which can be followed by anyone with a little patience for simple mathematical formalism (Ashby, 1964 , 202–18).

from the self-ordering of self-creating systems in pliant media that allow creative and adaptive interaction.

The Darwinian individual seeks not equilibrium, as we are taught by the romantic organicists, but dynamism; not closure but process. The aim of life is not death, as Freud, still under the sway of Newtonian physics and romantic poetry, proclaimed, but life. The formal closures of the great romantic odes thematically anticipate death as the ultimate beauty and adequacy. Indeed, their formal perfection is to be found not in their linguistic structure but in the ritual exhaustion of their thematic possibilities. Of course, as the deconstructionist critics have observed, the ploy is never successful: it is only a ritual enactment of death, not a real suicide. The delicious possibility of experiencing ones own conclusion but not ones end is most attractive. Thus, in "Tintern Abbey," Wordsworth, that most ruminative of poets, concludes fifty-plus lines before he quits. Having discovered "In nature and the language of the sense, the anchor of my purest thought," he is satisfied to continue with his own ruminations and self-deconstructions in which the solidity of the anchor melts into platitudes.

In "Hymn to Intellectual Beauty," Shelley is more definitive:

> Thus let thy power, which like the truth
> of nature on my passive youth
> Descended, to my onward life supply
> its calm . . .
>
> (Shelley, 1975, 2:247)

As is Mallarmé at the conclusion of "L'Aprés-midi d'un faune":

> Non, mais l'âme
> De paroles vacante et ce corps alourdi
> Tard succombent au fier silence de midi:
> Sans plus il faut dormir en l'oubli du blasphème
> Sur le sable altéré gisant et comme j'aime
> Ouvrir ma bouche à l'astre efficace des vins!
>
> No, the soul
> Empty of words and this now torpid flesh
> To noon's proud silence all too late succumb.
> I must forget that blasphemy in sleep,
> Laid out on thirsty sand, mouth open wide—
> Oh, delight!—to wine's effectual star.
>
> (Mallarmé, 1982, 38–41)

And Wallace Stevens at the conclusion of "The Rock":

> It is the rock where tranquil must adduce
> Its tranquil self, the main of things, the mind,
> The starting point of the human and the end,
> That in which space itself is contained, the gate
> to the enclosure, day, the things illumined
> By day, night and that which night illumines,
> Night and its mid-night-minting fragrances,
> Night's hymn of the rock, as in a vivid sleep.
> (Stevens, 1982, 528)

The great monuments of the romantic tradition seek the formal perfection of the inorganic. The excitement that is passivity calls again and again to the weary voyager in the world.

Notice, however, that, even when Whitman takes up the purest themes of romanticism in "Out of the Cradle Endlessly Rocking," he speaks not of sleep but of awakening; neither of a Wordsworthian anchor nor of a Stevensian rock but of "the thousand responsive songs at random." Whitman's forms are dynamic, open not of the openness of self-subversion but of the openness of an organism controlling the crucial variables in terms of which it defines itself.

Like mathematics, the poetry of the modern West has been closely allied with science. Both have been expected to maintain an impeccable formal purity, on one hand, and to articulate a living space on the other. No *medium*, however, almost by definition, contains the most intimate interior or the most sublime and terrifying otherness. In their places, we have substituted a monotrop that embraces both the soul and the world—"pure" art and shopping malls. Despite its obvious ruthlessness, we have served its need to be embodied in intellectual disciplines as well as totalitarian gods and totalitarian leaders. Now we approach a perfection in which the replica is potentially self-sustaining. It no longer requires enforcement. The distractions it presents are absorbing and comfortable, hallucinogenic and pervasive.

The question of Rimbaud's obligation is still open. Is there a knowledge to which we are obliged? Or do we, henceforth, work modification after modification on a universal grey medium that is attractive only to the extent that it can divert and distract, tease and drug, until humans are as mechanical as the creations of their imaginations?

The Comedian as the Letter G: *The Network of Limited Objects*

In the first episode of Jackie Gleason's definitive sitcom *The Honeymooners,* Ralph Kramden argues with his wife Alice over the issue of buying their first television set. He loses the argument, but, before he gives in, he makes this eloquent argument:

> RALPH. Look, Alice, it ain't just the money. There's another reason I don't want no television in this house. It changes people. They stop usin' their brains. They just look. When people get television, they stop readin' books.
>
> ALICE (*sarcastic*). Well, it can't change us. We don't even have a book!
>
> RALPH (*grasping straw*). All right. All right. I'll get you a book! (Crescenti and Columbe, 1985, 5)

The team that created *The Honeymooners* had an unerring understanding of the medium. Beginning as a segment of *The Jackie Gleason Show,* the series, which was first aired in the 1955–56 season, was the first spin-off. Although it was the victim of bad scheduling and only thirty-nine episodes were made, it was almost immediately syndicated and became the most standard of standard reruns.

The relationship between Ralph Kramden and Ed Norton is based on their complementary attitudes toward statistical reality. Ed Norton accepts the world as it is, as a sewer worker must perhaps. It is indicative of Ed's character that he was planning a career as a fashion designer (as unlikely as that seems), but, he says, on the way to a job interview, "I was running up Forty-sixth street I fell into an open manhole. By the time I found my way out I had two weeks' salary coming" (Crescenti and Columbe, 1985, 205). Ralph, on the other hand, is an inept version of Stevens's ephebe. He is forever in "an ennui of the first idea." Stevens writes: "And not to have is the beginning of desire. / To have what is not is its ancient cycle" (Stevens, 1982, 382). Leonard Stearn, one of the show's writers, notes:

> The idea of pie in the sky, the get-rich-quick-scheme that was going to take Ralph out of his imprisonment in the social structure, was the basis of about ninety percent of the Honeymooners scripts. You recognize that when you come from a background like Ralph's, your only hope is a get-rich-quick-scheme, striking gold, a miracle. Ralph doesn't have the education or the connec-

tions to do it any other way. So it's a fantasy. (Crescenti and Columbe, 1985, 146)

The psychology of *The Honeymooners* is closely allied to the game show. In one episode Ralph appears on *The $99,000 Questions,* and the host, Herb Norris, is played by a real game show host, Jay Jackson, who starred in *Twenty Questions* and *Tic Tac Dough*. Game shows figure repeatedly in the character's thought and conversations. For example, Alice and Trixie are discussing Ralph's refusal to buy a television:

ALICE (*flatly*). Ralph doesn't believe in buying things on time.
TRIXIE (*trying to understand).* Well, you can't blame him for that. A lot of people only believe in buying for cash.
ALICE (*sarcastic).* Oh, he doesn't believe in that either. He wants to win'em on quiz shows. (Crescenti and Columbe, 1985, 2)

In the episode "Funny Money," Ralph finds a suitcase of money (which unknown to him is counterfeit) on his bus. In trying to explain this improbable fact, he theorizes, "I know what it is . . . it's one of those new kind of quiz shows. It's probably called 'Find the Money on the Bus' or something. You know how they're all crazy in television. (*Then definite.*) That's it, Alice, it's a quiz show. I remember one day a guy on the bus asked me how to you get to the public library. That probably was the $64,000 question" (Crescenti and Columbe, 1985, 17). And in at least two different episodes Ralph characterizes people by what their category would be if they appeared on *The $64,000 Question,* which was the big hit of the 1955 season.

The game show is the self-consciousness of the electronic media: the medium represents normative life and distributes prizes with apparent randomness.* The entire population is perceived as possible contestants. There have been more than seven hundred game shows on television since regular commercial broadcasting began (Fabe, 1979, xiii), and, while they have usually been treated as filler and consigned to the least desirable scheduling slots and despised by television's critics, they have been the bedrock of television programming. By comparison to dramatic shows, they are

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*The talk show is a recent outgrowth of the quiz show. Instead of Amana Radar Ranges and Samsonite luggage, it distributes air time, which is, of course, a valuable commodity. In statistical reality, there are no more reliable confirmations of one's own being than an appearance on the air.

cheap to produce, and a few have been as popular as the most popular television offerings in any genre.

Groucho Marx's *You Bet Your Life* is the definitive instance, and its title is directly to the point. Although its creaky wheel of fortune and wooden duck seem prehistoric relics as far as game-show technology is concerned, it is still regularly rerun nearly forty years after these perfect little mystery plays of statistical reality were first enacted. Although Groucho obviously sought contestants who were "interesting"—a delicatessen operator who sang opera, a lady born in Egypt, a feisty 102-year-old man, a mathematician who developed a system for beating roulette, the boom-boom girl who beat the drum for a tire company on a TV commercial, a lady who taught hula dancing—they are Everyperson. Groucho jokes at the contestants' expense, but finally they are allowed to be attractive, and Groucho's appreciation of their particular qualities, whatever they might be, seems genuine: "Well, you are a charming couple, and now it is time to play *You Bet Your Life*." The game show is statistical fate or at least one of its instruments. The world of the electronic culture is the world of an actuary chart: no common ground is necessary. It only requires that everyone, no matter how diverse, be accommodated by the grid of possibilities.

Perhaps more than anything else, it was the game-show scandals of the 1950s that destroyed the kind of innocent confidence in statistical reality that Ralph Kramden represents. "Three of the best games ever," Maxene Fabe writes, "were also the crookedest. First they became a national obsession, drawing ratings not equaled again until *Roots*. When at last unmasked, they would betray the nation's confidence to a degree not duplicated until Watergate" (Fabe, 1979, 191). The game-show scandal, unlike Watergate, which was merely the revelation of petty criminality in the highest places, however, was a profound lesson. The problem was that the contestants too regularly beat the odds.

If the popularity of *The $64,000 Question* was an expression of innocence, *The Honeymooners* was an expression of a popular sophistication and cynicism. Jackie Gleason and Art Carney were talented comic improvisors, and the entire style, which has been almost totally lost in subsequent television comedy, involves a dissociation of actor and character to which the audience is privy. The characters who are clowns of statistical reality are played by actors

for whom accident was the medium. The thirty-nine episodes were minimally rehearsed and taped before a live audience, typically without retakes. On average, it took took about forty minutes to tape a thirty-minute show, and, as Crescenti and Columbe note, "One of the favorite pastimes of Honeymooners fans is 'spot the ad-lib'" (Crescenti and Columbe, 1985, 63). Gleason and Carney were able to incorporate many accidents that would have stopped most actors completely, including on one occasion the accidental collapse of a flimsy set.

In one episode of *The Honeymooners*, "The Safety Award," Ralph is chosen to receive an award as the city's safest bus driver (Crescenti and Columbe, 1985, 245–49). In an interview with a reporter for *Universal* magazine, which is doing a spread on Ralph, Ralph unselfconsciously reveals the relationship between statistics and stereotypes:

> INTERVIEWER. Didn't you ever have even one woman who got on the bus calmly, knew where she wanted to go, and had the right change in her hand?
>
> RALPH. Are you kiddin'! I've only been drivin' a bus for sixteen years.

The entire episode explores the capacity of normative reality to absorb even the most unlikely accidents, which is, after all, the the condition for safety. Walking home the day before the awards ceremony, Ralph is explaining that the key to his record is "look where you're going and go where you're looking." Just as he speaks these lines, he runs into a woman who is walking down the street. She says, "Why don't you look where you're going." The sequence (it cannot be called a plot) consists of a series of highly unlikely accidents. Norton's foreboding, when he first hears of the award, keys our expectation of the unexpected. First, Alice and Trixie turn up, ready to go the ceremony, wearing the same dress (Ralph says they look like the Bobbsey twins). They fight, both refusing to change, and each refusing to go if the other wears the same dress. Ralph and Ed accuse them of being silly, and, as the women represent "reason," they soon reach a compromise. Then Ralph and Ed appear, wearing identical jackets. The resolution of this problem is not shown, but, when they reappear, Ed is wearing an old jacket, and it is clear that Ralph is responsible for damaging the new one. Bringing the car to pick up Alice, Ed, and Trixie, Ralph has an accident. Though he claims innocence, he accepts responsibility

and tries to settle the matter off the record, not wanting it to be in the newspapers that the city's safest bus driver had an accident on the way to get his award. It turns out that the commissioner, who is supposed to give Ralph the award, is ill, and Judge Lawrence Norton Hurdle, who is famous for $50 fines and fifty minute lectures on safety to traffic offenders, substitutes for him. By this point, the fact that the judge should be the other person involved in Ralph's accident seems almost probable. Moreover the judge, who was wearing the wrong eyeglasses, admits that his wife had convinced him that Ralph had properly signaled his turn and that the accident was judge's fault, so, in fact, Ralph deserves the safety award.

The programs have no point whatsoever: they are statistical investigations. The media do not instruct. They endlessly reenact the fundamental laws of statistics in relation to stereotypes that are as flat as die faces. The reality is completely familiar: every time the dice are thrown, they will give a number between two and twelve; over the long run, they will give more sevens than any other number. The *logos* of statistical reality might be stated thus: *anything* that is possible is possible. It might also be stated thus: nothing is necessary.

There is a grim mode of cultural criticism that might propose that the classic television programs represent the appearance of a new mythology, and, to be sure, if statistical reality had a mythology, this would be it. Myths are records of special events, however, and in the statistical medium nothing is special. In one episode, Ralph and Ed get in an argument over whether to watch a romantic movie or captain video. They start flipping from channel to channel, and the dialogue connects and makes at least grammatical sense:

> MAN. Your lips are like rubies . . . and your mouth . . . your mouth is like . . .
> *Norton snaps dial.*
> CAPTAIN VIDEO. A giant crater filled with boiling lava! . . .
> *Ralph looks at Norton, steamed.*
> CAPTAIN VIDEO. And now, Rangers, let me remind you of the drink that builds healthy bones and strong muscles. The drink that Captain Video drinks
> *Ralph snaps dial.*
> WOMAN. A double scotch on the rocks! Certainly darling.

Norton snaps dial.

Captain Video. Yes, Rangers. That's the drink that makes Captain Video fly high. (Crescenti and Columbe, 1985, 246, 9)

And so forth. It is a completely homogeneous linguistic environment. With the advent of remote-controlled television, even the minimal thematics of television programming disappears. According to some studies, the average viewing time on a channel before a change may be no more than two minutes. With twenty-five or more cable channels available, who knows what people are seeing on television, how the images relate to one another, and so forth? It is perhaps too much to hope that the television mass audience will become conscious collagists, but the technology increasingly places programming in its distracted hands.

The normative nature of statistical reality is neither archetypal nor paradigmatic. The archetype is centered in a vision of eternity, and the paradigm is centered in a vision of history. They both involve evaluations of the trivial and the sublime. In statistical reality, time is not shaped by vision. It is the baseline, uncentered, the dimension of entropy along which information and disorder play. What was called the "trivial" and the "sublime" are arrayed in a grid of possibilities in which triviality and sublimity are numbers that are less frequently called than the quotidien, but as pure formality their moments constitute just more instances in an endless and statistically reliable string of instances.

The change from romantic to statistical reality was not a paradigmatic change but a caving in of romanticism upon itself. Reality was not quantifiable in its totality, if indeed its totality is an infinite closed aggregate, but it was quantifiable in all of its parts. The totality that was proposed as the discipline of organic form and the practical world where things were actually weighed and measured were divided by an insuperable barrier. The parts and the whole which seemed so intimately necessary to one another proved incommensurable (such is the discovery of poststructuralism).

As a theater, the communications medium of a thoroughly heterogeneous population is rich in individual examples but poor in dramatic genres. There appear to be only three, each of which represents an attitude toward normative reality:

1. in situation comedy, a normative reality is established, and anything that happens, disturbing the norm, is funny;

2. in soap operas—in their various manifestations, which include the more "serious" cop shows—a normative reality is established, and anything that happens is traumatic;

3. in chase and crash shows, atypical events, though of a completely normative kind, are appreciated for their rarity.

The remainder of television programming—largely sports and "news"—of course, deals with statistical reality directly.

The intense moments of romantic excitement are diffused throughout a cultural medium, as Walter Benjamin foresaw. In the 1980s the aesthetics of film were introduced into politics by way of the electronic media. If the führer brings the emotional energy of his followers to focus on his person, the movie director and television producers (whoever he is? they are?) create a medium so irresistible that the audience becomes absorbed in itself by becoming absorbed in nothing. The secret of Hollywood is that there is no object and no subject. It is the perfect product: Hollywood sells its customers to themselves precisely at the moment when there is nothing there to buy. It is a condition of potentially endless fascination. It doesn't even require a star. A grade-B, journeyman actor will obviously serve well enough. The things for the directors to fear are lack of variety and the possibility that the audience might take it all too seriously. Ronald Reagan proved himself a real professional when he regained consciousness from surgery for colon cancer and started cracking jokes.

The surest way to control great masses of people is not to whip them into an emotional frenzy—they are likely to become unruly—but to trivialize their existence. It is then possible to convince them to act even against their own best interests, which are so ill-defined as not to be recognized. Even the curiosity that might lead them to inquiry and their sense of something in themselves or in their experience which is not perfectly plastic is eroded. They begin to think that they like watching TV. Their lives become serial events that issue only in more events—soap operas and sitcoms, in which the tension never drops below a certain level and nothing definitive ever happens. Death, like life, is rendered meager and begins to seem cozy, attractive. The moments of high romantic excitement—the dénoument of a Wagnerian opera, the speech of the führer, and so forth—are averaged out over the more than three thousand hours of prime-time programming each season.

Television is purely formal, without content, meaningless. Those who criticize its content, both the right-wing, fundamentalist Coalition for Better Television, for example, and concerned liberals, such as Todd Gitlin (Gitlin, 1983) and Henry Sussman (Sussman, 1989), mistake its nature. Its meaning is not significantly thematic or referential. Derrida's critique of the metaphysics of presence is fully realized by tele-vision, *far-off* vision. The television text functions not by collecting attention, however, but by diffusing it. "Television audiences," says Steven Bochco, writer-producer of *Hill Street Blues*, one of the critically respected programs of recent years, "are creatures of comfort. They want something easy and recognizable. May be the biggest problem with *Hill Street* in terms of popular success, is that the show demands to be watched. And most people do not watch television. They are simply in its presence. They use television as a narcotic" (Gitlin, 1983, quoted 306).

Bochco is not using a casual metaphor: the formality of television is an intensification of consciousness without attention to content. Walter Benjamin writes:

> Reception in a state of distraction, which is increasingly noticeably in all fields of art and is symptomatic of profound changes in apperception, finds in the film its true means of exercise. The film with its shock effect meets this mode of reception halfway. The film makes the cult value recede into the background not only by putting the public in the position of the critic, but also by the fact that at the movies this position requires no attention. The public is an examiner, but an absent-minded one. (Benjamin, 1968, 240–41)

Of course, Benjamin was writing before television, but he half-foresees the day when the sets of the Nielsen families would be wired to recording devices that track their absent-minded judgements and, in turn, determine the programming for an entire nation of television viewers. The idea of a television program may be obsolete. The task may be to produce the most attractive possible sequence of individual moments. Judgement of the content of the television environment is largely beside the point. It is not received with the ritual concentration or the awareness of historical density that enlivens the literary texts. The thematics and ideologies that informed the earlier regimes are now the *content* of statistical reality, not their form. What is required is neither a reassertion of the

old archetypes and paradigms, which is at any rate impossible, nor an accommodation to the empty forms of statistical reality, which is death, but an new orientation. The project of artificial intelligence—it might be said—is to produce a simulation of a literate human being. The more profound undertaking is to produce *human* intelligence in the context of the electronic media. That is, an intelligence that does not depend upon the representation of its objects, upon repetition, and upon relating discrete units of comparison. Intelligence in a homogeneous electronic environment is not representation, which is automatic, thoughtless, and endlessly proliferating; it is rather more like music. The ideological content of television is the same as the ideological content of Muzak and must be criticized in the the same terms.

Cognitive Science: Topological Continuity

Despite Descartes's dramatic call for a *mathesis universalis,* the general direction of intellectual history has been toward ever greater disciplinary specialization, and, of course, this tendency has been striking since the latter part of the nineteenth century. Again and again specialists bridged the gap between one discipline and another only to discover that they had created a new specialty. To say the least, the master discipline of philosophic knowledge has eluded us. During the past four decades or so, with the appearance of cognitive science, however, a super discipline, embracing logic, linguistics, mathematics, psychology, anthropology, neurophysiology, computer science, and engineering, as well as certain aspects of nearly all intellectual disciplines has begun to appear. If it is not quite the *mathesis universalis,* the new science has integrated thinking from a wide variety of different fields.

Taking the computer and computer programming as central metaphors, cognitive science provides a methodology that accommodates a wide range of phenomena, without requiring the authority of a universal paradigm. It can allow places to incoherent theoretical schemata without the problems of universality intruding. It is, thus, more closely related to engineering than to theoretical science. Theories are tested in terms of *finite* provability. Validity depends upon the construction of a workable program that simulates the phenomenon in question, not upon impeccable logical consistency. Of course, programming requires consistency in

any given routine, but routines may be isolated from one another; it is not a logic that depends upon an absolute *logos*. In *The Mind's New Science: A History of the Cognitive Revolution*, Howard Gardner writes, "I define cognitive science as a contemporary, empirically based effort to answer long-standing epistemological questions—particularly those concerned with the nature of knowledge, its components, its sources, its development, and its deployment" (Gardner, 1987, 6). This is not the science of Newton, to which Hegel, Marx, Nietzsche, and Freud reacted, nor is it the science of Einstein, Bohr, and Heisenberg, to which Heidegger reacted. For one of the founding researchers in the field, Herbert Simon, the new science is not a science of nature but "a science of the artificial." Although Simon is a sly and even cunning thinker, I see no sign that even he fully appreciates the break with the tradition of Western thought that this concept entails (Simon, 1980). Until recently, a science of artifice—that is, a science of the inessential or accidental—would have been unthinkable: sciences were sciences by virtue of subject matters that were ruled by the necessities of nature. In classical philosophy, artificial constructions—that is, the products of the arts in the broadest sense—were considered attractive precisely because they were exempt from the necessities of nature; they offered refuges from crass reality, natural needs, and barbarism. Thus, the polis itself was the supreme artifice. For the post-Newtonian theorists, the compromise changed somewhat, but the function of art remained generally the same: it offered refuge from the empty, objective structures of colorless matter and meaningless motion in natural array. Now, however, we have a science that is not obliged to nature. We study both human psychology and the objective world not in relation to Nature but in relation to our own technology.

Only now can the central problems of Cartesianism, which derived from the fact that the subject was purposive and the object was not (i.e., dualism and its attendant complexities), be solved. In the complex philosophic synthesis of cognitivism, purpose is a formal property, not a vital spirit or life-force, and recursion can be accommodated without difficulty, so the vicious circles that Descartes had to treat so gingerly now present no problem. The digital computer was a requisite of the Cartesian dream. Only now is it possible to store and process the vast amounts of relevant information.

Cognitive science begs the question of abstraction, and this is precisely its advantage. As formal objects, the Cartesian infinities are much more manageable than the complexities of the actual world, but they represent the concrete world only in an odd parody. For a machine to simulate human behavior in the world, a great deal of information must be accounted for on a per item basis. An intelligent machine must have general representations of the world, called "frames," "scripts," or "schemata," which provide the necessary information required to act in some situation—entering a room, reading a story, and so forth. For formal games, such as chess, this information turns out to be relatively simple.

The world of the game can be fully and adequately specified. In "real" world situations, however, an adequate description is elusive. The frame for a room and what can be done in it involves a vast amount of information. Moreover, when one item in the frame changes, other items are likely to change as well, and we have no formal rule to decide which. For example, if a frame affords the possibility of picking up something with the left hand, then it is not possible to pick up something else with the left hand—it is not possible to catch a ball or open doors with the left hand. Of course, many things—the color of the rug, the configuration of the furniture, and so on—do not change. Humans seem to deal with this problem with an absolute minimum of attention, but robots must learn about how things change when things change. While the robot might review the implications for every move in the frame in relation to all of the prevailing conditions, it would be involved in a combinatorial explosion that would endlessly defer any action.

The first generation of cognitivists divided on how the knowledge was to be represented. The declarativists, represented by John McCarthy and Patrick Hayes, for example, proposed to model the essential structure of the world in an abstract formal language and to treat domain-specific data as content. Thus, a powerful, formal theory, consisting of only a few tokens and axioms, could ideally serve as the generalized description of human knowledge that could be variously implemented for special tasks. The proceduralists, on the other hand, such as Marvin Minsky or Terry Winograd, thought that form and content were more immediately intertwined and that knowledge was bound to specific sets of procedural rules, such as how to play chess or how to use English.

Their conception of knowledge was at once more dynamic and more dependent upon the context of its use.

Patrick Hayes's "The Second Naive Physics Manifesto" is a little masterpiece of artificial intelligence theory which makes some of the problems of description usefully clear:

> Let us imagine that a N[aive] P[hysics] formalization exists. It consists of a large number of assertions . . . involving a large number of relation, function and constant symbols . . . let us call these formal symbols tokens, and the collection of axioms the theory (in the sense of "formal theory" in logic, not 'scientific theory' in history of science).
>
> The success of a NP theory is measured by the extent to which it provides a vocabulary of tokens which allows a wide range of intuitive concepts to be expressed and to which it then supports conclusions mirroring those which we find correct or reasonable. (Hayes, 1985, 5)

Such a theory defines a range of possible situations that can be inferred from it and allows the expression of particular situations. One advantage to the symbolism of first-order predicate logic, which Hayes uses, is the existence of a formal model theory, which describes the possible worlds implicit in a set of axioms: "We have to be able to imagine what our tokens *might* mean" (Hayes, 1985, 10). Otherwise, we will not know if the formal system provides for all of the contingencies that might arise in all of the possible states of affairs that the axioms define. A given set of axioms defines a collection of models or of possible worlds, which is likely not to include all of the possible things and possible acts of the common world. With an axiom set that can be proved to be complete, however, all of the possibilities of its world can be known, and one can say with confidence that every contingency can be adequately described in the language. Hayes notes, "We should treasure completeness theorems: they are rare and beautiful things. Without them, we have no good justification for our claims that we know how our theories say what we claim they say about the worlds we want them to describe" (Hayes, 1985, 11–12). However, he doubts the likelihood, if not the theoretical possibility, of an adequate and complete theory: "We must build theories which are only partially closed. Some tokens will not yet have their meanings axiomatically specified: they will represent directions for future investigation. We will, indeed, always be in danger of having later

theory construction come back and force an alternation in our present work, perhaps scrapping it entirely" (Hayes, 1985, 17).

Hayes's system as described relates only to a ghost of itself, which is constructed by this operation: "Make a ghost model as follows. Let each name denote itself. Every token which should denote an operation on things, interpret it rather as an operation on the names of things, whose result is the expression which would have referred to the thing got by performing the operation on the things named" (Hayes, 1985, 12). In this sense, the model is purely self-referential. The problem of interpreting the model in terms of an actual world, so it can interact with input of sensory or linguistic data, is difficult. "Indeed," as Hayes notes, "no formal operations, no matter how complex, can ever ensure that tokens denote any particular kinds of entity." Any formal linguistic system, whether first-order logic or the English language—considered apart from its common use—requires an interpretation relating the formalism to the world. The tokens in the formal system must be interpreted by a second system. Obviously, this only defers the problem a step, because the metatheory also requires a metatheory, but the deferment often creates a useful leverage (i.e., something like intelligence).

Some of Hayes's analyses of the common language are comparable in elegance and interest to Wittgenstein's. He gives this cogent and economical example of the difficulty of specifying what it is to put something in something: "Liquid objects . . . are defined by their solid containers, and may be in a state of continual overhaul, like a river. The full story is more complex, however, since if the river dries up and refills it is the same river, while if I drink all my coffee, I go get *another* cup" (Hayes, 1985, 29). Naturally, much of this knowledge is readily available: it needs only be made conscious and expressed in language that makes the relationships clear. Hayes describes the research as consisting of an exploration and clarification of intuitions, and he compares the naive physicist's techniques for recognizing accurate descriptions of the physical world to the grammarian's techniques for sorting out acceptable linguistic constructions.

Sometimes, however, mathematical objects such as symbolic tokens have difficulty in catching the intuitive character of the world. Consider, for example, Hayes's discussion of "touching":

> Two bodies can touch, and when they do, there is no space between them: this could even be a definition of touching. It is also clear that they do not (usually) merge together or become attached or unified into one object: each retains the integrity of its bounding surface. And it also seems intuitively clear that the surface of a solid object is part of the object: the surface of a ball bearing is a steel surface, for example. And, finally, the local space we inhabit does seem to be a pseudo metric space (in the technical sense), i.e. there is a (fairly) clear notion of distance between two points. Unfortunately, taken together, these intuitions are incompatible with the basic assumptions of topology, and it is hard to imagine a more general theory of spatial relationships. Briefly, the argument goes: a pseudometric space is normal, which is to say that if two closed sets of points are disjoint, then there are disjoint open sets each containing one of them. (Intuitively, two closed sets cannot touch without having some points shared between them.) But if objects contain their surfaces, then they are closed sets: so they can never touch.

To model objects touching in a formal language, therefore, requires a "fix," and Hayes treats touching objects as if "there is an infinitesimally thin layer of space . . . between them." Admittedly, this is unintuitive and does not address the basic problem "which is that our intuitive local space is, indeed, probably not topological." (Hayes, 1985, 21–22) The model, unlike the models of classical physics, proposes to describe not the world but the language of describing the world. This descriptive domain, unlike the descriptive domains of Descartes or Newton or the Wittgenstein of the *Tractatus*, contains no ideal objects; the objects are rather patterns of statistical regularity that can be described within useful, though not absolute, limits. Unlike robots, humans live in the world, not a description of it. The continuities of topology turn out not to be the continuities of the space that we inhabit.

RECURRENCE

Only those disciplines that study culture have been largely untouched by the cognitive science.* The students of literature, art,

*Mark Turner's *Reading Minds: The Study of English in the Age of Cognitive Science* (Turner, 1991) is a notable exception, or so the subtitle seems to imply. Turner, however, takes the occasion of cognitive science to reassert, with one small twist, a traditional, even reactionary, conception of English studies.

history, even of film and other popular genres seem for the most part to have missed perhaps the most profound intellectual development of our time. They continue to speak of power, eros, and will in terms that belong the nineteenth century. The critique of philosophic absolutism that has been brilliantly articulated during the past two decades is largely beside the point. The significant mechanisms of control are not now absolute but cybernetic, based on the measurements of temporality, differences, decenterments, even, in a sense, absences. That is, we have learned to free ourselves from the old structural imperatives at precisely the moment they no longer command us. The ongoing hope to demonstrate the inefficacy of both the old mechanism and the old organism is a nostalgia for the nineteenth-century constraints on the freedom of thought that can now be overcome. Michel Foucault's prescription in his preface to *Anti-Oedipus,* "Develop action, thought, and desires by proliferation, juxtaposition, and disjunction, and not by subdivision and pyramidal hierarchization" (Deleuze and Guattari, 1977, xiii), is precisely the formula of the new mechanism. *The textual structure that frustrates nineteenth-century absolutist totalitarianism is precisely the textual structure that feeds the new statistical totalitarianism.*

Organic form as it was understood in the nineteenth century married the human subject to the Newtonian object, and, though it was an uneasy marriage from the beginning, it created a productive allegiance between warring families. To Friedrich Engels, it appeared that this spectacular productivity was mere chance that he could imagine only as chaos. Fortuitous events *in sufficient numbers,* however, are quite orderly, and, of course, even Marx and Engels themselves believed that the chaos was ultimately subject to historical laws. As Freud first discovered, anticipating cybernetics and information theory in this regard, rational mechanisms of self and society can be configured from purely irrational components.

Marx, Nietzsche, and Freud, each in his own way, attempted to invert the ontological priorities, to assert the priority of the concrete and the material over the symbolic and the abstract. They did a service by stripping the dialectic of its disguises, revealing the logic of production or power or eros that lurked behind the idealistic absolute. "Matter," "force," and "desire," as it turned out, however, belonged to the same language as "spirit" and "mind"

and behaved according to the same logic. In effect, the great materialist thinkers of the nineteenth century exchanged one mechanism of thought for another without achieving a definitive grasp on reality or the liberation that they believed such grasp would afford. The forms were indifferent to the substances in which they were manifested: matter or mind, mechanical force or electromagnetic field, meat or microchips of silicon were all the same. The material world they proposed to inhabit folded into the theory by which they hoped to describe it, and the theory in turn folded into languages. The language thus created did exhibit the structures of the world, but it no more revealed the *essence* of those structures than did any other complex natural process. If all inquiry is deflected into a symbolic realm and the dialectic has no objective content, as is ultimately the case with post-Hegelian logic, history is without shape, and the dialectical strategies toward the intelligent renovation of history are at once available as apparent modes of action and without significant content apart from their contribution to the gross cultural production.

Is it possible to withdraw assent from the endless mediation of the world by way of a logic and a language that sustain their *own* processes rather than the processes of the individuals who create and use them? Is there a knowledge we can use rather than be used by? For us, who increasingly produce meaning commodities and services rather than material goods, these questions have the force of the Marxist question of revolution. They address the appropriation of our minds by the pervasive medium of labor and leisure; even the unconscious, it appears, is invaded, appropriated, and mechanized by linguistic logic. It still seems, as it did to the young Marx and Engels, that "men and their circumstances appear upside down, as in a *camera obscura*." The lens, however, has been changed: now, all production is *theoretical* production. We have developed the Marxian theoretical eye without producing the stateless and just society that Marx assumed the theoretical eye implied. The randomness of reality, which seemed to Marx and Engels a denial of reason, is statistically regulated. Even "monstrous" aspects of nature that had evaded mathematical formalization, such as the shapes of mountain ranges and the curves of coastlines, even chaos itself, can now be described by statistical means by means made available by fractal geometry, catastrophe theory, and related disciplines.

Must we dwell in the guilt of an empowerment that requires obedience to the *projects* of life, not life itself? Can we express value by means other than lamentation for the lost Absolute? Is language a single entity, a logical machine in which all of the parts mesh, or is it, as Wittgenstein argues, more like a collection of tools that have related uses but a variety of operating principles? Does the science of linguistic have a subject matter? Is the medium itself a definitive essence or is it an accident, a medium that happened to be available to self-cognizing organisms when they sought to express themselves? The questions proliferate: was the linguistic nature of genetic coding prior to the linguistic coding of genetic nature? the linguistic nature of neural coding prior to the linguistic coding of neural nature? To answer any of these questions is, unfortunately, to beg them. We are able to think about the world only *after* we have assured ourselves that it is coherent, that every thing in logical space entails every other thing. It is, however, precisely our thought that allows us such assurance. The obvious solution to these perplexities, to seize the source of language and theory production, to recoup the lost integrity, is to return to the *false* beginning and to repeat the Cartesian strategy. Thus, we ride the wheel of the Nietzschean recurrence.

CONNECTIONISM

The rigor with which time and energy is extracted from the population in the abstract fueling of culture by information processes makes it appear, as Hans Moravec supposes, that a genetic takeover is underway. The Nietzschean return is an expression of the selfish independence of the DNA molecule and its ruthless strategies of self-preservation. The split is not between mind and body, as the great Western nineteenth-century thinkers believed, but between mind codes and genetic codes. Their brave materialisms are so far from the mark, so caught up in a struggle that proves to be irrelevant, that they cannot even be usefully reinterpreted. Moravec asks,

> How should you and I, products of both an organic and a cultural heritage, feel about the coming rift between the two? We owe our existence to organic evolution, but do we owe it any loyalty? Our minds and genes share many common goals during life, but even then there is a tension between time and energy spent ac-

> quiring, developing, and spreading ideas, and effort expended towards biological reproduction (as any parent of teenagers will attest). As death nears, the dichotomy widens; too many aspects of mental existence simply cannot be passed on. (Moravec, 1987, 169)

To be sure, downloading a computer file is easier than raising a teenager, and, as Moravec points out, the storage capacity of our largest computers is approaching that of a teenager. Hopefully, like teenagers these computers might also exhibit extraordinary powers of self-organization, so they would achieve something despite the failures of programming (education).

With the increase of computing power, it now becomes possible to think of replicating not the human mind but the human brain, not the symbolic self-representation, which the culture has struggled so valiantly to produce, but the neural circuitry or a symbolic representation of the neural circuitry. Of connectionist theory in cognitive science, David E. Rumelhart writes:

> Our strategy has . . . become one of offering a general and abstract model of the computational architecture of brains, to develop algorithms and procedures well suited to this architecture, to simulate these procedures and architecture on a computer, and to explore them as hypotheses about the nature of the human information-processing system. We say that such models are neurally inspired, and we call computation on such a system brain-style computation. Our goal in short is to replace the computer metaphor with the brain metaphor. (Rumelhart, 1989, 134)

We no sooner create a technology for symbolic self-representation than it is irrelevant. No doubt, this fact explains the cultural malaise of the past two decades, the almost universal loss of confidence in our ability to know and act responsibly, the gridlock of government, the pessimism of the academy, and the oppressiveness of the information media that has been nearly our only entertainment. Thus, the cultural project moves into a new mode of repression. Now we are to express not the generalized code of the culture, which T. S. Eliot and Martin Heidegger, for example, saw as the burden of sense making, but the genetic code that produces the neural circuitry itself. We are to march to the rhythms of DNA as the Nazis marched to Aryan music.

We now must see that the human individual is not the token of

either a cultural or a genetic code. We are beyond both culture and nature. Self-production is absolute.

This proposition—self-production is absolute—is not testable, but it does not make an epistemological claim. It proposes an aesthetic and an ethic but not a truth. It is tested by action, not the protocols of abstract verifiability. Self-production is unique, not normative. It is judged in relation to the environment that the acts of self-production themselves uniquely create.

STATISTICS AND THE SINGLE OCCASION

The baroque extravagance, that drive toward new and ever more inclusive formality, is now exhausted. The dialectical impulse to push abstraction back to the concrete and particular images no longer generates the excitement of history. Only a few supreme examples of each formal type that can be collected in museums—collections of every kind, paintings, literary canons, repertoires, barbed wire, Avon bottles, and baseball cards—suffice to exhibit the formal gestures. The world itself is a museum, an example of itself: Nature does not exist. To receive a message about nature is to constitute a machine that tells us about itself. The problem of the One and the Many has not been solved, but the question has been successfully begged.

The poststructuralist appeal to the undecidability of every locale inside infinite logical horizons is true but *trivially* true. Finite zones can be isolated and analyzed, giving statistically useful results. The symbolic machine that the human mind constituted in the place of the world is now a global enterprise with its own inertia. Mind can no longer *think* its own creation; its functions are local administration and maintenance. The weariness of our moment cannot be revivified by turning back to the tradition that articulated itself by asserting the aesthetic as a contradiction of the abstract. Poetry, however, has not ended. Like logic itself, it is now free of its opposite, and it is the nature of this concrete articulation that we are now to understand.

One might speak of the appearance of a new archetype, which is to say not a new form but a new world, but the notion of the archetype belongs to archetypal thought, and it is precisely that scaleless notion that we now leave behind. We have moved from the

Eleatic notion of a *logos* and its heroic incarnation to the notion of language itself as cosmic order. The tradition of the *logos* proposed from the outset, to speak the unspeakable, to incarnate the immaterial, *and* rigorously to obey the law of noncontradiction. These requirements were impossible but nonetheless rigorous and violently productive. Setting out to make humans into gods, however, it made them only into engineers.

In the domain of the common, by contrast, there is no presupposed background, no repetition, and, so, there are no concepts or even objects. We must speak of the "thing"—self, word, object—at a particular time, involved in a particular attendant, local world: it is never complete, it never realizes an essence, and it is never apart from the event of itself and its performance. The language of a poem is not informative. It neither satisfies a thirst for "fact and reason," to recall the words of Keats's famous passage on negative capability, nor, for that matter, to follow out the Keatsian antithesis, dwells in "uncertainties, mysteries, doubts" (Keats, 1965, 1:193). It has no relationship to systems of determination and decidability; its domain is not information but value.

The object—the poem, painting, or any act of living—divorced from its event, is statistical, a conceptual fossil of thought or life. We must learn to speak of mind and knowledge as events (i.e., the *same* event), occurrences of clarity, opening to the insistent and vivid revelation of arising contingencies, of what happens *now* and its factual content. Ludwig Wittgenstein: "Seeing life as a weave, this pattern (pretence, say) is not always complete and varied in a multiplicity of ways. But we, in our conceptual world, keep on seeing the same, recurring with variations. That is how our concepts take it. For concepts are not for use on single occasions" (Wittgenstein, 1970, 99). When it is possible to survey an event in a statistically significant run, science will serve; when we have only one chance, as is always the case for a living being, poetry is required. Unlike the concept, poetry *is* for use on single occasions. When it is worthy of our attentions, when it is not merely another form of distraction to which we are subject, it does not have or give a second chance. It is the measure of an actual, concrete occasion of living.

Statistical reality is not a unified principle or even a ghost of a unified principle. Its world cannot be deconstructed to reveal a metaphysical origin. The only thing all versions of statistical reality

have in common is that they require the input of information, which they do not return in the form of identity-sustaining output. We have lost the last vestiges of autopoietic culture. Our public life is out of homeostatic control and wreaks destruction on the world that is our common home. Now to identify with the statistical mechanism of social organization involves autopoietic self-destruction.

There is one experience of otherness that is strangely intimate, that indeed expresses us better than we express ourselves. In the Lacanian formulation, "the unconscious is the discourse of the Other." This Other is the counterpart that underwrites both ego's logic and its ignorance. *There is also, however, an otherness that cannot be appropriated,* an otherness on which we have no hold and that has no hold on us, an otherness that is not a phantom of our own psychic dynamism. Confronted with otherness as utterly alien, the problem of language in all of its originality appears. Discourse, the language that continues by its prearrangements, falls into silence: nothing is *ex*-pressed or *re*-presented. One is required to speak but has no idea what language might be. Language must be brought forth, not from an origin or a lost *logos,* not even from Language itself in all of its given systematicity and multiplicity, but from *nonlanguage.* We confront one another, but there is no text to interpret. The Euro-American, the Amazonian Indian, and the Chinese peasant all suddenly find themselves needing to speak of, and for, their imperiled planet as if they had never spoken before. Henceforth, we are all in the crisis of that moment of the first time anyone spoke anything whatsoever.

NONSTATISTICAL REALITY

Public reality is now utterly degraded. If there is to be a culture of depth and resonance, independent observers must interact, enter into intercourse and establish larger unities—families (true families rather than units of economic dependency), tribes, communities—in which their autonomy is amplified by its participation in the life of the new unity.

For isolated individuals, the entrance into larger unities is both highly desirable and traumatic. Although the prospects of relieving the loneliness of autopoietic unity is a significant attraction, none of the private logics that propose a public space are viable. The

entrance into community is, therefore, unmediated. In any attempt of the individuals to translate from the proprioceptive equilibrium of their autonomy to the formal language, the very thing they would communicate by way of the formal structure is lost. The language by which they propose to communicate, it turns out, is common to no one. The very things of which they hope to speak are disallowed. Gregory Bateson comments: "The explanatory world of substance can invoke no differences and no ideas but only forces and impacts. And, per contra, the world of forms [social mechanisms] and communication invokes no things, forces, or impacts, but only differences and ideas" (Bateson, 1972, 271). Language, therefore, is noninformative. It is emotional and connotative. It gains accuracy not by denoting this or that "thing" but by cutting across several potentially codable signals that interfere with one another and by managing to find a single usable value for complex states of affairs in which the whole is implicit in all of its parts. Visual, auditory, and proprioceptive information, which cannot be reduced to a coherent code, are all measurable by a single scale. In a given instance or embodiment, neighboring signs spill over and modify one another, not by entering into logical relationship, but by virtue of proximity alone. In use, novelties may arise and produce new signs in relation to unique events of knowledge but not in relation to the systemic requirements of preexistent signs. The autopoietic image, which is to say the trace of Eros, is not a representation or a simulacrum; it is the thing itself, the manifest thing. Maturana and Varela write:

> Language was never invented by anyone only to take in an outside world. Therefore, it cannot be used as a tool to reveal that world. Rather, it is by languaging that the act of knowing, in the behavioral coordination which is language, brings forth a world. We work out our lives in mutual linguistic coupling, not because language permits us to reveal ourselves but because we are constituted in language in a continuous becoming that we bring forth with others. (Maturana and Varela, 1987, 234–35)

Autopoietic language produces not a represented world but itself, as it takes its measure on the world upon which it physically impinges and leaves a trace. Whether its forms are glyphs, alphabets, or traces in magnetic media, such language cannot be accounted for in terms of rational coherence and completion. Each

incident of language must be read out in terms of its particular occasion and use. It is more accurately transformative than informative: temporal and contingent, it brings forth constantly a new world. Rather than transferring information from a sender to a receiver, thereby reducing uncertainty, it establishes precise orientations in a linguistic field which is open to measure. Indeed, autopoietic language *increases* uncertainty. It wipes out all epistemological capital. The requirement of negotiating a new equilibrium is constant. The common knowledge is perishable; it cannot be banked. All disciplined knowledge must be read out in relation to the autopoietic processes of community. Statistical reality is only a tool of nonstatistical reality.

Logography: Non-Statistical Writing

The poststructuralist critique is important, not because it bears significantly on scientific or technological practice, which can obtain statistically useful results by limiting attention in given cases to relevant finite zones, but because absolutist thought still remains a sentimental attraction that at any moment may assert its false but commanding authority. The philosophic tactic is useful in this sense: the classical doctrines that make claims of absolute truth can be overturned by showing that the absolute structures on which the claims are based are minutely incomplete, that gaps or residues remain unstructured and thus create havoc as the minutiae multiply throughout the potentially infinite system. Poststructuralism, denying the idealities of classical structural schemes, while using their objects and rules as generative fictions of infinite textuality, however, privileges the memory of the tradition that it rejects. The traditional procedures are maintained but only at the expense of rendering them impotent and futile. And, of course, it should be mentioned that to careen through infinite textual space is its own thrill and compensation for lost certainty, the hallucinogen that is found in the media's pharmacopeia along side television's sedative.

In the poststructuralist analysis of language, temporality arises as a result of slippage between the generality of language and the particularity of events, as an intrusion of the cussedness of life in the utopia of intellect. To the prose intelligence, which is without measure, time is an enigma. It has been used as a battering ram

against metaphysical citadels, which are more sentimental icons than efficacious defenses of a cultural tradition; but as a dimension of living, time generates anxiety. Measure as a linguistic form has been lost to the logocentric West, and the vigorous campaign to expose metaphysics has done nothing to recover the temporal grounds of the common knowledge. The domain of the common, which was once the burden of folk culture, the active and creative functions of life, as opposed to the merely descriptive and regulatory, must now be specifically constituted.

Charles Olson's redaction of Hesiodic cosmology addresses this necessity directly:

> The sea was born of the earth without sweet union of love Hesiod
> says
> But that then she lay for heaven and she bare the thing which
> encloses
> every thing, Okeanos the one which all things are and by which
> nothing
> is anything but itself, measured so
> screwing earth, in whom love lies which unnerves the limbs and
> by its
> heat floods the mind and all gods and men into further nature.
>
> (Olson, 1983, 172)

Okeanos is the principle of autopoiesis. The distance from Maturana's and Varela's "described so" to Olson's "measure so" is the distance from the domain of the mechanistic and statistical to the domain of the creative and active. In the domain of description, nature is fixed as a realm of possible worlds; in the domain of the creative, the heat of love "floods the mind . . . into *further* nature," which is the realization of the contingent facticity of the organism.

Language as description is reasonably understood; the science of linguistics has been devoted to it almost exclusively. As a concrete act of measure that relates us to a manifest concreteness, however, the poem potentially gives us extraordinary access to our own participation in the construction of the world.

It has been said, with impressive authority—Hegel's, Heidegger's, Lacan's, to mention only one intellectual lineage—that the world is without an origin; it would be truer to say that the origin is without a world. Indeed, for anyone there are many worlds, and, while our logic exacts rigorous consistency of a certain kind, it no longer requires consistency of *image or description*. World making is an *ad hoc* activity. In Charles Olson's *Maximus*, for example,

there are many world pictures, mapped and remapped in non-Euclidean space:

> The old charts
> are not so wrong
> which added Adam
> to the world's directions
>
> which showed any of us
> the center of a circle
> our fingers
> and our toes describe.
> (Olson, 1983, 64)

Of course, the charts were also not so right, precisely because they did not show *any of us* but Adam, that spreading generalization, Man. The leaping Adam is in fact a mechanism, a projectile of his own cognitive medium, frozen spread-eagle on the cardinal directions, because his self mechanism can know nothing without knowing everything; he is dialectical man, self-frustrating man, forever leaping and forever fixed. Olson juxtaposes another Adam whom, at the age of nineteen, he was taught to embody at the Gloucester School of the Little Theatre:

> It was in our minds
> what she put there,
> to get the posture,
> to pass from the neck of,
> to get it down,
> to get the knees bent
> not as he was shown, arms out, legs out, leaping
> another Adam, a nether
> man
> (Olson, 1983, 65)

who is in fact nearer Java man, pithecantropus of the middle Pleistocene, as the poem goes on to make clear, than the humanistic Adam of Renaissance charts. The human is intensive rather than extensive, *inhibited*—not by social constraint but by virtue of the self-obstructing nature of the human project—rather than *exhibited*, drawn to erect posture by a center that is not logical but physical. As a result, the relationship between the human subject and object, between conscious and unconscious, is no longer dialectical; these traditional oppositions stand in relation not as logi-

cal contradictions but as mapped territory to unmapped territory. The nether man or woman—the unconscious—is oriented to time and space, not by extension, as if there were an origin in the past and a completion in the future and a signifying chain stretching (perhaps infinitely) from one to the other, but by *intension*. And it is essential to keep the full meanings of "extension" and "intension" in play: that is, language is not denotative but connotative, and the time and space of human orientation is significantly measured not as a discrete manifold but a continuity—an experience of depth in which the small, even the smallest, entities are infinitely rich and valuable.

How does one entertain that which is beyond *logos* and the reason proper too it, to recall Olson's phrases, without desperate submission to proliferating information that expands until memory is glutted with its own waste products? The answer cannot be simply given: the conditions that make language possible are not themselves linguistic. One might usefully think of Will James's notion of action, of L. E. J. Brouwer's intuition, and of Wittgenstein's meaning as use. These address certain accesses to formal conditions of temporality that bear on language but that are inherently silent. We have largely failed to develop the precise practice of these ideas, however. The theories are all limited in their success to explaining how we casually bumble through. Only the poets have taken seriously the question of inhabiting time, *being time*, as the condition of action.

In his lectures at the Black Mountain Institute for the New Sciences of Man in 1953, Charles Olson *assumes* that his audience "is prepared to entertain the idea that we are already beyond rationalism, beyond humanism, beyond realism . . ." (Olson, 1978, 15). "Beyond," not just *after*. If rationalism provides a doctrine of structural relationships, humanism a doctrine of structural origination and focus, and realism a doctrine of structural representation, the alternatives cannot be themselves doctrinal, because any *doctrine* must be subsumed by reason, egocentrism, and representationalism. The alternatives must issue in a *practice* that can be indicated in a series of injunctions having no authority but their own results—like the directions to a particular place or a recipe. In their structures, directions and recipes involve no formal hierarchy, no grammatical center, and no representation. The recipe is an ordered series, and the necessity that orders the individual steps is

not logical or grammatical. It is not a *logical* connection between, for example, putting the eggs in the bowl and beating them. The center is not a logical position in infinite grammatical space but an unspecified subject in relation to finite and actual possibilities. The only imperative *force* of these imperative forms is desire: *if* you want to get to some place, you follow these directions, *if* you want a cake, you follow the recipe. If the cake is no good, it is not the fault of the *grammar* of recipe. Either it is a bad recipe, calling for the wrong ingredients or the wrong procedures, or the wrong recipe for the kind of cake you desire. There might be mistakes in grammar that cause you to do the wrong thing, but that is not the fault of the grammar itself. And, finally, one does not bake a cake by looking at the picture of the finished product. In fact, one might successfully follow a well-written recipe and be surprised at the actual results—not have a picture of the cake in the mind's eye before it is finished. One gains access to statistical reality by way of pictures, absolutely or pragmatically centered and rationally structured, and confirms the access by way of another picture. One gains access to nonstatistical reality—that is, a particular rather than a normative cake—by way of a recipe and confirms the access by eating the cake. Olson quotes Dante on the nature of comedy as a set of directions: "we may say briefly that the end of the whole and the part is to remove those living in this life from the state of misery and lead them to the state of felicity" (Olson, 1967, 83). Such is the injunction of the poetics of the common knowledge.

The poststructuralist critique decenters the universal, but its practitioners are left at the mercy of a symbolic structure in which every trope is entropy. When it is revealed that "Information" is in the beginning and that the Word comes later, to recall Fred Dretske's dictum, we are delivered into a discourse that is always in the crisis of the reversal of the sign by which the same quantity signals a reduction of uncertainty on the one hand and an increase of uncertainty on the other. The poststructuralist critique reveals only the medium: a text is a demonstration of a channel, of the possibility of communication. Language as such, however, is a vast and unreliable channel because the systematic background of any particular language event cannot be established with certainty. No message can be interpreted if it reduces an infinite number of possibilities by only a finite amount. Language is useful as a communication tool because in practical situations the possible mean-

ings are severely limited by disciplines of various kinds, conventions, and explicit purposes. Only in such especially preconditioned environments is statistically reliable information possible.

When language is disciplined only by the part—the finitude of which becomes more apparent as our rapacious exploitation becomes more efficient and ruthless—as opposed to the ideal entities presupposed by rationalism, humanism, and realism, however, it is dimensioned not by probability but by its own measure. It is *extropy,* a turn that is not in a closed channel, indeed a turn that is not conditioned by a channel at all, even that broadest of all channels—Language itself. It is not *in*formation but *e*motion, an event in the world.

The reality of what is presents itself in contradictory characters: as a continuity and as a series of relationships. Wherever experience has been taken on its own terms, without the prior assumption of its coherence—that is, without begging the question—this duality appears. It is not however a *dualism*. There is no reason to believe that it involves two substances. It has rather to do with the fact that any act that can be accomplished can also be described. The difficulty, and it is a practical problem rather than an ultimate philosophic perplexity, is that the requirements of action are different from the requirements of description: action requires an integral being and description requires a self-divided being. These contradictory requirements might be met from the vantage of the infinite—at least this has been an overwhelming speculation—but, of course, we have no recourse to such a vantage. Thus, in the nineteenth century, when psychologists finally began to look at psychic reality as carefully as the physicists had looked at the natural world, these inconsistencies or complementarities began to appear.

Active intellectual life, as opposed to the repetition of closed rationality, depends on two intuitions that are permanently out of phase with one another. In the face of a culture that is relentlessly monolinear, a culture in which moving the lips is a mark of a poor first-grade reader, Olson asserts clearly and fully for the first time since before Plato the necessity of the physical voice to the exercise of intelligence:

> The difficulty of discovery (in the close world which the human is because it is ourselves and nothing outside us, like the other) is,

that definition is as much a part of the act as is sensation itself, in this sense, that life is preoccupation with itself, that conjecture about it is as much of it as its coming at us, its going on. In other words, we are ourselves both the instrument of discovery and the instrument of definition.

Which is of course, why language is a prime of the matter and why, if we are to see some of the laws afresh, it is necessary to

> examine, first, the present condition of the language—and I mean language exactly in its double sense of discrimination (logos) and of shout (tongue). (Olson, 1967, 3)

The West was completely bowled over by the technology of writing (as it was later bowled over by the printing press and now by electronic information management). It was so impressed by writing's mnemonic efficiency that it dismissed the relevance of the voice and the body to the function of intelligence. Derrida and his followers know voice only as discrimination or "difference" and, therefore, as the Achilles' heel of metaphysical thought. As a mystery of metaphysics, the voice does not speak. Its sole function in metaphysical thought is to provide presence. The poststructuralists know nothing of voice as "shout," nothing of poetry. To the poetic intelligence, difference is measure.

The origin of a prose text may be imagined as a *logos* that is at one with itself. The philosophic project has been to suppress the dualism that is inherent in the nature of abstraction as such (i.e., there is always that from which one abstracts and the abstraction) and to claim the unity of the abstraction. It is in the nature of abstraction to see everything as One, but the procedure that allows the vision of the One calls us to consider two. This is the basis of the dialectic, the internal secret of Platonic idealism and all subsequent idealisms; this is the prose of the world. The poem, however, is always cast in the dissonance between the act and the necessary stasis of the describing mark. The poetic origin is not a unity but a contradiction.

We can speak of this difference in terms of two linguistic modalities, language in the mode of explanation and language in the mode of creation—statistical and nonstatistical probability—and the modes of intuition on which they depend. These two notions are most relevantly defined by Alfred North Whitehead in *Process and Reality.* Of one he writes: "Undoubtedly, the intuitions of Greek, Hebrew, and Christian thought have alike embodied the

notions of a static God condescending to the world, and of a world either thoroughly fluent, or accidentally static, but finally fluent—'heaven and earth shall pass away'" (Whitehead, 1978, 347). This is, one might say, the Parmenidean intuition. It renders primary discourse impossible. Logical thought can say no more than this: If there is anything, it is One, unchanging, unmeasurable. The dialectic that follows this insight, which is to say the intellectual history of the West, is problematic, but it does allow the possibility of description and provisional explanation. Being always double (*dia*/lectic), every move toward the One is also a move toward the two and vice-versa. In the meantime, however, the explanation that the dialectic provides is useful. In other words, the Western tradition *began* in effect with the poststructuralist critique, or, one might say, Parmenides demonstrated that structuralism is its own critique: if there is a truth it cannot be spoken. The tradition is logocentric only in a superficial sense. The thought of the logos has shaped certain conventions, of the book, for example, but that has as much to do with convenient packaging as philosophic necessity. Now, when information can be stored and retrieved much more efficiently by electronic techniques, even the sentimental regard for the *logos* is no longer necessary.

Whitehead also speaks of "civilized intuition": "There is not the mere problem of fluency *and* permanence. There is the double problem: actuality with permanence, requiring fluency as its completion; and actuality with fluency, requiring permanence as its completion" (Whitehead, 1978, 347). It is the intuition that is essential to all orienting action but that the mode of description tends to betray; description does not easily resist the temptation to explain creation, thereby closing itself and withdrawing from the physical world.

In the philosophic project, the intuition that has one component that can be spoken or captured in paint, and another—an entrance to time—that can only be indicated or marked by rhythm, are transformed into two propositions that contradict one another. Two senses of the world that are simply unrelated are imagined as terms of a logic. That is, stasis is attributed to God and fluency to earth: the duality of image and time, vision and audition, is confused with the contradiction of one propositions by another, and the dialectic begins. In the logocentric picture, desire seeks a lost origin, the very certainty that its own activity disrupts.

The desire to possess, to speak the silence, or the desire to represent oneself and to satisfy oneself in the representation is the motive of a history all too familiar—a history in which order is destructive and Eros is deathly. The irreducible duality is denied in the name of the unity of the intuition which is its chief mystery. The subsequent attempt to name the mystery requires a linguistic materialism that has been expressed in the doctrine of the *logos*. Love is infected. The best we can imagine, inside the terms that it provides, is a reconciliation or an accommodation of mind to body, subject to object, life to death. The great sublation that romanticism envisioned rises to its own sleepy fanfare in the homogenized, grey life-death of soap-opera America.

In 1956, Olson began to study Whitehead's *Process and Reality,* discovering that its suggestion, if not its letter, was consistent with his thinking as it had been developing for the previous decade. Whitehead made it possible to restate the central argument of "Projective Verse" and "Human Universe" in vastly enlarged terms. Later, Olson would write of "Whitehead, who cleared out the gunk / by getting the universe in (as against man alone" (Olson, 1983, 249). It is characteristic of Olson to use terms like *gunk* in senses that are so precise that their full definition becomes technical. It is by no means the throwaway that it may first appear. "Gunk" (gum + junk, perhaps) is precisely those aspects of language that allowed abstract thought to compensate for the loss of rhythm by creating a universe of discourse. It is the sludge that inhibits the fluency of language and allows the inflation of the grammatical at the expense of the rhythmic. Olson's problem may be stated in these terms: How is sophisticated thought possible without the infection of abstraction? He had, of course, the evidence of the imagists' work, but for all of their beauty and value as demonstrations, Ezra Pound's "In the Station of the Metro," H. D.'s "Evening," and William Carlos Williams' "The Red Wheel Barrow" do not establish an adequate language in which to conduct the cultural business, and therefore they remain merely "aesthetic"—that is, dependent upon *another* language. Pound's *Cantos* are more to the point in terms of their encyclopedic breadth, but they remain attached to an authority that requires vicious enforcement.

To insist upon individuality as the ground of language is only to insist upon another level of abstraction, until one descends to an

atomic level. Of course, the tradition of classical physics hopes precisely to seek the language in which the location and vector of every atom is known. Such can be the only grounds for an accurate rationalistic language, and the failure of rationalistic metaphysics is related specifically to that failure. Every atom, whether logical or physical, sooner or later reveals its constituents until, finally, the unit becomes so small that observation disturbs the object, and the unit of measure becomes some theoretical event horizon, not a concrete unit. The paradox of explanation, which depends upon statistics, is that the supposed simplest units of matter (whether the units are radium atoms or voters) cannot be described apart from their relevant society. Neither the quantum physicist nor the public-opinion pollster deals with individuals, only with the relationship between posited individuals and the generalization of all of their possibilities. Whitehead, however, also speaks of non-statistical probability.

> There can thus be an intuition of an intrinsic suitability of some definite outcome from a presupposed situation. There will be nothing statistical in this suitability. It depends upon the fundamental graduation of appetition which lives at the base of things, and which solves all indeterminations of transition.
>
> In this way, there can be an intuition of probability respecting the origination of some novelty. It is evident that the statistical theory entirely fails to provide any basis for such judgement. (Whitehead, 1978, 207)

These events of creative change do not arise from a determining society of predisposed individuals. In the statistical world, nothing new is possible. All is already accounted for. Any "real" therefore—Baudrillard is true to the statistical world—is a simulacrum. The postmodern assumption is that all of the possibilities—all of the infinite possibilities—are accounted for. The Platonic heaven or divine mind is burdened with vast tabulations instead of essential forms. The knowledge of nonstatistical probability, Whitehead says, represents the "secularization of the concept of God's function in the world." That is, the creation of the world is a secular, finite activity.

In Olson's understanding (I will avoid the complexity of interpreting both Whitehead and Olson in this difficult matter), statistical knowledge is merely philosophic, and though it may allow accurate prediction about certain types of phenomena, its truth

does not satisfy the creative eros. Nonstatistical action arises from entities that are not preconditioned by their membership in a society. Unlike conventional atoms that which arise in our efforts to use a general system of signs for particular objects, whether irreducible units of radium as studied by physicists or units of an electorate as studied by public-opinion experts, the human "atom" is not social—which is to say, not an atom. Of course, humans are for the most part socialized; they are persuaded to abandon the cosmos-making function in favor of a statistical environment, where they abide by generalized expectations; they make the tragic sacrifice of the Person to genetics.

Olson recognizes two integrities that are independent and in generative cooperation: the human body, with its manifold abilities to act, and the earth. From the perspective of humankind as physical, these two are unique; they qualify as unities as nothing else. It is by way of them that access to plurality as the possibility of abstraction is made available, or to put it more clearly, it is only by way of a relationship between these integrities that plurality comes into existence. It is the basis of Olson's practice however to speak of the plurality not as idea but as landscape or view. That is, this multiplicity is reduced to a conventional unity, but not the unity of logos. The landscape, furthermore, comprehends language as physical, as marks on the page and vibrations in the air, as an aspect of itself. It is trees, rocks, hills, and language. Landscape and language are events that arise in the relationship of two integrities, which are known in primordial and silent intuition. This is the most common knowledge, and the knowledge from which the larger part our learning and our social ritual distract us.

The human body and the earth are the fundamental event/atoms of poetic thought, a paradox that arises not from some failure of reason but from immediate intuition. The one is intuition of human integrity as a limited temporality; it is constituted of the anxiety and ecstasy of a separate biological organism. The other is the intuition of human integrity as the condition of earth itself, a knowledge of that which abides. The one is manifest as rhythm, the other as syntax; the one as the product of the body, the other as image of earth. Although they may be intuited temporarily as a unity, it is only at the moments of high intensity when one speaks and acts from a confident knowledge of the common. The linguistic medium is constituted of marks by which radically

autonomous beings orient themselves with others of their kind in an otherwise featureless world. It does not pass information from a sender to a receiver but creates a world. The common knowledge is not exemplary; it does not impose normative structures on action. It speaks of that which is meaningful in itself. Wittgenstein said of genre paintings, "I should like to say 'What the picture tells me is itself.' That is, its telling me something consists in its own structure, in its own lines and colours. (What would it mean to say 'What this musical theme tells me is itself'?)" (Wittgenstein, 1953, 142). In the mode of the common knowledge, even "genre paintings"—proposed typologies—can only be understood as utterly specific. Knowledge of both the thing in itself and its type must, as it were, come together. We cannot determine if some unknown entity belongs to a given type unless we somehow *already* know. This fundamental problem of circularity haunts our knowledge. The circle is broken by the fact that, in the domain of the common knowledge, some signs refer only to themselves; their degree of generality is determined by the specific occasion of their use.

> We speak of understanding a sentence in the sense in which it can be replaced by another which says the same; but also in the sense in which it cannot be replaced by any other. (Any more than one musical theme can be replaced by another).
>
> In one case the thought in the sentence is something common to different sentences; in the other, something that is expressed only by these words in these positions. (Understanding a poem.) (Wittgenstein, 1970, 28)

These two senses of understanding belong to different epistemic domains. The one informs the science of linguistics: language is seen as a logic of signs, independent of any particular content. The other arises from a radical empiricism: language is experienced as sounds and marks dense with the logical catastrophe of uniqueness and inertness. Such signs present themselves as things in their own rights *and* as proxies for other things, divided and paradoxical from their first appearance. Thus, constituted not of preselected atoms but of specific, complex events of their use, they are uncategorizable and irreducibly alogical. They may be valued as knowledge not because they can be interpreted by rule but because of their usefulness. They are the concrete facts of the world one inhabits.

Olson speaks of "logography"—"Word writing. Instead of Idea writing . . .", a writing emptied of abstraction. The neologism is parallel to "phonography"—sound writing—or "photography"—light writing. Interestingly, the term comes from I. J. Gelb's *A Study of Writing* (Gelb, 1963), which is also the source of Jacques Derrida's term *grammatology*. The distance from Derrida's science of marks to Olson's writing with words, however, is considerable. Grammatology is a science that cannot establish its own principles—a sentimentality that cannot pronounce its own name with a straight face, a kind of etymological centaur. To impose *logos* on *grammé* as definitive terms of a study is to presuppose self-frustration on the part of the student. By contrast, logography is a practice, a technology. It is subject to abuse, like any other technology, of course, but its justifications are pragmatic, not theoretical. Just as the phonograph will record any sound which occurs in its operating presence, whether it obeys a preestablished musical logic or not, the logograph writes words. The page registers word events, not the negotiations between the desire to speak and the lawful modes of saying.

The knowledge that is discovered in Olson's work is not philosophy or science, not mythology, theology, sociology, or psychology; it does not argue with the traditional disciplines. It does, however, expose the arrogance of their claims and the despair of their results, at least when a bewildered human turns to them for practical guidance. Although this knowledge must confront the intimidation of the entire intellectual establishment, which is immense and rightly to be feared, it promises the possibility of action that actually satisfies something of the intellectual hunger, the gnawing need not for certainty about the ultimate but about what is under ones nose: "The Earth . . .," Olson writes, "is conceivably a knowable, a seizable, a single, and your thing. And yours as a single thing and person yourself, not something that's distributed simply because we are so many and the population is growing, or that the exploitation of the earth itself is increasing" (Olson, 1969, 5). Given the vantage of such a possible knowledge, he continues:

> What makes most acts—of living and of writing—unsatisfactory, is that the person and/or writer satisfy themselves that they can only make a form (what they say or do, or a story, a poem, whatever) by selecting from the full content some face of it, or plane, some part . . . It comes out a demonstration, a

> separating out, an act of classification, and so, a stopping, and all that I know is, it is not there, it has turned false. (Olson, 1967, 5)

The feeling that our knowledge has somehow turned false in our deeds is not uncommon. All too often, acting on the best knowledge we have, we recognize after the fact that we had hoped for something otherwise. Derrida writes:

> There is not a single signified that escapes, even if recaptured, the play of signifying references that constitute language. The advent of writing is the advent of this play; today such a play is coming into its own, effacing the limit starting from which one had thought to regulate the circulation of signs, drawing along with it all the reassuring signifieds, reducing all the strongholds, all the out-of-bound shelters that watched over the field of language. This, strictly speaking, amounts to destroying the concept of "sign" and its entire logic. (Derrida, 1976, 7)

And, though he develops a rather different argument, Michel Foucault concludes in a similar tone:

> From within language experienced and traversed as language, in the play of its possibilities extended to their furthest point, what emerges is that man has "come to an end", and that by reaching the summit of possible speech, he arrives not at the very heart of himself but at the brink of that which limits him; in that region where death prowls, where thought is extinguished, where the promise of origin interminably recedes. (Foucault, 1970, 383)

In fact, Foucault ends *The Order of Things* with a very brief meditation on the distinction that stands at the *beginning* of Olson's work. He writes, "in Artaud's work, language, having been rejected as discourse and re-apprehended in the plastic violence of the shock, is referred back to the cry, to the tortured body, to the materiality of thought, to the flesh" (Foucault, 1970, 383). These words, if we could erase "tortured," might apply likewise to Olson's work. Olson entered this space and, for more than twenty years, practiced efficacious language without suffering the physical torture and intellectual debilitation of schizophrenia. It appears, however, that the French prophets of the end of Western metaphysics or the end of Man, as Foucault proposes it, cannot imagine an alternative except in terms of madness or worse. Derrida, noting that voice is the founding metaphor or metaphysics, fails to realize that it is anything else. He acquiesces in despair: "what makes the

history of the *phone* fully enigmatic is the fact that it is inseparable form the history of idealization, that is, from the 'history of mind,' or history as such" (Derrida, 1978a, 75). And in his essay on Artaud, he goes very nearly into paroxysms of gloom: "To think the closure of representation is thus to think the cruel powers of death and play which permit presence to be born of itself, and pleasurably to consume itself through the representation in which it eludes itself in its deferral" (Derrida, 1978b, 250). This is the last possible investment in the tragic sense of life that, more than metaphysics or logocentrism, defines the dominant tone of culture in the West. Oedipus, Socrates, and Jesus are tragic figures in whom we have suffered for a grandiose conception of the human soul, a conception that has perhaps cut us off from other areas of enlargement, which do not promise eternal life but might, at least, make life on earth worth living. Suffering is required to keep the dialectic alive. At this late and utterly abstract stage, it has no significant metaphysical content; its only content is hope that the soul might find a language so devoid of content that it might live. As long as we suffer, we may look forward to the emergence of the Absolute. Hegel says the dialectic can be "regarded as the pathway of doubt, or precisely as the way of despair" and, in the concluding paragraph of the *Phenomenology*, he speaks of the "Calvary of the Absolute Spirit." The culture still clings rigorously to the way of the cross, always focusing on the greatest despair as the term of the greatest hope. We have not yet begun to assess the depth and import of Olson's critique of the dialectic:

> dialectical does mean one to one, and an immediate discharge of mental engagement in which the will and the mind are like aggressive motor actions, and are complimentary in that they do compliment the other person engaged, as though there was a one-to-one possible, as though the conversation was between us and a meeting of minds was possible. It is socializing, and relational.
>
> One wants therefore to enter this ring on a different footing: it isn't true, and has left the universe out, substituting for it a prune or wrinkled grape, the social . . . The whole slip to discourse, deliberately mounted to supply an education, and State as the result (cause-and-effect) of an artificial "person' and an equally shrunken *socius* company ended up in Hegel, and in Marx-plus, the modern liberal companionship. Not only does materialism (instead of technology) become the appetite of the contemporary person, satisfied by the goods alone and a credit

> marked as well as the debted Nation, but equally the new man-grape gazes upon space as though he can return via it to the paradise, of trees, on which all the fruits do grow, a conversation with some superior its from *another* planet. (Olson, 1974, 54)

Under the regime of the dialectic, our fate has been to live on this planet, while thinking about another one, which is a parody of our own, lacking its rich profusion of individuals. Like cartoon figures, we are pilots of rationalist space ships, setting ourselves down on an alien planet, and finding that our theories are generally accurate but not really sufficient to deal with particular, unexpected dangers and advantages of the place.

As early as 1946, Olson began an investigation into abstraction or, to use current cant, logocentrism. The terms, space, fact, and stance, which are defined in *Call Me Ishmael*, name the intuitions of a concrete world in which voice is not a metaphor of spirit but the *physical* qualification of intelligence; and, in 1949, in "Projective Verse," Olson announced the beginning of his lifelong practice of "open form." Open form, as Olson uses the term, is not merely a leaky conceptuality that drips through a porous structure riddled with temporality. In the Riemannian world, as Olson understands it, any act creates a discrimination and a space, a unity and a continuum, a nature and an orientation, meaning and information. Although these domains each exhibit their own logic, the relationship among them is not logical; their spaces do not intersect. In one domain—Williams was right—there are "no ideas but in things." In the other—and here Pound was nearer the mark—there are acts, which are something like ideas, at least more like ideas than things, but there are no actors—"the radiant world where one thought cuts through another with clean edge, a world of moving energies" (Pound, 1965, 154). Williams could only imagine a stasis or a static image of motion in "The Yachts," for example. And in *Paterson*, the city is a male abstraction and Garrett Mountain a female abstraction, art and nature, hopelessly sundered; it is a sentimentality. Pound, like so many of his modernist contemporaries, fell for totalitarianism. In the poem that moved him decisively beyond Pound's *Cantos* and Williams' *Paterson*, Olson writes:

> The odish man sd: "Poesy
> steals away men's judgment

by her muthoi" (taking this crack
at Homer's sweet-versing)
"and a blind fear
is most men's portions." Plato
allowed this divisive
thought to stand, agreeing
that muthos
is false. Logos
isn't—was facts. Thus
Thucydides
I would be an historian as Herodotus was, looking
for oneself for the evidence of
what is said.

(Olson, 1983, 104)

Olson conceives of Herodotean history as an active engagement with evidence that one produces for oneself, to trace what is merely told back to what can be seen, not so much out of skepticism or need of proof as for need of meaning. Language apart from an active life in which it functions is empty. Evidence arises in the completely alogical factuality of living. The measure specifies so much time and, by the conventions that he began to develop in "Projective Verse," so much space. Literate poetry is speech writing or written speech: "The advantage to literacy is that words can be on the page." On the one hand, it is potentially as free from *logos* as the preliterate epics; on the other hand, it has all of the resources of five hundred years of printing and three millennia of writing. "One wants phenomenology in place, in order that event may rearise. There are only two facts about mythology which count: that they are made up of tales and personages, in place. Words then are naming and logography is writing as though each word is physical and that objects are originally motivating. This is the doctrine of earth" (Olson, 1974, 50–51).

Construction

Olson read Norbert Wiener's *Cybernetics* in prepublication proofs and quoted Wiener's definition of "message" in "The Kingfishers":

> We can be precise. The factors are
> in the animal and/or the machine the factors are
> communication and/or control, both involve

> the message. And what is the message? The message is a discrete or continuous sequence of measurable events distributed in time.
>
> (Olson, 1987, 86–92)

The last sentence is quoted directly from Wiener's text. As we have seen, it is a fundamental definition of information theory. The message is a measure not of identity but of difference. It should be added to the varieties of Derrida's "differance":

> Differance is neither a word nor a concept. In it, however, we shall see the juncture—rather than the summation—of what has been most decisively inscribed in the thought of what is conveniently called our "epoch": the differance of forces in Nietzsche, Saussure's principle of semiological difference, differing as the possibility of [neurone] facilitation, impression and delayed effect in Freud, difference as the irreducibility of the trace of the other in Levinas, and the ontic-ontological difference in Heidegger. (Derrida, 1978a, 130)

By this addition, this accomplishment that is neither word nor concept, that is so destructive to classic rationalism, that so completely undoes the entire classical project and its careful balancing of speech and writing, now emerges as the central factor in a new rationalism, a new representationalism, and in new mechanisms of control more efficacious than any previously imagined. Whether it also presents a new humanism depends upon the definition of *human*. The distinction between the purposive domain of the human and the purposeless domain of nature breaks down. Teleonomy belongs not to the originary stuff but to the meanings that are found there in those representations that are known as humans, on the one hand, and machines, on the other. "A discrete or continuous sequence of measurable events distributed in time" is the new *logos*—the *logos* that is not an origin itself but derives from information, fully temporalized, self-absent, beyond both absolutism and dialectics, the *logos* that is embodied not in the scientist, which is to say, the teleologist of the closed world, but in the engineer, not in Jesus but in Hephaestus. Hephaestus was an early worker in artificial intelligence and robotics. It is said by Homer that he manufactured some mechanical women of gold, who could talk and faithfully perform the most difficult tasks in his workshop, and a fleet of three-legged robots, intelligent tables or carts,

which could run by themselves on errands, and so forth. Thus, the focus has shifted from the Olympian deities to the subterranean deities, from the deities of identity to the deities of difference, from the original creation to the creation of simulacra, provisional creatures, creatures whose obsolescence is already planned. Production is no longer conscious but the work of local societies—to use Whitehead's terms—that can be manipulated in relation to statistical probability. Social production is the work of the unconscious or, to use cybernetic jargon, a black box, in which the inputs and outputs are known but the inner workings are invisible and inscrutable. The innermost workings of the computer chip, for example, can never be known: the movement of the electrons are random and unpredictable. Only because of their vast numbers and the resultant redundancy are we assured of the prevalence of the requisite forms. Nearly a century of psychoanalysis has had one notable result: the unconscious has been mechanized, while, it must be noted, remaining more or less unconscious.

Olson's ouevre is not thematic but investigatory. In the early work, he proposes a revision of the heroic stance of the romantic poets. The poet is understood as an input-output machine, as in the organicist tradition, but an input-output machine on cybernetic principles. In "Projective Verse," he writes, "A poem is energy transferred from where the poet got it (he will have some several causations), by way of the poem itself to, all the way over to, the reader" (Olson, 1967, 52). Thus, the energy/information of the world—the content—is retained as it is shaped by its passage through the particular topological configuration of the poet. In "Projective Verse" and other early theoretical writings, he conceives of the interchange on the phenomenological level:

> Now . . . the *process* of the thing, how the principle can be made so to shape the energies that the form is accomplished. And I think it can be boiled down to one statement . . .: ONE PERCEPTION MUST IMMEDIATELY AND DIRECTLY LEAD TO A FURTHER PERCEPTION. It means exactly what it says, is a matter of, at *all* points (even, I should say, of our management of daily reality as the daily work) get on with it, keep it moving, keep in, speed, the nerves, their speed, the perceptions, theirs, the acts, the split second acts, the whole business, keep it moving as fast as you can, citizen. (Olson, 1967, 52–53)

The message is neither origin nor end, an endless mediation. In "The Kingfishers," he goes on to extend the definition of "message." The message

> is the birth of air, is
> the birth of water, is
> a state between
> the origin and
> the end, between
> birth and the beginning of
> another fetid nest
> is change, presents
> no more than itself
> And the too strong grasping of it,
> when it is pressed together and condensed,
> loses it
> This very thing you are.
>
> (Olson, 1987, 90)

In this passage Olson continues to paraphrase Wiener's introduction to *Cybernetics* but now very loosely. The duality that we have repeatedly noted between continuity and the discrete series also appears in the self-reflexive mechanism: "the too strong grasping of it . . . loses it." Consider, for example, a robotic or human hand reaching for an object: it reads a series of messages in time, predicts on the basis of these messages where its trajectory is tending, and, on the basis of the readings, corrects itself. This is, of course, the basic feedback loop of cybernetics—the output of the mechanism, controlling its own input in order to produce purposive acts. The problem is that, unless the mechanism is sensitive, it will fail to react with the required speed, to make necessary small corrections. If it is too sensitive, on the other hand, the need for a large correction will throw it into wild oscillation, over-correcting in one direction and then over-correcting in the other. Wiener writes:

> we found that the ideal prediction mechanism which we had at first contemplated were beset by two types of error, of a roughly antagonistic nature. While the prediction apparatus which we at first designed could be made to anticipate an extremely smooth curve to any desired degree of approximation, this refinement of behavior was always attained at the cost of increasing sensitivity.

> The better the apparatus was for smooth waves, the more it would be set into oscillation by small departures from smoothness, and the longer it would be before such oscillations would die out. (Wiener, 1965, 9)

The effective mechanism must allow for considerable play. Olson's work, especially *The Maximus Poems*, is a probe into the nature of this topological limit.

If humans are merely input-output devices, however, they cannot help but be statistically overwhelmed by the enormity of the collective human product. Even the phenomenological largeness of Maximus—that is, the human transformer of energy-information at his or her most efficacious—cannot withstand the onslaught that is generated by fully mechanized social production. Thus at the end of the first book of *The Maximus Poems*, Maximus admits,

> I am interfused
> with the rubbish
> of creation . . .

The phenomenological phase of the poem comes to an end. Maximus withdraws from the input-output circuit to the interior.

> step off
> onto the nation The sea
> will rush over The ice
> will drag boulders Commerce
> was changed the fathometer
> was invented here the present
> is worse give nothing now your credence
> start all over.
>
> (Olson, 1983, 155)

Maximus's new start in *Maximus IV, V, VI* stakes itself to the archetypal and the cosmic, and in terms of literal geography, its predominate locale is Dogtown, the now-deserted village that grew up in Colonial times in the interior of Cape Anne, in order to avoid the marauding pirates who attacked coastal settlements. Olson begins in "Maximus, from Dogtown—I," paraphrasing the *Theogony* of Hesiod. The literal historical, geographical address of the first volume is buttressed by the cosmological archetypes. The individual, rather than merely shaping the energies that appear, produces an interior world in which

the soul is led from drunkenness
to dryness, the sleeper lights up from the dead,
the man awake lights up from the sleeping.

(Olson, 1983, 172)

It is not mere subjectivity but an interiority that awakens into the public domain. As Charles Stein shows in *The Secret of the Black Chrysanthemum*—the only full-length study of Olson that gets beyond introductory issues—Olson's cosmology does not belong to the statistical and social world; its language has no relation to that domain. "I find the contemporary substitution of society for cosmos," Olson writes, "captive and deathly" (Olson, 1967, 97). The crisis of the cosmological address that is at once publicly available and not subsumed by the social mechanism comes in "Maximus, from Dogtown—IV":

The problem here is a non-statistical
proof: Earth 'came into being'
extraordinarily early, #2
in fact directly following on
appetite. Or
as it reads in Norse
hunger, as though in the mouth
(which is an occurrence, is 'there',
stlocus).

(Olson, 1983, 333–42)

What is required, in the words of Whitehead, from whom Olson's use of the term "non-statistical" derives, is "an intuition of an intrinsic suitability of some definite outcome." There are two modes of attention and two corresponding domains—an ontological domain, which is forever confused with its own description of itself, half-revealing and half-hiding itself in deferred possibilities, and a common domain, in which even the minimal requirements of grammar, discrete distinctions, do not prevail (all is continuous). In the former, to recall Quine's phrase, to be is to be the value of a variable. It is the being proposed by the doctrine of social order. "According to this doctrine," Whitehead writes in a passage that Olson underlined in his copy of *Process and Reality*, "all social orders [whether the society consists of atoms or humans] depends on the statistical dominance in the environment of occasions belonging to the requisite societies. The laws of nature are statistical laws derived from this fact" (Whitehead, 1978, 207). By contrast,

the intuition of an intrinsic suitability of some definite outcome is utterly specific, without relation to the social questions concerning predictable behavior. Rather to be is to be the value of the thing itself, a manifestation of what Olson calls Okeanos: "Okeanos the one which all things are and by which nothing / is anything but itself, measured so" (Olson, 1983, 172–81). Okeanos is the continuous, "heaven's stream." When this space is partitioned, divided, atomized, the distance between every two points opens into infinite regresses, which must be disciplined by the statistical techniques of the mathematical or logical variable. When it is measured by itself, which is to say by its own activity—the event of itself—the continuity is retained *and* a world of shapes, both the measurer and the measured, is made manifest.

The nature of this world, which is as fully furnished and as densely resonant as the activity establishes, however, is local. The cosmic space reaches only so far as the actual measure applies. Just as there are no infinite regressions, there are no infinite expansions. In "at the boundary of the mighty world" for example, Maximus specifically locates Hell's mouth, where the manifestation of heaven's stream opens to Tartaros:

> It is Hell's mouth
> where Dogtown ends
> (on the lower
> of the two roads into
> the woods.
> I am the beginning
> on this side
> nearest the town
> and it—this paved hole in the earth
> is the end (boundary
> Disappear.
>
> (Olson, 1983, 332)

This place is clearly enough identified that it is possible to go to Cape Anne and confidently locate it (I have done so). It is an unexceptional place, which for anyone who is not an active participant in the construction is without notable qualities. For the readers of *Maximus,* Hell's mouth, if their cosmos includes one, is elsewhere. Placement is not the result of a statistically reliable agreement, which must be negotiated, ruled by disciplinary conventions, or determined by force. Statistical knowledge is "gener-

al" by virtue of being common to no one: it is textual knowledge—always deferring, always slipping and sliding, with tolerances which for most personal uses are worthless. As far as Maximus is concerned, the statistical world is Tartaros itself.

In Olson's redaction of the Hesiodic cosmology, "Maximus, from Dogtown, IV," earth is created not from chaos or entropic generality but from a specific historical construction. Earth as such is a human product. In nonstatistical space information is the product of the person, not the reverse. The peculiar qualification of human vision is that it is local, specific, and, above all, logically and morally *prior* to the divine perspective of the Tartarean socius. It arises directly in the Stream, Okeanos, as a result of specific historical human action:

> that the Earth
> was the condition, and that she
> there and then was the land, country
> our dear fatherland the Earth,
> thrown up to form a cairn, as spouse
> of Uranos: a i a
> the original name
> of Colchis (cld be a 'local'
> reference, that the Great Name
> the Earth shall have been
> Kuban where those
> inventors of the Vision-the
> Civilizers-were
> 'local'? some sure time prior to
> 2000
> BC.
>
> (Olson, 1983, 334)

The creation of the Earth—a i a or Gaia—was the measure created by the construction of a cairn by the citizens of Kuban, which Olson identifies elsewhere as "the Founding City of civilized man."

To what extent is this to be taken as "true" history? For someone looking for authority to claim, for example, that the Kubans where the original Indo-Europeans who established a binding tradition, the purity of which must be regained, it is of course meaningless conjecture. To be sure, objective history is past and deter-

mined. What happened is bound to involve conjecture. Our relation to it from an objective historical point of view is to construct a representation that will be inevitably more or less inadequate. It is a representation the original for which can never be discovered. Nonstatistical knowledge, however, relates not to an original but to the intuition of an appropriate outcome from a novel situation. It derives its authority from the preeminent claim of a present that does afford only the opportunity to act, not the option both to act and to assess the act in relation to the possibilities that condition the act. "Maximus, from Dogtown—IV" concludes with the note, "Thus / March," for which time the cosmology is definitive.

The story is repeatedly told in different terms and in relation to different sources throughout *Maximus IV, V, VI*—sometimes in relatively complete form in the first two poems of the Dogtown sequence, for example, or "Chronicles," and sometimes in relation to a completely different field of mythological reference in "Maximus Letter # whatever" (Olson, 1983, 201); sometimes in fragments which, taken together, bulk large in the last two volumes. What is communicated is not information that is intended to reduce our uncertainty. The *Maximus*, rather, gives evidence of the adequacy and reality of Olson's *own* time, and, in our reading, evidence of the adequacy and reality of our own time. Unlike disciplined, statistical knowledge, it makes itself available to use, not by making claims so general and vague as to have a kind of universal applicability, but by proposing specific concrete acts of knowing.

Maximus IV, V, VI is, however, the solipsistic movement of the *Maximus*. At the outset of the third volume, Maximus announces a wider task:

> having descried the nation
> to write a Republic
> in gloom on Watch-House Point.
> (Olson, 1983, 377).

To write a *res publica* (a public thing or affair). Zeus and the Olympian gods had added nothing to the physical world. Rather, they had instituted the social order, the statistical regime under which every writing was also an unwriting. The phonetic representation of speech could be interpreted only against the background of the entire phonological (and fundamentally social) program.

Olson is not interested in Olympian knowledge, which requires its heightened perspective in order to view both the event of language and the systematic which makes its possible. He is interested not in knowledge as potential power but in actual knowledge, as practice: what to take (*recipere*) and in what order to take it:

> I am a ward
> and precinct
> The Big False Humanism man myself and hate
> Now on universalization, believe
> it only feeds into a class of deteriorated
> personal lives anyway, giving them
> what they can buy, a cheap
> belief. The corner magazine store
> (O'Connell's, at Prospect and Washington
> has more essential room in it than
> programs. The goddess
> of the good doesn't
> follow any faster
> than how a person may
> find it possible to go out,
> and get what it is they do want
> wherever they do go
> (Olson, 1983, 379)

In contrast to "The Big False Humanism," Olson insists upon active participation in the creation. Humanism attempts to "take in" everything at once: it literally wants to eat its cake and to have it too; and within statistical limits that propose to account for each specific event as an instance of all possible events, it is sometimes able to do so (deferring the textual and "ecological" consequences). The goddess of the good, however, limits her favor to sequences of events controlled by actual desire and the actual discovery of what to take and in what order to take them—that is, only so long as desire is related to the outcome of a specific occasion, not to the statistical exploitation of entire classes of occasions.

Therefore, near the beginning of *The Maximus Poems, Volume Three,* Maximus in the guise of the war god, Enyalion, sets off to do definitive battle with the statistical world—"Dog of Tartarus / Guards of Tartarus / Finks of the Boss . . . War Makers" (Olson, 1983, 405), who obscure those necessary sequences by partition-

ing reality, creating the discrete manifolds of logic and language and socius that support them.

As long as the generational struggle remains, however, the process remains dialectical and mechanical, as Maximus realizes in an untitled poem that begins:

> I have been an ability—a machine—up to
> now. An act of "history", my own, and my father's,
> together, a *queer* [Gloucester–sense] combination
> of completing something both visionary—or illusions (projec-
> tion? literally.
>
> (Olson, 1983, 495)

So engaged, the visionary and illusory are confused. Charles Stein notes the relevance in this connection of the ambiguity of "projection" as Jung understands it:

> Here, "illusions" is associated tentatively with the word "projection," the question mark after the latter suggesting again the motion of Olson's in-process interrogation of his own thought. For "projection" in the repressive sense is of course productive of mere "illusions," but if repression is absent, projection may yet occur without neurotic admixtures, in which case the process may indeed be productive of creative work or visionary experience. (Stein, 1979, 32)

The uncertainty of the common knowledge is not relativistic but absolute. A claim is not true or untrue because the appropriate systematic background against which to judge it is undecidable but because of its inherent suitability or unsuitability to a specific occasion. It is *utterly* true or false: the outcome could not have realized some other possibility. This is the definitive character of measured or finitistic space.

In an infinitistic cosmology—that is, any logical or semio*logical* or phono*logical* cosmology—all is difference. The distinctions that make logic possible ultimately destroy the identities which make discrete categories useful. If the symbolism can contrive to represent ever smaller units, nothing can ever be definitive or final. There is always another distinction to be made, another symbol to be generated, and so forth. The poststructuralists thoroughly work out the implications of this view. The *Maximus* is at least an initial foray into the alternative.

Toward the end of *Volume Three,* Olson writes at an angle across a page:

the unit the smallest there is

Wed night (after 2 AM Thursday
July 16th—
'LXIX

Charles Olson

This is the fundamental assertion and demonstration of finitistic cosmology. Any *unit* is the smallest unit there is. Otherwise it would not be a unit. If there is a unit, the infinite regression stops, and the Zenonian paradoxes are replaced by the nonidentity paradoxes—zero is equal to one. What the smallest unit is, of course, depends upon the measure that is used. If the measure is by a scale, the smallest marking that can be discriminated is the unit; if the measure is by the human foot, the foot itself or perhaps the half- or quarter-foot, which can be approximated, is the unit. Anything smaller does not count. In the nonstatistical space of the *Maximus* the pages of the book itself are the units. It is an absolute space that lacks only the means for objective verification; it is not the casual social space (of the poststructuralists, for example) that lacks both truth and falsity.

Seventeen years after the writing of "The Kingfishers," Olson once again recurs to the cybernetic definition of the message. Now, however, the cybernetic machine is autopoietic, not an input-output mechanism:

the Mountain of no difference which I

have climbed as other men and other men will

have no choice other than: there is no other

choice, you do have to listen to that Angel and

'write' down what he says (you don't your

other Angel does and you obey him

to the degree that it is almost impossible to

keep doing, that's for sure!

But,

does this Vision hold in faith

(as well as in credulity) and in my own experience crucially in

necessity

in perfect measure of rhyme and Truth,

does it, in beauty too, take me

test, stiffly the modus

of this visione which

not as modulus, this,

, that is, measurement

"throughout the system"

modulus precise finite segments

—"There are no infinitesimals"

all does rhyme like is the measure of

producing like, the Guardian

does dictate the message

is a discrete & continuous conduction

of the life from a sequence of events measurable

in time and none of this is contestable,

There is no measure without it or

with anything but this measure:

it does, my Beloved's head grows to Heaven,

does my Life grow

out of my "life" [Likewise—likewise?

is the Modus

absolute [I say it,

as a prayer.

(Olson, 1983, 501–2)

Olson's image for the autopoietic process derives from the "Recital of Hayy ibn Yaqzan," an Ismaili Muslim text, which tells the story of each human being entrusted to two orders of angels, "called 'Guardians and Noble Scribes'—one to the right, the other to the left. He who is to the right belongs to the angels who order; to him it falls to dictate. He who is to the left belongs to the angels who act; to him it falls to write" (Corbin, 1960, 148). The occasion only affords the possibility of getting the message right or wrong, of staying in the continuous erotic stream or, damming it, describing it, mechanizing it, thus replicating death on behalf of life.

As early as 1953, Olson had withdrawn his first assessment of the input-output machine, which he had modeled in "The Kingfisher." He speaks of the danger "of falling for, & into, the mechanistic trap of measurement—entropy, & all that language of the electronics of communication, [which] is doing away with the organism which has these behaviors, or satisfying the curiosity—the morality—which is your life, or mine, and that largest question: *what am I doing with it—what is it I am to do with*" (Olson, 1978, 18–19). Both the "inputs" and the "outputs," Olson discovers, are interior to the autonomous organism. He picked up on biological research, the theoretical implications of which would not be otherwise articulated for nearly two decades:

> just as Haeckel's Law has been so examined by embryologists that it has almost come to be inverted from the exactitudes achieved in the last 75 years (that now one says ontogeny (or the life development in the individual) creates phylogeny (creates the species), so one can declare that each of us, the vertical force in us, the gravitational, that prime of all our tropisms, the archeology we are, creates the mythology of which we are the inheritors. (Olson, 1978, 21)

That is, the individual is the *product* of neither an evolutionary tradition nor a cultural tradition but is, in the present, the sole producer of both. Similarly, Maturana and Varela write:

> Thus, the individuals, though transitory, are essential, not dispensable, because they constitute a necessary condition for the existence of the historical network which they define. The species is only an abstract entity in the present, and although it represents a historical phenomenon it does not constitute a generative factor in the phenomenology of evolution, it is its result. (Maturana and Varela, 1980, 107)

The historical network may be constituted as a mechanism of purpose and intimidation. It typically is. It may also be constituted, as Olson writes, as a function of somatic time—life lived by individuals, not by a species or historical agencies or any other abstraction. As such, it is the sole value that is not a mortgage against other things and other people. It is the value of life that is not compromised by the false valuing of death as an ultimate aim.

CHAPTER 6

Beginning Again

There has been a beginning of begun.
They can be caused.
They can be caused to share.
Or they can be cause to share.
—Gertrude Stein, *Stanzas In Meditation*

sing with the taken
—Kenneth Irby, *Orexis*

WHAT WAS RIGHT IN METAPHYSICS

> Besides, if there is becoming and movement, the process must also arrive at a limit; for no movement is infinite, and every movement has an end.
>
> —Aristotle, *Metaphysics*

At this juncture, the question, What was right in metaphysics? must invoke the question, What is wrong in poststructuralism? for which metaphysics is not "true" but lives on in a shadowland of erased legibility in texts that we still (for some reason) have the eros to read, if only to build theories that demonstrate that metaphysics is not "true" but lives on still in a shadowland of erased legibility in texts which we still (for some reason) have the eros to read, if only. . . .

I could go on caught in this infinite loop forever. The excitement of infinite hermeneutical possibilities, however, begins to give way to the tedium of processing an infinite text with a finite machine. We have described the world. We know everything. Our ignorance is only apparent. The engines of language crank out infinitely the text of a world that is never the same but never truly different. We know the limit cases, or we have approached the infinitely receding limits so often that we are confident that *in practice* nothing surprising happens in their vicinity—some turbulences in dream texts, automatic writings, randomly generated

texts—but nothing wholly new and unexpected. This knowledge, however, is not knowledge of the world, it is knowledge of the *description* of the world. *After* physics, we know the world as a student might know a person from the constitution of the state in which he or she lives. When the physical world has been described completely and adequately, nothing has been said of any individual—person or star.

What was true in metaphysics is that there is an origin. What was false was that metaphysicians supposed a logical rather than a common or factual origin—that is, the metaphysicians supposed that it was only necessary to repeat the strategy that had been successful with *physis* on the individual. Therefore, they began to describe the description and the descriptions of the descriptions, infinitely regressing into solipsism. In fact, what is *after* physics is poiesis. The generalities are only generalities, which is to say relationships between objects that are themselves more or less vague and ill-defined (i.e., nonexistent): in ancient physics, *a* causes *b;* in classical modern physics, *f* is a function of *x;* in contemporary physics, *x* is statistically related to *y.* The ancients modeled the world as a finite machine, the moderns as an infinite formal system, the contemporaries as a collection of finite formal systems, which are reliable to the extent an appropriate background of possibilities can be established.

The issue of metaphysics was forced when phonetic writing became fluent enough to require a theory. Again we must question not Derrida's interpretations, which are always brilliant, but his scholarship. It is true, as he insists, that "the history of the *phone* is inseparable from the history of idealization, that is, from the 'history of mind,' or history as such" (Derrida, 1978a, 75); however, he mistakenly understands the phonetic mark as a sign of the power of voice, rather than what it properly is, the violation of voice. By the sixth century B.C. or so, a few Greeks were skillful enough at writing that they could represent the unbounded variety of speech with the combinations of a finite and remarkably small collection of discrete, arbitrary marks. The Greek alphabet was especially powerful because it identified zones of vocalization. It specified resonance. With discrete vowels, writers had access to a script and, *therefore,* a logic, which seemed complete. It was, however, a logic *not* of voice but of discrete marks, and the problems of metaphysics were generated by meditation upon the necessary conditions of the logic of marks. Thus, Aristotle, in discussing the

problem of recognizing the tokens or individual marks of phonetic difference as cases of the universal mark: "For this is just what we mean by the individual—the numerically one, and by the universal we mean that which is predictable of the individuals. Therefore it is just as, if elements of articulate sound were limited in number, all the literature in the world would be confined to the ABC, since there could not be two or more letters of the same kind" (Aristotle, 1984, 1579).

This is not a problem of an organization of knowledge that honors the voice. Plato had banned the carriers and, thus, the traditions of oral knowledge from the ideal republic; and, when Aristotle restored poetry as a tool of philosophy, he restored literate poetry, not oral poetry. Only with literacy did the problems of completeness and normality (i.e., how each token of the sign is recognized as the *same* sign) arise. These are the characteristic problems of writing and the logic of writing. In metaphysics, Aristotle sought to account not just for the reliability of the available texts but for the theoretical reliability of all possible texts. In addition to demonstrating that writing was a complete formal system and that the limited number of marks could represent all of the possibilities, it was also necessary to demonstrate that the meanings of the marks remained consistent from mark to mark. Logic could underwrite the claim that certain necessary relationships held between certain atomic units, but it could not likewise guarantee that the atoms remained consistent from one instance to the next. How could a thing have the dignity and value of a unique thing and, at the same time, be described by universal predicates?

The distance between the particular and the universal has been a persistent source of theoretical embarrassment and practical inconvenience. Many changes have been rung on the theme, producing a class of ontologically weird objects: the pineal gland of Descartes, the objects of Hegel's logic (A = not A), and the frequency-sensitive neurons of Freud's "Project for a Scientific Psychology" as well as Derrida's "visible imperceptible"* texts belong to this peculiar category.

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*"A text is not a text unless it hides from the first comer, from the first glance, the law of its composition and the rules of its game. A text remains, moreover, forever imperceptible. Its law and its rules are not, however, harbored in the inaccessibility of a secret; it is simply that they can never be booked, in the *present*, into anything that could rigorously be called a perception" (Derrida, 1981, 63).

Classical metaphysics is a sustained meditation on ontological weirdness, on the fact that the world of action and the world of thought are oddly out of whack. In the *Phaedrus*, after playfully delivering an oration to show the art of rhetoric is not so mysterious, Socrates speaks of the techniques of division and generalization, which he had used and which are common techniques of rhetoric in these terms: "I am a great lover of these processes of division and generalization; they help me to speak and think. And if I find any man who is able *to see unity and plurality* in nature, him I follow, and walk in his step as if he were a god. And those who have this art, I have hitherto been in the habit of calling dialecticians; but God knows whether the name is right or not." Of course, to see unity *and* plurality is to see incoherence. The western episteme entered upon a line of thought that rendered the commonest things strange, indeed just beyond the horizon of knowledge altogether. That is, it was not enough to see things, it was necessary to divide things from themselves and to rejoin them in a problematical, theoretical domain. And success in this discipline, as Socrates was aware, conferred remarkable power. To *see* unity and plurality is to conceive rightly—to name rightly, perhaps even denying the certainty of the rightness—in order to *walk* aright, freely, compelled neither by the exigencies of oral performance nor by the rules of rhetoric. Socrates speaks of the divine prospect of reclaiming the integrity of the organism, so it is possible literally to move like the gods. This is to have the Marxian theoretical eye. The oral poet is absorbed by the requirements of memory and the mimetic identification with the narrative, the rhetorician is absorbed by the requirements of logic. Given the triumph of literacy, Socrates could merely dismiss the poets as a danger to the emerging order. The rhetorician and the dialectician, however, are both mechanics of the abstract: the one dazzling with the illogicality of logic itself, the paradoxes and fancy footwork; the other trying to comport himself with grace in a world where even the *first* logical problem is insoluble. Faustian modernism attempted to overwhelm the impossibility of logic by force of will.

Abstraction, which coordinated attention and selective inattention, seeing both unity and plurality in nature, created disequilibriums and dynamisms that *compelled* thought. The mind was no longer free. In one mode of attention, philosophers saw particular trees and buildings and people, but by withdrawing their attention

from the marks of individuation and squinting abstractly at the world, they saw that *everything* was water or fire or something overwhelmingly universal. Thereafter, they saw trees, buildings, and people differently. Their insight into the prime material was confirmed and extended. Having opened thought in the direction of abstraction, however, the mind was no longer free to follow its own course and fell subject to its own compulsion: "From these facts," Aristotle writes, "one might think that the only cause is the so-called material cause; but as men thus advanced, the very facts showed them the way joined in *forcing* them to investigate the subject" (Aristotle, 1984, 1556). *After* physics in classical thought, after life was explained as a mechanism of material causation, humans were captives of their own self-description and *its* processes, the forms of language as such. With literacy, there was a sudden increase of available abstraction. As both Plato and Aristotle were aware, however, to assign all individual alphas to the class alphas, individual betas to the class of betas, and so forth opened a powerful hierarchy of abstract relationships that tend to swamp finite life. It opened directly to the cynicism of the sophists and their world in which argument served only power, not justice.

The office of metaphysics was to negotiate the terms of the uneasy, even impossible, relationship between categorical thought and the concrete world. Its fundamental doctrines were (1) that the infinitely reiterable elements of language close on discoverable principles—that is, that the universals are knowable—and (2) that the mind, in discovering its *own* content, frees itself from the *necessities* of its content, its mere representations, and discovers what it is in itself. The strategy of metaphysics was to invoke a third realm, neither the mind nor the experienced world—a place not always as fanciful as the Platonic heaven but of a necessary ideality. Metaphysics had a peculiar genius for generating new entities to explain its problems: objects proliferated into transcendental space by force of the requirements of abstract thought itself. Of the Platonists, Aristotle wrote, "as for those who posit the Ideas as causes, firstly, in seeking to grasp the causes of the things around us, they introduced others equal in number to these, as if a man who wanted to count things thought he could not do it while they were few, but tried to count them when he had added to their number" (Aristotle, 1984, 1565). And, as it turns out, this general strategy involves not a mere doubling but an infinite regress. An

abstract world replica must invoke metaworld after metaworld, each mediating between an original and a newly invented world. In these terms, the problem of the relationship of the concrete to the abstract can be deferred, but it cannot solved.

There is no more rigorous critique of so-called Platonic metaphysics than Plato's own in the *Parmenides*, and if I understand the Platonic canon correctly, Plato explores all of the complexities of infinitistic thought from the perspective of a finitistic dialectic, a dialectic that was forever ready to admit that it was uncertain even about its own name. And Aristotle explicitly comprehended the real dangers of the proliferation of metaphysical objects: "those who maintain the infinite series destroy the good without knowing it" (Aristotle, 1984, 1571). Aristotle foresaw the Hegelian bacchanal and recognized its ultimately nihilistic implications.

For more than two millennia, the classical dialectic maintained its equilibrium. The abstract force of classical logical was limited to the relationship of the individual to the general case, the minor premise to the major premise of the syllogism. In the seventeenth century, however, the logical circle turned vicious. An algebraic function is a higher order of abstraction than a syllogism. It establishes a relationship not between an individual and a universal class but between two universal classes. The content of an algebraic x or y (or of a word in an abstract calculus of the linguist) is not some *thing* but another symbolic expression. There was thereafter an ideal object—nature—and an ideal subject—the Cartesian ego; an abstract objective space and an abstract subjective time, the one described by the mathematical science, the other by the new poetry. If doctrinaire, classical metaphysics always regressed into a series of evermore abstract worlds, post-seventeenth-century metaphysics took the opposite tack, replicating abstract ideas concretely, egressing infinitely toward a dense world of the future in which all of the possibilities are materially realized. "Machine technology," Martin Heidegger wrote, "remains up to now the most visible outgrowth of the essence of modern technology, which is identical with the essence of modern metaphysics" (Heidegger, 1977, 116). The classical was a search for an origin, a first world of abstraction; the modern—or, more accurately the Cartesian—is the search for an end, an abstract world of realized construction. The metaphysics of statistical reality can be summed up, as we have seen, in W. V. Quine's dictum "To be is to be the

value of a variable." In classical thought the contemplation of the eternal promised eternal life; the introduction of the infinite into life, on the other hand, produces machines, the knowledge of which is deathly and death-producing. It is clear, to say the least, we are approaching a new threshold of technological plasticity that is the eros of modern knowledge.

Heidegger spoke of the "darkening of world . . . the emasculation of the spirit, the disintegration, wasting away, repression, and misinterpretation of the spirit," which followed the European failure to sustain German idealism. He noted:

> It was not German idealism that collapsed; rather, the age was no longer strong enough to stand up to the greatness, breadth, and originality of that spiritual world, i.e. truly to realize it, for to realize a philosophy means something very different from applying theorems and insights. The lives of men began to slide into a world which lacked that depth from out of which the essential always comes to man and comes back to man, so compelling him to become superior and making him act in conformity to a rank. All things sank to the same level, a surface resembling a blind mirror that no long reflects, that casts nothing back. The prevailing dimensions became that of extension and number. . . . This is the onslaught of what we call the demonic (in the sense of destructive evil). (Heidegger, 1961, 37–38)

The world is dark indeed, but it is Heidegger himself, however, who sides with the demonic, not per se in his siding with fascism, which was the historical manifestation of the demonic, but in siding with the discipline of the infinite, the recurrent source of destruction of the common world. Of course, we cannot stand up to the greatness, breadth, and originality of the romantic meditation. This is a given: it is infinite, and we are not. Although the human subject—that is, the abstraction Man—appears to have access to the infinite, men and women do not. Thus, we are forever intimidated by this Being that we postulate at the end of an endless and-so-on. We are to question the beginning of that which is without beginning—to inquire after the god of a world without a god. We are condemned by our language to believe in a god that is forever in hiding, known only in fleeting moments, epiphanies, which hint at some ultimate resolution but which tells us nothing about how to act here and now. It has become fashionable to denounce Heidegger for his fascism. The Nazis however are gone and are not

likely to emerge in that form again. It must be seen however that Heidegger's thought, quite apart from its historical association with German fascism, is a profound expression of the arrogance that longs for absolutes. If there is something in the writings of Pound or Wyndam Lewis which can be retrieved from totalitarianism, in Heidegger there is not.

Aesthetic studies have been heavily implicated in this arrogance and this longing. The influence of Paul de Man's widely published writings are far more significant evidence of the pervasive attraction of totalitarianism that infects many schools of literary theoretical thought than are his long-hidden juvenalia. The very devices that are intended to create a concrete world are expressions of a lust for the knowledge that destroys the concreteness and sensuousness that art manifests. Literary texts often seem to carry resonances of the infinite. In all directions, the hermeneutic traces disappear in pregnant ellipses, and the willing reader hears the inexpressible buzz of the absolute. In an essay on Hölderlin, Heidegger writes:

> Hölderlin inquires, before anything else and in fact exclusively, as to man's measure. That measure is the godhead against which man measures himself. The question begins in line 29 with the words: "Is God unknown?" Manifestly not. For if he were unknown, how could he, being unknown, ever be the measure? Yet—and this is what we must now listen to and keep in mind—for Hölderlin God, as the one who he is, is unknown and it is just as this Unknown One that he is the measure for the poet. This is also why Hölderlin is perplexed by the exciting question: how can that which by its very nature remains unknown ever become a measure? (Heidegger, 1971, 221–22)

The metaphysical invocation of the origin, unlike the mythological "in the beginning," is not the beginning of a narrative but the end of narrative. Thereafter, there are no stories as such, only temporal renderings of the archetypes. This is the principle of Aristotle's *Poetics*. The poets whom Plato excludes from the ideal republic are not the poets whom Aristotle restores. It is not poetry as such but the *idea* of poetry that returns as the mechanism of abstraction. For Heidegger, as for Aristotle, poetry manifests concretely the otherwise unworldly forms of logic; now, however, poetry is called upon to underwrite not this or that abstract idea but

Language itself. It must exhibit not this or that truth but the possibility of what Heidegger calls "greatness of spirit." We can think the *idea* of the infinite, and we can make symbols for it, but we cannot think the infinite as such. Thus our poetry has become hopelessly out of touch with the world; making symbols of a grand indefiniteness. The infinite gods of grammar are of no use to us, because they exist in a domain to which we have only provisional access by way of the intoxications of romantic arts and archetypal religions. Thus, we may be edified, but we have no access to meaning or useful action. In fact, an infinite God could not be a meaningful or useful measure even if it *were* known. Infinity is not a scale of the finite world. The darkening of the world results from our failure to produce the finite spirit that can inhabit the finite world which we construct. It is the perfectly knowable human scale that is required.

For men and women, as opposed to MAN, however, language is just another technology that we have mystified as we mystify other technologies and that like many other technologies, does not work as well as we would like. We are not in the closure of metaphysics but in the opening of the secular origin or the domain of the common. Metaphysics, however, is no more exhausted by its closure than mythology is exhausted by the falseness of its tales. Just as it was necessary to discover the psychological meanings of archetypal religions, it is now necessary to discover the ethical meanings of metaphysics.* We have dealt rather well with the integrity of the individual psyche but not with the meaning of the ethos. We must escape the fundamentalism of metaphysicians, their critics, and their deconstructors. Having liberated ourselves from the literalism of myth, we must liberate ourselves from the *symbolism* of metaphysics, or, that is to say, the fundamentalism of the symbol. The knowledge of things in themselves begins not with the question, What is this? or with Why are there things rather than nothing? These are perplexities that arise from the uses of

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*Metaphysics and archetypal religion are cognates, both products of the Mediterranean basin in the period 500 B.C. and 100 A.D. Christianity is an archetypal religion in a profound sense that ancient Greek religion is not. To be sure, archetypalism can be read back into the ancient ritual practices, but they belong literally to a different world.

symbolism, with definitions and the strange fact that symbols can be negated in a way that things cannot. Philosophy begins with wonder, Aristotle tells us, with amazement, with the knowledge that things are. Here is this! and this! and this! The world makes itself available for the exercise of freedom. Aristotle writes, "Evidently then we do not seek it for the sake of any other advantage; but as the man is free, we say, who exists for himself and not another, so we pursue this as the only free science, for it alone exists for itself" (Aristotle, 1984, 1554–55). Metaphysics was concerned not with *how* to do this or that practical thing but with *stopping* the logical deferment in order to declare that *this is* the beginning, the completely alogical order of the world, life itself, the freely chosen aim of the individual, purposeless and circular, committed only to the maintenance of its own sufficiency. What was true in metaphysics is the knowledge that is freedom rather than the knowledge that is subject to the relentless—but as it turns out, completely relative—requirements of logic. Metaphysics sought to free the mind from the compulsion of its own content, from the necessities of a represented world and the logic of representation, to free the mind to the content that it is in itself. What is true in metaphysics, however deeply it was itself sometimes compromised, is the directions it gives toward a knowledge that is not compromised with its own deathly mechanism.

WHAT SHOULD HAVE COME FIRST

we're all in the loop
music anyway
limited beyond all possibility notation.
—Norma Cole, "Erotema"

As Napoleon rode toward Jena, Hegel wrote: "The frivolity and boredom which unsettle the established order, the vague foreboding of something unknown, these are the heralds of approaching change. The gradual crumbling that left unaltered the face of the whole is cut short by a sun burst which, in one flash, illuminates the features of the new world" (Hegel, 1977, 6–7). The bourgeois face that appeared in that sun burst is now crumbled

and grotesque, dying and threatening to take everything and everyone with it.

The desperation of the youth culture—expressed for the most part in cartoons and in music the decibel level of which is literally deafening, so many of the musicians and some of their audience suffer permanent hearing loss—is deep and legitimate. Both the music and the cartoons are ugly, intentionally ugly. For the first time since the 1920s, the music is not based on the blues, which is to say, it does not have the vitality of the integral body as a reserve of expressivity. It is not, however, possible to generalize significantly about the Youth. Those who do not merely go through the sitcom motions of living are engaged in local cultural scenes that give a new meaning to fragmentation and decentralization. There are no culture heroes as such, but local rock groups focus the emotional intensity, and the information comes from local fanzines, which have sprung up by the handfuls in most large American cities and in many isolated communities. With readily available page layout software for computers and electronic copying, publishing has been thoroughly democratized. Information can also be cheaply and quickly distributed on magnetic tape and by electronic computer networks.

The following anonymous review of *Dimension Hatross* by Voivod, on the Noise International label, is from an electronic fanzine, *Jersey Beat,* which appeared on a computer bulletin board in the Albany, New York, area:

> A whorling mass of gelatinized steel wool, Canada's Voivod shifts gears on tempo, key and riffage as rapidly as a Village trendy changes lifestyles—and with as much apparent rhyme 'n reason. But in Voivod's case, the result is an exultant, liberating sense of anarchy & stylistic spontaneity. Event-windows rush by too quickly to lock into much more than sensations of pure speed and raw power—perhaps an overall impression of aggressive percussive assault.
>
> A lot is made of this outfit's art-punk and prog influences. To make a long convulted [sic] argument short—they extract a vastly different effect from these elements in this context: there's less scope, breadth, and creative intimation here. On the other hand, a lot of folks, including me, have probably prayed to have those scant seconds of incendiary bombast clipped out of their

> Mahavishnu records and pasted together for the pure demolitionary kick of it. Black Flag were moving in this direction but aborted the mission before reaching escape velocity. Voivod are already on Mars on a recon mission.*

The distance from the expressive pelvis of Elvis Presley and the coy sexuality of Chuck Berry's guitar caressing to "a whorling mass of gelatinized steel wool" measures precisely the extent to which the Freudian body—that is, the half-forgotten idealized body—has been revealed. The unexpressed content of the Western psyche is no longer significantly sexual. In fact, it is so-called *conscious* processes that have become so mechanized and so little in need of maintenance that they are repressed, even as their formulae appear nonchalantly on everyone's tongue. Paradoxically, it is not what we fail to express but precisely what we do express with blithe arrogance that we do not know.

The West has long suffered an epistemological pathology, and, with the worldwide communications networks of this century, the entire world is infected. We describe the world in such a way that we are required by the terms of the description to try to overwhelm it. In generalized terms, it works like this:

A describing system may include itself in its descriptions of the world—that is, take its own activity as the background for itself. As soon as one does, however, the event, a thing that has reference only to itself, is transformed into an example—a ratio between an event and a fixed, or at least partially fixed, systematic background. An event says, in effect, A is A. An example says, A is B, B is C, C is D, and D is A. ABCD provides a systematic background for each of the constituents. Of course, A is not exactly B, or they would be indistinguishable from one another, but *ad hoc* identifications allow some imprecision. Even if identifications are random, the example of A/ABCD presents odds of one in four. If

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*It seems right, somehow, that the last citation in this book should be to a source that I do not know how to cite. I can say that on June 20, 1989, this text was still on the Factsheet Five Bulletin Board in Rensselaer, N.Y., and the source includes an address where one can purportedly get the paper version of *Jersey Beat* (though I have never seen it). Knowing the way things move in this world, however, it is likely neither the phone number nor the address will produce my source, especially by the time this book is published. The anonymous reviewer with a flair for interesting metaphors will be soon be absorbed back into the underground. That is, the event windows open and close rapidly. As of June, 1992, this BBS seems to have disappeared.

the environment allows several chances, everyone will eventually pick a winner. The background may be more or less extensively articulated as a cosmic schema, a Weltanschauung, an archetype, a paradigm, a history, a society, a natural or artificial language, an aesthetic canon, or an electronic circuit. When an important background suddenly appears, it is a sun burst, illuminating the features of a New World—or what *seems* to be a new world because each event becomes an *example* of an entire world.

Peter Sloterdijk notes, "Although Kant forbade us to think of 'objective goals' in nature, his philosophizing orients itself, to be sure, not toward an overarching world reason but toward the confidence in our ability to bring reason into the state of the world" (Sloterdijk, 1987, 545). The epistemological pathology, which appeared in the seventeenth century and flowered in what we call the Age of Enlightenment, admitted an infinite number of steps between A and the return to A. Thus, an *ad hoc* stratagem, by which it was possible temporarily to overwhelm the finite environment, became a permanent discipline or addiction.

Now we know that we cannot bring reason to the world, not because our reason is weak but because the world is not that kind of place. We must welcome the fragmentation, not because a new sunburst awaits us but because, legitimately, we should never have hoped for knowledge as more than a way to "get by" with a little grace. Copernicus, Kant, Darwin, and Freud all proposed to remove us in our arrogance from our self-proclaimed privileged positions. With an arrogance of their own, they beat down human presumption. Now a profound humility is required. We must look quickly into the opening and closing event windows. Events come with their own backgrounds, which fade as quickly as the events themselves. Those who hold to a systematic background beyond the disappearance of the events which produced it, whether for reasons of sentimental love of the tradition or greed or desire for power, are dangers to the common good. The events are random and meaningless until we bring our own measure to them, and, of course, they are random and meaningless as soon as our sustaining attention fades.

Now there are no examples.

This is difficult to say. The statement itself wants to become an example of something—a world or an epoch, especially an exam-

ple of words, which in turn want to become examples of phonemes, significant differences, statistical reliabilities, or an example of *now.* Words, however are not *examples* of words; now is not an example of *now*. From *now* to *now,* word to word, is a precise measure—unexemplary, unrepresentable except by the traces which mark it, nonrepeatable. The design we cut in time we cut once and once only. From eternity—as we imagine it, with hopeless inadequacy—or from the sham eternity of some discipline of knowledge, *now* is contingent, a roll of the dice, and from the crap game, a domain of possibilities arises—natures, histories, persons, and so forth—a marketplace of knowledge where the truth and the possibility of great profit reward the best calculation. It is pervasive, even unavoidable, but it requires nothing of us. As the design in time is lived, suffered or enjoyed, however, it is absolute; our obedience is required. There are no second or third chances. There is not even a hint of an infinitely resolvable context for our perplexity.

There are no examples here. Now.

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