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## Nuclear Critics and the Monstrous New

Nobody wants to deny Diacritics the credit for inaugurating, in a special issue seven years ago, what is now called "nuclear criticism." And yet: rather like Derrida's argument, in that issue, that all literature (and not just that written about bombs) is nuclear, an argument can be made that all literary criticism since Hiroshima must be nuclear as well. For if criticism, as Edward Said has asserted, is always "situated," then the nuclear situation must leave its traces in the text. At times these appear as passing figures of speech: writing which "explodes" or "burns"; a semiotic "ground zero"; structural elements or "atoms," decently draped in Lucretian allusions. Sometimes absence speaks more eloquently than presence: in The Writing of the Disaster Blanchot mentions nuclear war only once, only parenthetically-"(the atomic threat etc.)"—and only to clarify that his metaphysical "disaster" is entirely other than this (118). Or is it? "They do not think of death, having no other relation but with death," Blanchot writes (40). He is emphasizing how a force that is pervasive becomes invisible to those for whom it is their element; and he is not exempt from the point he is making. Finally, the invisible but pervasive pressure of the nuclear threat may affect the very structures of our thinking, regardless of its content; deformation, mutation, go beyond the biological. If, as Marcuse once suggested, the bomb has already fallen and we are its mutants, it should not be surprising to detect corresponding mutations in what we write.

Not that mutation is by definition such a bad thing: in its general sense of a process of change, it is as likely to be desirable as not. But

it is a mark of the change that has come upon us that this word now evokes, before anything else, the image of a radioactively produced monster. To determine why this should be so is an aim, among others, of Spencer Weart's ambitious *Nuclear Fear: A History of Images*. The nuclear monster is only one of the numerous images treated there that have formed, and more often deformed, our thinking about the nuclear situation. But its own deformation makes it a vivid emblem of such thinking at its most problematic.

When a radioactive vegetable creature known as *The Thing*, then, lurches about the screen, "looking remarkably like Boris Karloff playing Frankenstein's monster" (190), it is, like that monster, a composite. It is pieced together from many images and ideas, from images as ideas. Its monstrosity, to begin with, poises itself against the human. It is the human become inhuman: the visible penalty for violating the secrets of nature, "herself" humanized. Even etymologically, the assault on matter is the assault on *mater*; Weart repeatedly notes imagery of penetrating to the mother's womb. This in turn is related to the descent into the inchoate, the chaotic, which is one step in the process of alchemical transmutation—a common comparison in the history of atomic research, utilized by scientists and the public alike. Only here the *trans*- is halted in mid-step: like Donne on the eve of St. Lucy, we are stuck halfway in the alchemical process, distilling an essence of chaos.

The fact that so many nuclear monsters are released from melting arctic ice points to an equivalent unfreezing of archaic fears. The bomb-we generally refer to it as a single mythological entity-the bomb brings out into the open our own monstrous potential. The imagery provides a "monstrous double," which is the mimesis of our secret fears and desires. In René Girard's analysis the monstrous double always appears at a time when violence is begetting violence in a spiralling mimetic process which threatens to destroy the community from within. This is the sacrificial crisis, the stage which precedes archaic sacrifice—or perhaps a more global burnt offering. The difference between the two indicates both the power and the peril of images from the past. Power: because of the release of so many of our deepest fears and hopes by an event where the archaic can coexist with the scientific—as it did in the mind of Oppenheimer, murmuring of the goddess Kali at the moment of Trinity. Peril: because, as Weart reminds us, "associations already in the mind can creep into the picture that people think they perceive" (8), and thus deform it. As these images often express forbidden desires twin-born with fears, they were unbearable in the past, and remain unbearable in their contemporary guises. Thus these images contribute to what Robert Jay Lifton calls "numbing": the monster, like Frankenstein's, will be exiled anew into some arctic region of the mind; and this too is peril.

Nuclear imagery is a Janus, monstrously two-headed: looking backward, it translates nuclear fears into older ones; looking forward, it governs decisions about our nuclear future, decisions which are often taken for the sake of imagery. Among Weart's many examples of this, the best is the project which, within hours of its announcement, was spontaneously christened "Star Wars." That project was "a striking demonstration that imagery could shape history in spite of what scientists and engineers held to be true" (384). The very familiarity, through fiction or film, of ray-guns and magical force fields lends them a kind of credibility. But the real force inheres in the image:

If the administration's strategic defense program was built on images, to a large extent that was deliberate. Perception theory strategists who knew that a missile defense system could not work still wanted one, for they thought that the Star Wars imagery itself would instill caution in the enemy, and at the same time would make their own side more willing to fight. (385)

The image thus becomes not just a diaphanous preview of the future but a condition of its coming into being. In the debates over nuclear reactors in the seventies, even "estimates about reactor economics necessarily depended less on facts than on images of the future" (347). I should note here the breadth of Weart's notion of image. He does not confine himself to visual images, nor to isolated ones, but instead deals with more diffuse clusters which compose what he calls "a public image in a general sense":

Such a cluster may include various kinds of simple images from mental pictures to complex stereotypes. It may also include carefully thought out ideas, unconsidered beliefs, inarticulate feelings, and visceral emotions. All these are internal experiences that people may project back onto the external world by associating the experiences with particular things. The result of all this is the attitudes that finally determine action. (347)

Any cluster of images, in short, is a potential future, a matrix of mutation or transformation.

The idea of a potential future is central to another recent work of nuclear criticism, J. Fisher Solomon's Discourse and Reference in the Nuclear Age. The book's genesis is to be found in the Diacritics special issue, and specifically in Derrida's essay. Solomon sees that essay, originally given as a talk at the Cornell Colloquium on Nuclear Criticism, as an attempt to repeat the effect of Derrida's 1966 talk at Johns Hopkins—that is, if not to abort at least to mutate nuclear criticism at its inception by demonstrating its unresolvable aporias. Accordingly the essay delivers "seven missiles, seven missives." Having dropped his bombs on the Cornell Colloquium, Derrida closes with a reference to the seven-fold patterning of apocalypse in the Revelation of St. John, who is also St. Jacques. Each missive, it is implied, has been not just an avertissement but also "a divine portent or warning"-which I note as one of the definitions of monster. And I have the feeling that Solomon, though he is too polite to say so outright, finds much that is monstrous in Derrida's essay.

Perhaps Derrida would agree. His Johns Hopkins talk closed with a reference to "the as yet unnamable which is proclaiming itself and which can do so, as is necessary whenever a birth is in the offing, only under the species of the nonspecies, in the formless, mute, infant, and terrifying form of monstrosity." It would be a mistake to identify this monstrous future with nuclear holocaust: rather what is implied is an historical mutation in "what is still now and then called humanity" ("No Apocalypse" 20). When he speaks directly about nuclear war, and as it were offstage, Derrida is all for the preservation of humanity: "It's better to negotiate and to speak and to postpone the use of these weapons, and to analyze what these discourses—the political discourses—are, and to try to mobilize the people against what is threatening in this" (Salusinszky 21). In the Diacritics essay this becomes "a long colloquy with warriors in love with life, busy writing in all languages in order to make the conversation last" (32). Such a conversation can only postpone the closure of nuclear war if that war itself is seen as a linguistic phenomenon, and this appears to be the case: nuclear war, Derrida asserts, is "fabulously textual, through and through." Consequently, "the terrifying reality of the nuclear conflict can only be the signified referent, never the real referent (present or past) of a discourse of text" (23). To be sure Derrida does not deny the physical reality of stockpiled weapons; still, the arms race which generates those weapons is powered by the "fable" of an anticipated but not yet real nuclear war.

It is Solomon's contention that an anticipated or potential future has a reality, and that discourse can have reference to that reality. The nuclear referent becomes, in Solomon's book, the impetus or cutting edge of a major reappraisal of thinking from all areas bearing on the problems of discourse and reference. While Solomon's political agenda allows him to perceive and explicate the ways in which various structures of thought deform themselves, it also drives him towards a creative intellectual mutation of his own.

Solomon evolves what he calls a "metaphysics of potentiality," and he begins this process with a reading of Aristotle's *Physics* and *Metaphysics*. In contrast to Derrida's monstrous future, "the species of the nonspecies," a species in Aristotle is defined by a set of specific potentialities, potentialities which are material. This material potentiality composes itself with a formal actuality to make up the "thisness" of any individual member of the species, mediating identity and difference. A future, however terrifying, cannot be an absolute difference; it actualizes itself out of a material, real, and present potentiality.

Contemporary physics is in this respect Aristotelian. Heisenberg, whose "uncertainty principle" is used by many theorists as if it were a metaphor, describes quantum mechanics

as a quantitive formulation of the concept of *dunamis*, possibility, or in the later Latin version, "potentia," in Aristotle's philosophy. The concept that . . . the possibility or "tendency" for an event to take place has a kind of reality . . . plays a decisive role in Aristotle's philosophy. In modern quantum theory this concept takes on new form. (Solomon 99)

But it is Karl Popper who is most useful to Solomon. Not only does Popper agree with Heisenberg that propensity is a real physical property; he applies the notion of potential to theory itself. For scientific theory, he argues, is a species of the potential, and the scope of any theory's potential is one measure of its worth. The testing of that potential through experiment is again a matter of measuring not a material reality so much as a propensity.

As for the textuality of nuclear war, Solomon meets this challenge through analyses of, among others, Iser, Fish, and De Man. He argues that a text is dynamic, another version of *dunamis*. The text is in play—not so much a Derridean play as "a play of forms, of textual potentialities becoming actual in the mind of their interpreter according to the 'material' constraints of a virtual textual situation" (113). The argument begins linguistically, with "the unextended phonemic and morphemic classes to which individual phonemes and morphemes belong" (180). The potential of these classes is then realized in the form of particular signs. Here Solomon has taken his cue from Aristotle's observation that "this A, which the grammarian investigates, is an A." More linguistically put, this becomes the following argument:

The phoneme /a/... constitutes an actuation of the indefinite potentiality for specific actuation that subsists within the class of phonemes to which it belongs. Only after we have identified it as "an /a/" can we differentiate it from another phoneme within its language system. (182)

To further this resistance to Saussurean difference, Solomon turns to Charles Peirce, and specifically to Peirce's discussion of two possible objects for the sign:

We have to distinguish the Immediate Object, which is the Object as the Sign itself represents it, and whose being is thus dependent upon the Representation of it in the Sign, from the Dynamical Object, which is the Reality which by some means contrives to determine the Sign to its Representation. (4.546)

Representation, that is, can be linked to what Peirce calls "collateral experience." The objects of experience are governed by laws, propensities which may be scientifically determined; and likewise conventional signs are laws. Thus at their most general level both signs and objects are regular propensities. Such notions allow Solomon to conclude that "the goal, or tendency, of semiosis . . . is not the production of another sign but the extension of our knowledge in an evolving dialectic between the subjective sign and the objective dynamics, the habitual propensities, of the real" (201).

The last section of the book echoes Peirce in being titled "Lived Experience." Here Solomon critiques a transcendental element in Heidegger's notion of history; and beginning with Jameson's idea, in *The Political Unconscious*, of the ways in which history is textualized, he analyzes the problematic status of Marxism as a whole. Always he insists on the grounding of theory in a referent that is real, for the sake of the historical change which is Jameson's aim as well as his. The nuclear referent demands change, and if that change is not consciously undertaken it will execute its mutations at an unconscious level.

Both Weart and Solomon analyze the nature of our habitual modes of thinking, our propensities; by doing so they give us the opportunity to move beyond them to the actualization of potentials which, while always there, have heretofore been dominated and deformed. Within this general similarity the very differences between their projects implicate them with each other.

At the heart of Solomon's argument is the pragmatism of science: his writing is a logical instrument, lucid and supple. And it is curiously bare of images. Only in the last paragraph, in speaking of the impetus to change during the Vietnam war, Solomon refers to the "incontrovertible facts of fifty thousand pine coffins." Perhaps it is the very atypicality (for Solomon) of the image that makes us wonder whether the *vision* of pine coffins lined up to the horizon, and other images of the war, did not influence people as much as, or more than, the statistics in regard to casualties. Probability theory itself, after all, had never presented a very convincing case for the kind of war that Vietnam was; people's allegiance to it was won by images, in the broad sense of that word.

On the other hand Weart, a scientist and an historian of science, is drawn to the image's power. First, the power to engender scientific discovery (Leo Szilard's meditations on chain reaction, for instance, were mingled with the novels of H. G. Wells); and second, the image's power to deform, if not scientific pragmatism itself, its pragmatic applications. Yet he is careful to temper his case. Imagery can be a force for or against change, only by affecting attitudes; actual outcomes, however, depend on the reality of political systems. Warning against the irresponsible use of archaic images, Weart calls for their constant

testing against realities; and he concludes, in a sudden reversal, with "The best way to affect imagery is to alter reality."

Each project is necessarily incomplete. Solomon's apparent project is to demonstrate that a nuclear referent is real. But at a certain level we knew this: the denial of that referent was always more of an intellectual tour de force than anything else. So the real purpose of Solomon's book is to tell us something about the nature of that tour de force, something about intellectual mutations, and consequently something about their possible complicity with the most common attitudes of denial and laissez-faire. These attitudes in turn are determined, according to Weart, largely by archaic images of fear and desire. A referent that has never existed becomes, in the unconscious, one that has always existed—and, as Derrida reminds us in a footnote, "Freud said as early as 1897 that there was no difference in the unconscious between reality and a fiction loaded with affect" (23). The "attitudes that finally determine action" in the future thus circle round to the past, and back again.

This seems to extend Derrida's "fable" not only into the future but into the past, and to confound the two, along with belief and science, doxa and épistémè. And this was Solomon's point of departure, that from which he wanted to depart. The critical difference is in the stance one takes at the present moment, at the ground zero of all these circling aporias. Derrida's present is never a presence; it is an interminably prolonged suspension, an epistemological stasis paradoxically produced by the continual movement of differance. This stasis Derrida would optimistically link with the postponement of nuclear holocaust. But it might equally well be linked with passivity-using that term not merely in its political sense but also in the sense in which Blanchot uses it, where passivity is linked with his "disaster," is in a sense the disaster, the coming to naught of all human activity or self-assertion, assertion even that there is a self. Solomon's present moment, no less the locus of contradiction, is characterized not by suspension but by mediation, as is indicated by his closing statement:

The place for criticism, I believe, is the place of realism, a space from which a nuclear criticism could compare and evaluate the various "beliefs" that have been represented in the political debate surrounding the nuclear referent, arguing that not all beliefs are equal and not all possibilities the same, but that one belief can be distinguished from

another precisely by the limiting power of reality itself, a power that we can never grasp in a reified presence or form but over which we can conjecture, debate, and maybe even agree.

The structure of *Discourse and Reference in the Nuclear Age* as a whole presents us with an image (in the widest sense of that word) of process. That process-image is what is most valuable about the book, even more so than the stress on "objective demonstration" and "incontrovertible facts." For facts are always controvertible, in that one may argue over what to do in regard to them; and such controversy is part of a larger process. It is in presenting us with an image of that process that Solomon has created his truest "metaphysics of potentiality"—one which stresses the potential not just to predict a real future but to change it.

To read Solomon's book in this way is to move it towards another "metaphysics of potentiality," that of Ernst Bloch. In his monumental *The Principle of Hope*, Bloch stresses the importance of "realistic tendency-knowledge, with the conscience of latency within it" (178). This is akin to Solomon's notions of potential, though with a difference. In a key passage Bloch begins with the importance of process, and goes on to make a distinction between two versions of the possible:

The Real is process; the latter is the widely ramified mediation between present, unfinished past, and above all: possible future. . . . We must of course distinguish between the merely cognitive or objectively Possible and the Real-Possible, the only one that matters in the given context. Objectively possible is everything whose entry, on the basis of a mere partial-cognition of its existing conditions, is scientifically to be expected, or at least cannot be discounted. Whereas really possible is everything whose conditions in the sphere of the object itself are not yet fully assembled; whether because new conditions—though mediated with the existing ones—arise for the entry of a new Real. (196)

In these terms, Solomon's predictive potentiality is that of the "objectively possible"; whereas the *shape* of his argument—his argument as an image—prepares the way for the "entry of a new Real." Plainly Solomon's is a major contribution to the evolving Nuclear Criticism: and beyond that, a glimpse of the possible form of critical post-postmodernism. Yet this emerging Real is not so new that it is

without genus or species, without genealogy. Solomon looks as far back as Aristotle to assemble his argument—as does Bloch, who is in the same relation to Aristotle's entelecheia as Solomon is to his dunamis Both take an earlier idea as a state of potential, from which they chisel what is superfluous to their project. For Bloch, works of the past always contain an unfulfilled impulse towards the possible: the utopian impulse, he calls it. This impulse is most vividly expressed not so much in philosophical ideas as in artistic images; and the continuing power of past works of art comes from their expression of that still (and in a sense, always) undischarged impulse. The image of transmutation, so important to Weart's study, must be not only the subject of such works but their function: L'art pour l'espoir is Bloch's maxim. For hope, he argues, is "one of the most exact emotions above every mood." This is because, though change is what is hoped for, the emotion of hope itself is "not very changeable, but very characteristic in its intention, and above all . . . capable of logical and concrete correction and sharpening" (112). Hope is at one of the two edges of consciousness, that of the not-vet-conscious, which Bloch calls variously Front, Novum, or Ultimum. And in contrast to consciousness's other edge—that of unconsciousness, origin, the already-been—the principle of hope remains "as unexplored as the Antarctic." What can be melted out of that frozen, yet preserved state is not monstrosity but the New. the very idea of Newness itself.

Yet are not the two one? Certainly Derrida, in his Johns Hopkins speech, equated the new and the monstrous; and he extended that point in *Grammatology*:

The future can only be anticipated in the form of an absolute danger. It is that which breaks absolutely with constituted normality and can only be proclaimed, presented, as a sort of monstrosity. (5)

This anticipates, of course, Derrida's later argument about nuclear war. Clearly Bloch would disagree; and Solomon, while not denying the catastrophic nature of nuclear war, might well question the seductive drama of an "absolute break" with normality. Any future must arise out of a present potential, a potential which includes any number of possible futures. Along with the alarming reality of nuclear potential there is also the potential for countering it, for resisting the idea that

"the future can only be anticipated in the form of an absolute danger," and thus a form which is de-forming, which is monstrosity.

Perhaps it is not the future which is monstrous, though, but the present, and precisely because it is the point of mutation. If we think of the images of nuclear mutation, two characteristics dominate: First, the creatures, though natural, are larger than life. They enact a revenge of nature on those who have tampered with it. From their sheer size our feelings of fear and helplessness may be inferred: in the B-movie The Beginning of the End (1957), an army of towering insects enacts the day when "the grasshopper shall be a burden" to a society's anomie. Second, and more telling, is the phenomenon of composite monstrosity. Monsters are often physical composites, merging states which nature is "supposed to" keep separate. Neither the human nor the vegetable state is especially terrifying in itself: to merge them in "the thing," though, is to create a monster. It is its very in-betweenness that is terrifying, and its terrors are those of transition. Usually the transition is only implied in the image—though the recent remake of The Fly unpacks all those implications in a slow transition between two innocuous creatures. The image of monstrosity thus implies temporality—not that of a future absolutely severed from the past, but the painful transition from past to future, from one state of being to another. The human image moves toward becoming more or less than human, and in either case embodies visually an encounter with that which is other. Though the other itself may be source of fear, the terror of monstrosity is much more a fear of changing from self to that which is other than self. The monster embodies the fear of change, with all its attendant difficulties.

Yet these difficulties, monstrous though they may seem at the time, are part of a necessary moment, one which can pass into a future which is far less monstrous than the present: deformation may be the prelude to reformation.

The screen shows a slow stirring within the ice. A shadow approaches the surface, begins to scratch its way through. Waters melted by a distant atomic blast run down the translucent walls, distorting the already distorted image of what is emerging: a prodigious composite, an evolutionary warp, a leftover from nature's alembic. But if this is the image of nuclear fear, nuclear hope also presents an

image, evolving rather than devolving, yet monstrous in its way. It is human, but not entirely, not yet. The chisel of Michelangelo left this image unattained, an image of unattainedness: a slave struggling against the petrifaction which binds him, half human, half rock. The features of his face dimly emerge from a huge shaggy mass that extends his head into a cloud.

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