

*Against the
State of
Nuclear
Terror*

Joel Kovel

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4 The Culture of Technocracy

Culture is the linchpin between the people and the established order. It can be manipulated by the latter but stems from the spontaneous life activity of the former. And culture is the intersection of the psychological and the material, the way in which history is transmitted. If we are victims of nuclear terror, it is because we have lived lives in which the ways of the nuclear world appear to be natural instead of as intolerable violations of nature.

There are two salient features of a culture which can breed a nuclear order: violence and technocracy. By violence I mean the forcible alteration of the nature of things (literally having to do with their position in nature—putting a knife through someone's skin is violent, but so is caging an animal or suppressing a child's curiosity). By technocracy I mean something beyond the ordinary usage of the term indicating the rule of experts (although my meaning includes this sense): technocracy is political domination shaped by technical, "value-free" reasoning. It is the controlling of the human world by principles drawn from the natural sciences or the application of science to machines. We shall have considerably more to say about these terms as we proceed. For now, the point is that these are the two distinctive features of societies that generate nuclear weapons, and where they are greatest, as in the U.S., so is the nuclear order the most advanced. It should be added that violence and technocracy are not necessarily coupled, nor are they necessary features of capitalist societies as such, even though capitalism has classically entailed both violence and technocracy. There are violent societies that are not particularly technocratic, for example, Iran; and there are technocratic societies that are not particularly violent, for example, Denmark; and there are capitalist

and non-capitalist societies that fit into all possible combinations of these qualities. In particular, existing "socialist" countries are highly technocratic. However, when capitalism, violence and technocracy coexist under one social roof, then the world is in trouble, since the inherently expansionist tendencies of capitalism will be stirred by the aggression of violence and advanced with the technological force inherent in technocracy.

From another angle, what we are describing is the culture of power—that of domination over the Other. And since both violence and technocracy involve relationships to nature, we must add that the domination in question is always of nature, involving environmental degradation as well as that of other humans—and, it follows, of human nature also, a point we shall develop when we return to a discussion of the psychological dimension.

The atomic bomb is the end-product of an obsession with technical power. It is the ultimate—in the sense of final-transformation of nature to yield human power; and since it yields that power in the service of dominating the Other, it both fulfills domination and brings it to a close.

Because of technocracy, the power which is generated by the nuclear state takes on an impersonal, value-free quality. Yet it is human power; and unless we recognize it as such, there will be no hope of affecting it politically. It is, however, human power of a special kind. It is human power that has become inhuman, and returns to us as a stranger. It is alienated power.' It is of us, yet we do not recognize it, and being unrecognized, alienated human power becomes the source of fragmentation, and the reason there is no organic "we" to take up the struggle against the bomb. It is the secret behind technology; and the secret behind economic domination; the secret behind the war between the sexes and the secret behind racism; and it is the secret behind violence. And so it is the secret behind the nuclear crisis—behind the making of the bombs, the use of them as trump cards in the game of world imperial supremacy, and the terrorizing of the population in their name. It is, in sum, the secret of history itself, until nuclear weapons arose as the threat to put an end to history. And since history until now has been the record of man's domination of nature (and here the masculine noun is used

advisedly), the alienated power which is our enemy is also the product of an estrangement from nature.² It is the part of us which left nature and returns to us a stranger, a god, a demon, a ghost, a dream, or, of course, an atomic bomb. The end of history will then be nature's revenge on history, blindly wreaked by nature's wandering son. And the escape from the nuclear trap which is the end of history is also a reconciliation with nature. Let us glance at some of power's guises. They will all be intertwined.

Technology

Technocracy models itself after technology.³ Therefore, we begin with the machine, since we are in danger of ending by the machine. Modern man (again the masculine term applies to what has happened to the species) worships technology. This is understandable, since he is swaddled in it from the day of birth. It becomes his *alter* mother, a cocoon that carries him passively through the world, as visitors to Florida's Disney-world are encased in a plexiglas vessel and wafted before the universe's wonders. When my youngest child was born, the nurse took her from her mother after a couple of minutes and put her under a heat lamp. "Why?" we asked. "Because the new-born does not have its temperature regulation down yet," was the answer. Without the heat lamp, she would become too cold and possibly perish. How interesting; we wondered how the human species had managed to survive so many millennia before the heat lamp was discovered. Silence from the nurse.

The machine expands the body, and replaces the body. , Ride in an automobile, and once again be encased in the technological womb. It is quiet and comfortable in the car (at least that is how the better ones are designed). Stand outside on the road, though, and listen, and smell, and breathe as the

cars go by. Then you will understand something else about technology (which becomes a ruling principle of technocracy). Not only does it replace nature as our encasement, but it exports violence outward. Once we have multiplied the power of our body by a machine, then we have lost the self regulating features of nature. In their place is the extroverting power of the machine. We want that power for ourselves, but we do not want it to be used on ourselves. Thus, as we use it we

tend to distance ourselves from it. The machine is turned against the Other, whether this other be the soil, a bird, a bacterium or, needless to add, other people. In the process we become grandiose and abstracted from the concrete, immediate flow of life. Technology contains the seeds of paranoia. This does not *have* to happen; i.e. the seed need not sprout, but there is no inherent check against it, such as nature evolved in its self-regulating ecosystems. Note, too, that the self, or, to be more exact, a particular kind of grandiose, isolated self, is likely to be produced by the use of machines. We make ourselves as we make things. Once a certain kind of self-process gets going under these conditions, it tends to widen and reproduce itself. And it does so at the expense of others. The more power it commands by virtue of the machine, the more distant it becomes from the object of its power. The more distant this object, the less consequential it becomes, the more of a stranger and the less, therefore, a moral entity it is. For we only show morality if we care for others. And we can only care for those with whom we can identify. Care and morality require compassion, or fellow-feeling. Once this is lost we no longer recognize ourselves in others; and when it is lost through the exercise of technological power, we begin, by contrast, to recognize ourselves in the machine, which is only our brutal bodily power grown large and returned to us. So our bodies become strange to us, too, as technology takes over. And eventually the body becomes but another machine.

To repeat: this does not have to happen. That it has happened is a reflection of a historical set of choices, the outcome of which has been to establish society so that all persons are

regarded as strangers to each other. Men may have been on others could be reshaped into domination and estrangement. What is likely is that the two sources of estrangement, technological and social, each reinforced the other. Certainly, some kind of mutual reinforcement must have occurred for which technology begins to undertake a seriously pernicious tack is that of the modern state.' States broke into the ancient

pattern of communal unity between individual, family, tribe, and natural cosmos four thousand years ago. They replaced this unity (or more exactly, a differentiation within a unity, where each person had a sense of individuality yet recognized him or herself in all others and in nature) with a superordinate body which represented the interest of one property-owning moiety of the social body, and imposed the will of this group on all others. With statehood came the germ of universal estrangement. I say "germ," because it took millennia for the state to achieve overarching presence within society, and to supplant the decentralized and autonomous community. Not until the revolutions which ushered in the modern age in Europe did the state consolidate itself over what is called civil society, which is the remnant of human communality.

When we condemn the state, then, we are not speaking in the abstract, and prejudging all statist structures of society to one level of hell or another. In a universal world order, there will have to be some form of council to represent the general interest. To the extent that the philosophy expressed here is an anarchist one, it should be recalled that anarchism is not the advocacy of anarchy or chaos, but of self-management and community. Remnants of community still exist in civil society, and constitute the raw stuff out of which antinuclear politics can be built. But the adversary to such politics does not have to be sought far. It is there, leaning oppressively on us all the time: not a council, but the state; and not the abstract state, but this state, here, now, the corrupt fruit of class interests, the proprietor of technological violence: capitalist technocracy.

The secret of the modern state is its incorporation of the technological mode. This allows political questions of value to be treated as if they were value-free questions-and this enables domination to function silently under a cover of democracy. Technocracy neatly cages enough democracy to secure its legitimation. Then it places that cage in a sideshow while it goes about its business.

In technological society, people are swathed in technology, fascinated by it, yet inevitably estranged from and ignorant about it. This should be no mystery, since the other side of estrangement is the privileged use of goods by the minority of owners and masters. Technology has always been

trumpeted as the great bringer of social equality. When used under the aegis of technocracy, it does no such thing, but only perpetrates inequality at a higher overall level of material acquisition. And foremost among the inequalities it brings under such circumstances is that of knowledge. No matter how much education is thrown at the populace, the pace of technical development keeps leaping far ahead. This creates the opening for an entirely new body on the historical stage, that of the *experts*. Experts belongs to this group by virtue of privileged access to a small area of technical knowledge, possession of which is their ticket to a portion of power. Thus each expert is also an ignoramus like everyone else, with respect to all the technical knowledge s/he does not possess. Yet the tiny portion s/he has, whether it is how to fix a washing machine, or how to diagnose schizophrenia, how to design bombers to evade Soviet radar, or how to negotiate arms control treaties, is a little portion of a great magic, representing all the estranged knowledge of the human condition that has accumulated under the conditions of the technological state.

The technological experts are the technocrats as such. While they wield great power, and more or less fill the top positions in the state bureaucracy, they do not, at least in the Western world, constitute a class interest in themselves, but only act as adjutants to the capitalist class interest. Therefore, it would be a mystification to identify technocracy primarily with the tendency to rely on technologically inclined experts to run major institutions. If technocracy has become so dominant in the modern West, it is because capitalism itself has taken an increasingly technocratic form.

Capital is still the power. However, as time goes on and it increasingly hollows out a society, we recognize its core to be technocratic. This becomes clear as soon as technical experts

usurp democratic functions, yet it was present from the earliest days. Capitalism arose through a universalization of the calculating attitude; and as it rose further and further, it increasingly identified its fortunes with those of the machine. Modern capitalist production has as a result become completely absorbed by technocracy (including the mechanization of work and its control by "scientific management").⁵

The basic principle of the machine applies to all technocratic activity—that it should be a multiplication of human

power achieved through separation from the sensuous body. Only something objectively measurable can be multiplied, of course, and so the success of technocracy is necessarily at the expense of whatever cannot be counted, which is to say, sensuousness, values, imagination, and, to be sure, nature itself. These become split off from the user of the machine. And the estrangement of technocrats is also the measure of the great mysterious power they wield in our civilization.

We are indoctrinated from birth to respect the machine and the expert. Technical advice replaces parental advice with the first formula fed to the baby, the first manufactured toy that is put into the nursery, the first school attended. During the whole of our life we are brought up to accept our ignorance passively and to yield to the mastery of the technocratic expert. Every program of the mass media reinforces the pattern; every advertisement, made from afar and advising us how to consume our life's goods, drills it ever more deeply inside; and every day spent at work under the conditions of modern production, where each aspect of work is subject to sophisticated managerial control, gives it all the stamp of reason itself. And if you bear in mind that the manager, the teacher, the repairperson and the advertising executive are each of them only the "master" of a tiny portion of technocratic knowledge, you will get some idea of why the population of the Western democracies has been so susceptible to the reign of nuclear terror.

Weapons, of course, are pieces of technology just like any other machine, even though their purpose is to break things apart and not to build them up. In all other ways, weapons are

no different from other types of machine, being but extensions of the human body—"arms." Since a person can kill with bare hands, it may be said that the "ultimate" weapon has existed since the dawn of human time. Theoretically, there was nothing to stop the cavemen from putting an end to the species by strangling all the women, just as there is nothing to stop the leaders of the U.S. or the USSR from terminating the human race by unleashing an all-out nuclear attack. Nothing, that is, save human feeling.

The fatal distinction between the two classes of murderousness lies less, therefore, in the greater destructive power of the technological variety than in the fact that it becomes

progressively harder to muster fellow-feeling through a machine that makes its object infinitesimally small (by infinitely multiplying the number affected) than it does to inhibit the use of bare hands, when what is at the end of those hands is another singular human being about whom one might care. This dismal truth has been well enough recognized, though nothing has been done about it by our compassionate leaders save to invent smaller and "cleaner" atomic weapons, so that a commander will have a "flexible" range of options, instead of having to face the either/or decision of omnicide.

Thus, the child of technocratic care is the neutron bomb. The reason those in command can do no better is not a matter of their personal wickedness, even though it generally takes a morally deficient person to rise in the jungle of power, and despite the fact that people tend to become more callous and amoral the further they rise. The degree of individual amorality is not the decisive factor in the amorality and wickedness of the system. Nor does the abstract capacity of modern weaponry to distance the user from the person being killed tip the balance towards mass technocratic homicide.⁶ It is rather that the kinds of inhibiting mechanisms which the system dredges up to replace the human feeling which might dissuade an individual killer are themselves so utterly heartless and inhuman. That is, the checks on technological killing are far closer to the interests of the state than they are to those of the victims of the state. This is a function of the political composition of modern states and not of the intrinsic properties of the machine. It is a matter of people becoming machinelike in the service of the machine. We shall have more to say about this mechanism when we explore some aspects of technocratic violence below. But first, let us round out the portrait of the power we face.

Economics

State power-and hence nuclear weaponry-remains at the behest of those who control the economy. This truth comes home in two ways: first, through the grotesque mass of interests comprised under the term "military-industrial complex,"⁷ and second, through the brute fact that the essential purpose of the military is to suppress the victims of economic oppression.⁸ Armaments, therefore, provide both profit in them-

selves and the power to secure more profit: clearly, an irresistible combination to any self-respecting capitalist. That these realities are not better appreciated than they are is plainly the result of complicity on the part of the media and the academic intelligentsia.⁹

What is less evident is the common root shared by technocracy and economic domination. It is of course widely recognized that capitalism is profoundly dependent on technology.

As we know, virtually the only area of high profitability left to "advanced" U.S. capitalism is high technology. But technology affects the process of capitalist production as basically as it does the product. The unrelenting replacement of human by technological labor forms the very fabric of the history of capitalism, and is responsible for the universal degradation of work in modern times, along with structural unemployment and a good portion of the economic misery that afflicts the [world](#).¹⁰

The nature of this root, however, should not be taken for granted. It is too readily presumed that the problems of the economy can be met within the terms of the self-same economy: more investment here, less there, a change in monetary policy, new tax laws, shifts between the state sector and the private sector, and so forth. Such measures have a short-term rationality, and can string out the system's inner tendency to self-destruct. Indeed, the arms industries themselves are economic measures taken to stave off the tendency of capitalism to destroy itself. England began the process, as Mary Kaldor has pointed out, "as a way of extricating itself from the chronic stagnation that occurred after 1870; and the U.S. followed suit '2 when World War II brought forward the military as the one medicine which seemed to palliate the intractable Depression of the thirties. The war was highly invigorating for U.S. capitalism, both destroying most of the rest of the capitalist infrastructure and doing wonders for markets in the post-war world. The rulers of the United States' system were, therefore, quite pleased with the military-industrial empire of World War II, and quite deliberately set about to preserve and expand it as a hedge against another depression in the years to follow. As the post-war market for consumer goods slackened, the pressure for the military-industrial complex waxed-a factor which added considerably to the mo-

tives for heightening the Cold War. Absolutely nothing in this picture has changed in the present, stupendous drive for militarization inflicted by the Reagan administration, and avidly swallowed by the military-industrial elites of the Western alliance-nothing, that is, except the increasing awareness that, like a laxative taken for too long, the arms industries are adding new levels of pathology to the system they were supposed to set into motion.

We cannot here detail the decay induced by the weapons industries. Enough is suggested by the fact that in Great Britain (the world leader in this respect, closely followed by the United States), the military gobbles up roughly half of all state-funded research and development monies, year after year after year;¹³ or that in the U.S. in 1977 (i.e. before Reagan, and at a time that hawks now decry as an inexcusable period of military indolence), for every \$100 of new fixed capital formation, forty-six were spent separately in the military sphere;" or by the whole rotting obsolescence of the once vaulted U.S. industrial system. Suffice it to say that the process has become so scandalous as to have aroused progressive elements of the capitalist class to cast about for ways of converting the war industries to more rational ends.

The problem with this meritorious project is that the weapons-making complex is embedded in an irrational whole. It is only quixotic to dream of a more rational use for productive capacity if the reasons for irrational use are not confronted squarely. Further, arms industries are intrinsically different from civilian production, making transfer quite difficult. Finally, the war industries are very deeply embedded within society, a fact which poses colossal problems for the project of conversion. Consider only what would happen to the state of California if the nuclear freeze campaign were to be suddenly successful. The price for this partial dismantling of American military capability (nuclear arms, at most, comprise 40 percent of the items in the military-industrial catalogue) is 200,000 jobs alone-not a very pleasant prospect at a time of grave unemployment.¹⁵

It seems therefore that the problem of militarism cannot be solved within the terms of the existing economic system. Those terms themselves will have to yield-a good thing, considering how much suffering and environmental destruc-

tion they have wrought and how much more havoc they stand to wreak.

Given the precipitous rush toward Armageddon inherent in the established system, no reasonable person can argue against any measure that slows down the process. But no

rational person should be content with merely slowing down the march toward death. He or she should insist rather that this march be reversed. And if it is necessary to insist on a far more radical measure than those ordinarily envisaged, so be it. The problem does not lie in the workings of the economic system, but in the fact that the system is economic in the first place. And the solution is not to grease the wheels of an archaic machine, but to see to it that the machine itself is replaced by something more suitable to the well-being of life on earth.

Capitalism (and the established "socialist" regimes, which are not genuinely socialist but, roughly speaking, state capitalist) is not simply a system of economics. It is a system defined by the economic-that is, one which elevates the principle of economics to an end in itself, and subordinates all else to it. Two elements are combined into this unique historical compound, each being particular transformations of the archaic roots of the word economy. From *oikos*, which comes from the Greek for dwelling place or habitation, and thus ultimately means the earth itself, economics derives the term material goods or commodities; from *nomos*, which comes from the archaic Indo-European root *nem*, and can ambivalently mean to allot or to take, we arrive at management or systematization. Thus, we arrive at the present sense of the term economics, as the rationalization of material commodities. The change in the word itself-from the allotment of the goods of the earth to the management of commodities reflects the history of capitalism: all the goods of the earth have become commodities to be bought and sold on the universal market according to the terms of capitalist rationalization. Human activity itself has become a commodity-labor power-to be bought and sold for wages.¹⁶ In other words, the particular, concrete sensuous "use-value" of an entity (such as human activity) is to be supplanted by its abstract, turned-to money "exchange-value." All entities become things to be counted, the only value of which can be expressed in their

price as commodities. We enter, therefore, upon the age of money. The great triumph of capitalism has been to make this entirely historical arrangement seem natural and timeless.

It is a disastrous triumph, however. For at the heart of the principle of the economic lies estrangement from nature. More than the estrangement, the deadening of nature: the forcible conversion of the living world to a realm of exchangeable things suitable for exploitation and acquisition-and the reciprocal conversion of the human self into a vessel suitable for the possession of property in the form of commodities."

I speak now from the standpoint of an ecological, as against an economic, consciousness and submit that it is integral to our antinuclear position.¹⁸ To be ecological in the sense used here is to replace the managerial, or dominating sensibility towards nature, contained in the notion of the economic, with an attitude of harmonization and reconciliation. It means recognizing ourselves as part of nature instead of as over and against nature. This viewpoint arises in relation to the more drawn-out crisis stemming from the ruthless exploitation of the capitalist order. The economic deadening of nature has led directly to the imperialist scramble for resources. Even without the bomb, it will ultimately lead to the actual death of the natural world, i.e. to its inability to support life itself. We cannot take up this aspect of the ecological movement here. But it is essential to draw the parallel with the nuclear crisis, which is, in every respect, nothing but a horribly accelerated version of the entire ecological crisis. No creature who lived in harmony with nature would have ever harnessed natural forces for so much destruction as has been contained in nuclear weaponry. Moreover, the entire relation to nature subsumed by the modern economic order is based on the same kind of domination of which nuclear weapons are the ultimate enforcer: the domination wrought by white Christian men over a globe largely inhabited by non-white people¹⁹-and the reduction thereby of both the globe and other human beings on it to wild things to be conquered by the rationalizing power of white masters. This reason bore final fruit in the atomic bomb. But centuries before Hiroshima it was at work in imperial conquest, and the creation of the economic sphere. Hear John Winthrop, freshly come from England at the head of his band of God-fearing Puritans to

make their way in the New World. Winthrop, according to Howard Zinn, "created the excuse to take Indian land by declaring the area legally a 'vacuum.' The Indians, he said, had not 'subdued' the land, and therefore had only a 'natural' right to it, but not a 'civil right.' A 'natural right' did not have legal standing."

Subduing the land and subduing the Indians were part of the same process, both ratified and made rational by the laws of the land. Here is the genius of technocratic imperialism-to remove all limits to the employment of nature as a means to domination. To subdue nature and anchor the process in abstract civil rights means to repress value from the zone between human beings and nature. Once technocratized, anything goes: the knowledge of germs as the cause of infection can be used to transmit smallpox through blankets to unsuspecting Indians; the knowledge of physiological chemistry can be used to sow Indochina with Agent Orange; and the knowledge of the nature of the atom can be used to wipe out two Japanese cities and browbeat the world thereafter. There is no fundamental difference between the method of colonial expansion and that of "splitting" or "taming" the atom, and using the result to establish "law and order" in Southeast Asia, or wherever the master chooses. There are some interesting differences in detail, though. The Founding Fathers were all too aware of a looming sense of hellfire and, indeed, Armageddon, that lurked on the other side of their "civilizing" operation. But what they imagined consciously, the state managers of today blot out of their technocratic, value-free minds, yet make real for everyone else. In this respect, nuclear weapons are a way history has had of bringing about the return of the repressed.

If we are to look for the origins of the paranoid nuclear state, then it is well to go back to the origins of modern imperialism. The repression of value from the boundary between people and nature was a definite historical act with profound psychological consequences. Once people were split from nature the innate communion between self and cosmos was interrupted; and human power became projected instead into the surrogate body of technology. This artifice aggrandized the self, as we have seen; but it also exposed the imperialist to retaliation from his subjects. The revolt of his slaves

has always haunted the imperial mind. With the coming of technocracy, however the threat was met in a new way: through a further development of technological control. Thus, the grandiosity and suspiciousness which enter into the formation of state paranoia are drawn from a historical cycle. Paranoia is a consequence of the dialectics of revenge, and the "enemy" sought out by the latest weapons system is always a reincarnation. Nuclear weapons are, in this sense, a return of the repressed guilt set going in the earliest days of Western expansion.

Nuclear weaponry is not just an aberration but the logical result of an entire attitude toward the world. This becomes even clearer when we consider the intermediate stage comprised by the saga of industrial and commercial nuclear power.²¹ Again, it would be too far afield to consider this story in any detail. But its bare essentials should be pointed out. The nuclear industry arose as a twofold effort to turn the discovery of nuclear technology to the further advantage of the ruling system of power—two lines of approach that have been, we might add, frequently combined in the history of capitalist society. One was to make the whole business of destruction seem legitimate and benign: hence arose "atoms for peace" as a handy slogan to temper the brutal reality of the technology. And the other was the irresistible impulse to turn a profit by squeezing the new source of power into the shape of a commodity—by boiling water with it and using the steam to generate electricity, which could of course be sold.

The grim story of this venture need not be recounted here. But it is worth re-emphasizing that the failings of nuclear power arose out of the peculiar delusion that any and all parts

of nature could be tamed by the human master. Thus, just as the unimaginable ferocity of nuclear weapons breaks down the political ends served by the use of technology in warfare, so does the malignancy of uncontrolled radioactivity make a mockery of the fantasy that there are no limits to the sources of commodities and profits. And as nuclear weapons continue to proliferate, while plutonium accumulates in reactors, we face the breakdown of "atoms for peace." It appears inevitable that the proposed U.S. build-up must draw on spent reactor fuel. Meanwhile, the nuclear power industry itself becomes militarized, in large measure because of the tre-

mendous risks associated with its source of energy. A good example of this is the recently disclosed fact that U.S. Army Green Berets have been stationed at nuclear power plants, ostensibly to check on whether these leviathans are vulnerable to sabotage.²² Thus the two lines of nuclear development find each other once more contributing to the heightening of nuclear terror but also to the dissolution of one of its stage props.

As we have noted, the triumph of the economic means the triumph of the principle of exchange as the guiding standard

of human reason. Roughly put, this means making the whole world into a market, where everything has its price, a monetary value through which it can be equated, and so exchanged, with anything else. The exchange principle makes the rule of the economic sphere coincide with the rule of money. The other side of the principle of exchange is the loss of what is unique and cannot be exchanged. As capitalist economics rose, the sacred was lost. Out of this loss arose the unchecked power of the rationalized market mentality. The mentality of the market is but the economic form of technocratic rationalization. The same animal goes under different names depending on its habitat²³—market mentality, technocratic rationalization, instrumental reason (as a general philosophical category), positivism (as a philosophy of science), or pragmatism (as an ethical code of conduct). If we emphasize technocracy here, it is because it is the form of the animal most closely implicated with the nuclear crisis.

All of the forms, however, are variations on the exchange principle and the stripping of value from the boundary between humanity and nature. Since there are no bounds to what this mentality thinks it can do with the principle of exchange, the way is left open for the nuclear power industry and the making of nuclear weapons. But the principle also implies the inevitable use of the bomb, since its effects are deemed equivalent to something else, say, the intimidation of an adversary.²⁴ Therefore, state managers have never really gone beyond a simple calculation of what advantage and what risk could be wrought by the use of nuclear weapons, and a weighing of the results in the balance of possible actions. Because of this attitude, there was never any serious question of whether or not to drop the bomb on Hiroshima.

