### 1NC Shell

#### The AFF’s approach to reduction of the natural world to a means of securing energy enframes existence, stripping beings of their very essence.

Beckman 0

[Tad, Harvey Mudd College, “Martin Heidegger and Environmental Ethics,” [http://www2.hmc.edu/~tbeckman/personal/Heidart.html //](http://www2.hmc.edu/~tbeckman/personal/Heidart.html%20//) myost]

To uncover the essence of modern technology is to discover why technology stands today as the danger. To accomplish this insight, we must understand why modern technology must be viewed as a "challenging-forth," what affect this has on our relationship with nature, and how this relationship affects us. Is there really a difference? Has technology really left the domain of techne in a significant way? In modern technology, has human agency withdrawn in some way beyond involvement and, instead, acquired an attitude of violence with respect to the other causal factors? Heidegger clearly saw the development of "energy resources" as symbolic of this evolutionary path; while the transformation into modern technology undoubtedly began early, the first definitive signs of its new character began with the harnessing of energy resources, as we would say. [(7)](http://www2.hmc.edu/~tbeckman/personal/Heidart.html#N_7_) As a representative of the old technology, the windmill took energy from the wind but converted it immediately into other manifestations such as the grinding of grain; the windmill did not unlock energy from the wind in order to store it for later arbitrary distribution. Modern wind-generators, on the other hand, convert the energy of wind into electrical power which can be stored in batteries or otherwise. The significance of storage is that it places the energy at our disposal; and because of this storage the powers of nature can be turned back upon itself. The storing of energy is, in this sense, the symbol of our over-coming of nature as a potent object. "...a tract of land is challenged into the putting out of coal and ore. The earth now reveals itself as a coal mining district, the soil as a mineral deposit." {[7], p. 14} This and other examples that Heidegger used throughout this essay illustrate the difference between a technology that diverts the natural course cooperatively and modern technology that achieves the unnatural by force. Not only is this achieved by force but it is achieved by placing nature in our subjective context, setting aside natural processes entirely, and conceiving of all revealing as being relevant only to human subjective needs. The essence of technology originally was a revealing of life and nature in which human intervention deflected the natural course while still regarding nature as the teacher and, for that matter, the keeper. The essence of modern technology is a revealing of phenomena, often far removed from anything that resembles "life and nature," in which human intrusion not only diverts nature but fundamentally changes it. As a mode of revealing, technology today is a challenging-forth of nature so that the technologically altered nature of things is always a situation in which nature and objects wait, standing in reserve for our use. We pump crude oil from the ground and we ship it to refineries where it is fractionally distilled into volatile substances and we ship these to gas stations around the world where they reside in huge underground tanks, standing ready to power our automobiles or airplanes. Technology has intruded upon nature in a far more active mode that represents a consistent direction of domination. Everything is viewed as "standing-reserve" and, in that, loses its natural objective identity. The river, for instance, is not seen as a river; it is seen as a source of hydro-electric power, as a water supply, or as an avenue of navigation through which to contact inland markets. In the era of techne humans were relationally involved with other objects in the coming to presence; in the era of modern technology, humans challenge-forth the subjectively valued elements of the universe so that, within this new form of revealing, objects lose their significance to anything but their subjective status of standing-ready for human design. (8)

#### The AFF is part and parcel of a larger narrative of US exceptionalism—their assertion that the international arena can be rationally known and ordered springs from an epistemology which treats beings as objects—setting the stage for endless imperial violence

Spanos 3

[William V., Distinguished Professor of English at SUNY–Binghamton, “A Rumor of War: 9/11 and the Forgetting of the Vietnam War,” *boundary 2* 30.3 (2003): 29-66. // myost]

The other difference, indissolubly associated with the first, is that, despite its infinitely more powerful military might, the United States lost the war to the recalcitrant Other it would subdue and accommodate. And it lost it because in this globalized postcolonial context—that is, by way of the disclosures released by the self-destruction of the end-oriented philosophical, epistemological, and cultural mechanisms of Western imperialism—America's Other, as Caputo testifies synecdochically, refused to be answerable to the American exceptionalist narrative. Its response rather was to be rhizomatically mobile, strategically indeterminate in its goals, erratic in its actions, indifferent to temporal and spatial boundaries, resistant (in its attunement to the slow motion of being) to the dictates of technological speed, and, not least, invisible to America's Ahabian gaze, all calculated to decompose the relay of American power extending back from its forward-oriented military machine, through its progressivist capitalist cultural apparatuses, to the instrumentalist (Franklinian "can-do") thinking that was planning and conducting the war from the Pentagon. This double difference, despite his effort to personalize and then assimilate this war to war in general is, as I have tried to show, the symptomatic testimony of Caputo's representative memoir A Rumor of War. And it is the specter of this witness to the visible contradiction between America's ontological justification of the Vietnam War and its Ahabian practice that has haunted American foreign policy since the fall of Saigon in 1975 and explains the dominant culture's obsessive will to forget Vietnam since then—an amnesiac process apparently culminating in the Gulf War and a triumphant "end-of-history" discourse—and its studied avoidance of reference to the Vietnam War in its effort to justify to the American people and the world at large its ferocious retaliatory attack on Afghanistan. [End Page 62] This double difference, I submit, is also why it is imperative that intellectuals who oppose the United States' representation and conduct of the "war against terrorism" retrieve the forgotten memory of the Vietnam War as Caputo's deeply backgrounded, representative text articulates it. For, as I hope I have shown, it is not simply its spectral witness to the terror of America's exceptionalist "search-and-destroy" mentality that, despite the sustained attempt to obliterate it from its history, continues to haunt the present American government's—and the American media's—concentering personification of the complex global conditions, which America itself has largely produced, in the name of its exceptionalist mission in the world's wilderness, in the demonized symbolic figure of Osama bin Laden, its most recent Moby Dick. It is also the Vietnam War's spectral witness to a mighty America's humiliating defeat at the hands of an Other—its Other—which refused to accommodate itself to America's exceptionalist story in Southeast Asia that now haunts America's metaphysical, epistemological, cultural, military, and political project against a decidedly undecidable "enemy" in the Middle East, a diverse and amorphous area of the world that has for centuries suffered the terrible human consequences of being the second, essentialized, term in the Occident's binary logic, and thus is as likely as Vietnam to turn the United States' power against itself. To put all this another way, the United States will no doubt succeed in its military mission to defeat the Taliban and (less certainly) to re-create an Afghanistan nation-state in its own image (as it did—several times—in Vietnam in the early years of the war). It may even capture and bring Osama bin Laden to trial (even, against the judicial tradition of democracy, to be tried by a military court). But granted this successful "accomplishment," it is no more likely to annul or even assuage the outrage that the United States has increasingly ignited in the Islamic world at large by its concentering of the cultural, social, and political global morass its exceptionalist ethos has produced and is producing than Captain Ahab's "monomania"—his concentering reduction of the ineffable being of being ("All that most maddens and torments; all that stirs up the lee of things; all truth with malice in it; all that cracks and sinews and cakes the brain; all the subtle demonisms of life and thought") to Moby Dick—was able to annul the self-defensive outrage of the white whale. Perhaps what I am suggesting by way of invoking the witness of the Vietnam War about the ultimate consequences of America's response to the attack on the World Trade Center and the Pentagon will become unequivocally manifest by reconstellating both these moments of American history [End Page 63] into the "hidden history of the Revolutionary Atlantic" (the period extending from the origins of the Atlantic slave trade to the Revolutionary years) retrieved by Peter Linebaugh and Marcus Rediker from the oblivion to which it has been relegated by the "Herculean" monumentalist historians of this "glorious" earlier epochal moment of the march of Western civilization: The classically educated architects of the Atlantic economy found in Hercules . . . a symbol of power and order. For inspiration they looked to the Greeks, for whom Hercules was a unifier of the centralized territorial state, and to the Romans, for whom he signified vast imperial ambition. The labors of Hercules symbolized economic development: clearing of land, the draining of swamps, and the development of agriculture, as well as the domestication of livestock, the establishment of commerce, and the introduction of technology. The rulers placed the image of Hercules on money and seals, in pictures, sculptures, and palaces, and on arches of triumph. . . . John Adams, for his part, proposed in 1776 that "The Judgment of Hercules" be the seal for the new United States of America. . . . These same rulers found in the many-headed hydra an antithetical symbol of disorder and resistance, a powerful threat to the building of state, empire, and capitalism. The second labor of Hercules was the destruction of the venomous hydra of Lerna. . . . From the beginning of English colonial expansion in the early seventeenth century through the metropolitan industrialization of the early nineteenth, rulers referred to the Hercules-hydra myth to describe the difficulty of imposing order on increasingly global systems of labor. They variously designated dispossessed commoners, transported felons, indentured servants, religious radicals, pirates, urban laborers, soldiers, sailors, and African slaves as the numerous ever-changing heads of the monster. But the heads, though originally brought into productive combination by their Herculean rulers, soon developed among themselves new forms of cooperation against those rulers, from mutinies and strikes to riots and insurrections and revolution. 24 As Caputo and virtually every American soldier who fought in Vietnam reiteratively testify, the insurgents of the National Liberation Front in Vietnam, [End Page 64] like the many-headed hydra of European antiquity (and of the Revolutionary Atlantic economy), were constantly defeated by the "Herculean" American military juggernaut, but they nevertheless kept rising up in unpredictable places and times to eventually bring their would-be monster-slayer to a dead end. Given the incommensurability of America's predictable invocation of the (mythical) logic of exceptionalism and the postcolonial condition, there is little reason to believe that the hatred precipitated by the United States' perennial unilateral "defense" of its "interests" in the Islamic world—a defense expedited by its reduction of the diversity of this world to an abstract and predictable stereotype—will not also manifest itself as a "many-headed hydra" that will resurface in unexpected places at unexpected times to constantly molecularize, and neutralize the power of, the concentering Ahabian American narrative, its self-present will, and its forwarding military machine. The lesson the Vietnam War should have taught America, but apparently has not, is that in this globalized postcolonial age, only a rethinking of America's perennial exceptionalist mission in the world's "wilderness"—a rethinking that must be genealogical, that must, in other words, understand America's modern (instrumentalist) foreign policy in the light of the very formation of the American national identity—will resolve the complex global conditions that are the dark legacy of Western imperialism. Only such a radical genealogical rethinking of America's role in the world will be able to negate the present historical context, which promises not the Pax Americana but, as even the Bush administration acknowledges when its deputies remind the American public that the war against terror does not have a foreseeable end, an ongoing, undecidable war against an undecidable enemy—not to say the establishment of a perpetual national state of emergency that will play havoc on the civil rights of the American people.

#### This enframing of the political makes conflict and war inevitable

Burke 7 [Anthony, Senior Lecturer in Politics and International Relations at UNSW-Sydney, “Ontologies of War: Violence, Existence and Reason,” *Theory & Event* 8.2 (2007): Project Muse // myost]

My argument here, whilst normatively sympathetic to Kant's moral demand for the eventual abolition of war, militates against excessive optimism.86 Even as I am arguing that war is not an enduring historical or anthropological feature, or a neutral and rational instrument of policy -- that it is rather the product of hegemonic forms of knowledge about political action and community -- my analysis does suggest some sobering conclusions about its power as an idea and formation. Neither the progressive flow of history nor the pacific tendencies of an international society of republican states will save us. The violent ontologies I have described here in fact dominate the conceptual and policy frameworks of modern republican states and have come, against everything Kant hoped for, to stand in for progress, modernity and reason. Indeed what Heidegger argues, I think with some credibility, is that the enframing world view has come to stand in for being itself. Enframing, argues Heidegger, 'does not simply endanger man in his relationship to himself and to everything that is...it drives out every other possibility of revealing...the rule of Enframing threatens man with the possibility that it could be denied to him to enter into a more original revealing and hence to experience the call of a more primal truth.'87 What I take from Heidegger's argument -- one that I have sought to extend by analysing the militaristic power of modern ontologies of political existence and security -- is a view that the challenge is posed not merely by a few varieties of weapon, government, technology or policy, but by an overarching system of thinking and understanding that lays claim to our entire space of truth and existence. Many of the most destructive features of contemporary modernity -- militarism, repression, coercive diplomacy, covert intervention, geopolitics, economic exploitation and ecological destruction -- derive not merely from particular choices by policymakers based on their particular interests, but from calculative, 'empirical' discourses of scientific and political truth rooted in powerful enlightenment images of being. Confined within such an epistemological and cultural universe, policymakers' choices become necessities, their actions become inevitabilities, and humans suffer and die. Viewed in this light, 'rationality' is the name we give the chain of reasoning which builds one structure of truth on another until a course of action, however violent or dangerous, becomes preordained through that reasoning's very operation and existence. It creates both discursive constraints -- available choices may simply not be seen as credible or legitimate -- and material constraints that derive from the mutually reinforcing cascade of discourses and events which then preordain militarism and violence as necessary policy responses, however ineffective, dysfunctional or chaotic.

#### The AFF is rife with examples of a thematic framing of human beings as benevolent protectors of the environment – monitoring, manipulating and controlling nature to ensure it functions in a systematically predictable way. This is a dangerous illusion that promotes futile managerial approaches to an untameable natural world.

Kuletz 98

[Valerie Kuletz, University of Canterbury. *The Tainted Desert: Environmental and Social Ruin in the American West*. New York: Routledge, 1998. 285-287. // myost]

We have seen how comparing two sets of perceptions about the environment and their intellectual lineages—the traditional Indian (specifically, the Western Shoshone, Southern Paiute, and Owens Valley Paiute) and the Western scientific—illuminates the limitations of each perspective, while simultaneously placing the two discourses on equal epistemological footing in such a way that one does not dominate the other due to its greater political power, or, as Bourdieu would say, "cultural capital."2 In some respects, this balancing act is an artificial one since Euroamerican scientific representations of the region enjoy far more legitimacy and political prestige than those of the region's indigenous population. Nevertheless, moving from one view to the other assists us in opening intellectual horizons onto the diversity of knowledge about place and nature that exist in this desert region. Comparing the two knowledge systems shows how environmental science, as a discipline and as practiced at Yucca Mountain, exists within a specific cultural and political context (and is a product of a specific cultural tradition), in the same way that Indian traditional knowledge about environment exists within a cultural context. However, because environmental science is the dominant narrative, its truth claims are "naturalized," that is, taken out of their cultural context and perceived as self-evident, so much so the the narratives that science constructs about the natural world become resistant to critical scrutiny, especially from those outside the discipline itself.3 The brief history of ecology, and ecosystems ecology in particular, in Chapter 9 illuminates some of the cultural and political factors that influence the Euroamerican perception of nature and that inform the Yucca Mountain Project—factors that exclude alternative perspectives that might jeopardize the project's implied political objective. By examining these factors in the larger context, we begin to see the powerful role of metaphors in scientific knowledge productions. They reveal the unstated assumptions from which we grasp the natural world and interpret it. When we describe the extended Yucca Mountain region as an "outdoor laboratory," the experimental landscape becomes a metaphorical landscape as much as a material reality. Metaphoricity and materiality are not, for human beings, separate entities. In using language science situates itself within culture and manifests a cultural production. Cybernetic terminology imposes human mechanistic, electrochemical conceptualizations onto nature; to a large extent people comprehend nature through their cultural productions—texts and machines. In this respect nature is what we make it. The ecosystem perspective identifies nature with energy conceptualized as work, with productivity conceptualized as the capacity to produce consumable materials, and with efficiency—all words that help to build an industrial, cybernetic-oriented, and economistic society. As the metaphors used to describe natural processes change through time from Clements's organism to Odum's electro-chemical circuit machine, it becomes impossible not to see our current late industrial, technocratic society reflected in our science. Today, the environmental economic discourse on productivity, with its organization of ecosystems according to capacities of "worldwide annual gross primary production"4 (see Figure 9.5) places Yucca Mountain as exceedingly low in the hierarchy of productivity, and thus deems it appropriate for nuclear waste disposal. But whose "productivity" are we talking about? Certainly not that of the Western Shoshone or Southern Paiute who have subsisted on the mountain's plants, animals, and water and who value the land in quite a different way. Science relies heavily on metaphors when representing nature.5 Ecology and, more specifically, the concept of the ecosystem are no exceptions. Here, economic and social metaphors proliferate to describe and explain nature. Many of these linguistic terms are politically motivated and are assertions of the status quo (stability, functionalist order, capitalist economics). Ironically, today, Indian pronouncements about nature are often dismissed as politically motivated. Why isn't such a phrase as "productive hierarchy" not seen as politically and culturally motivated, crafted to organize nature according to consumer interests? Indians claim that the land is sacred or holy homeland and thus should be under the care of the Native peoples. Capitalist Euroamericans say the land is resource rich and highly productive or unproductive and therefore should be used in various ways: for human consumption or for waste dumps. Which group—Native Americans or Euroamericans— is the more politically motivated? Our representations of the world wield great power. By identifying Yucca Mountain as a wasteland we legitimate actions that turn it into a wasteland. When we fill it with high-level nuclear waste, our actions suggest a belief that the earth is inert (because we need it to be) despite our knowledge of its dynamism. We downplay or ignore knowledge of a huge regional aquifer, numerous shallow volcanic aquifers, earthquake activity, and potential volcanic activity. Even in this dry, quiet landscape with its dense enduring rock, water moves—in its various forms. And the materials we fill the rock with also move, change with time. Heat and gases are emitted from decaying radioisotopes, moisture accumulates, and canisters corrode. The systems ecologists were right about one thing: Nature is dynamic, and high-level radioactive waste won't disappear. Eventually, it will he recycled back into the "system." It will accumulate in animals and humans down the food chain. If industry and the military continue to produce radioactive elements such as plutonium, they will become lively agents in a new kind of system that includes the transuranic elements, if not those who unleashed them. What the systems theorists mistook was the extent to which humans could control the system. Control in the cybernetic sense is different from "working with." It is analogous to the human control of other humans as governors of slaves. Eventually, the slaves revolt, become free radicals. If we can learn anything from the Indian perspective in this region it is that we need to afford all things some degree of subjectivity. Even when today's scientists well understand the limits of "objectivity," Euroamerican culture—including scientists—continue to proceed as though humans live outside the world they attempt to manipulate and control. Control is not all bad. But the belief in the right to control an objectified Other is dangerously illusory. The experiment at Yucca Mountain, and the history of that region show the illusion (indeed, the fantasy) of control for what it is. Much like the "Sorcerer's Apprentice" of the Disney cartoon, the product of our meddling with forces we don't entirely understand escapes our control—multiplying and taking on a life of its own.

#### The AFF's attempt to unify nature around a “sustainable” solution to ecological catastrophe fantasises the existence of a singular, harmonious Nature, rather than coming to terms with the facticity of multiple, contingent Natures. This presupposition mandates the imagining of ecological Armageddon as a tactic to stave off a more vital project of reimagining our relationship to the Earth.

Swyngedouw 6

[Erik Swyngedouw, University of Manchester. “Impossible 'Sustainability' and the Post-Political Condition.” 2006. Also published in *The Sustainable Development Paradox: Urban Political Economy in the United States and Europe*. Eds. Rob J. Krueger and David Gibbs. New York: The Guilford Press, 2007. <[www.liv.ac.uk/geography/seminars/Sustainabilitypaper.doc](http://www.liv.ac.uk/geography/seminars/Sustainabilitypaper.doc)>. // myost]

Slavoj Žižek suggests in Looking Awry that the current ecological crisis is indeed a radical condition that not only constitutes a real and present danger, but, equally importantly, “questions our most unquestionable presuppositions, the very horizon of our meaning, our everyday understanding of ‘nature’ as a regular, rhythmic process” (Zizek, (1992) 2002: 34). It raises serious questions about what were long considered self-evident certainties. He argues that this fundamental threat to our deepest convictions of what we always thought we knew for certain about nature is co-constitutive of our general unwillingness to take the ecological crisis completely serious. It is this destabilising effect that explains “the fact that the typical, predominant reaction to it still consists in a variation of the famous disavowal, “I know very well (that things are deadly serious, that what is at stake is our very survival), but just the same I don’t really believe, … and that is why I continue to act as if ecology is of no lasting consequence for my everyday life” (page 35). The same unwillingness to question our very assumptions about what nature is (and even more so what natures might ‘become’) also leads to the typical obsessive reactions of those who DO take the ecological crisis seriously. Žižek considers both the case of the environmental activist, who in his or her relentless and obsessive activism to achieve a transformation of society in more ecologically sustainable ways expresses a fear that to stop acting would lead to catastrophic consequences. In his words, obsessive acting becomes a tactic to stave off the ultimate catastrophe, i.e. “if I stop doing what I am doing, the world will come to an end in an ecological Armageddon”. Others, of course, see all manner of transcendental signs in the ‘revenge of nature’, read it as a message that signals our destructive intervention in nature and urge us to change our relationship with nature. In other words, we have to listen to nature’s call, as expressed by the pending environmental catastrophe, and respond to its message that pleas for a more benign, associational relation with nature, a post-human affective connectivity, as a cosmopolitical “partner in dialogue”. While the first attitude radically ignores the reality of possible ecological disaster, the other two, which are usually associated with actors defending ‘sustainable’ solutions for our current predicament, are equally problematic in that they both ignore, or are blind to the inseparable gap between our symbolic representation (our understanding) of Nature and the actual acting of a wide range of radically different and, often contingent, natures. In other words, there is – of necessity – an unbridgeable gap, a void, between our dominant view of Nature (as a predictable and determined set of processes that tends towards a (dynamic) equilibrium – but one that is disturbed by our human actions and can be ‘rectified’ with proper sustainable practices) and the acting of natures as an (often) unpredictable, differentiated, incoherent, open-ended, complex, chaotic (although by no means unordered or un-patterned) set of processes. The latter implies the existence not only of many natures, but, more importantly, it also assumes the possibility of all sorts of possible future natures, all manner of imaginable different human-non human assemblages and articulations, and all kinds of different possible socio-environmental becomings. The inability to take ‘natures’ seriously is dramatically illustrated by the controversy over the degree to which disturbing environmental change is actually taking place and the risks or dangers associated with it. Lomborg’s The Sceptical Environmentalist captures one side of this controversy in all its phantasmagorical perversity (Lomborg, 1998), while climate change doomsday pundits represent the other. Both sides of the debate argue from an imaginary position of the presumed existence of a dynamic balance and equilibrium, the point of ‘good’ nature, but one side claims that the world is veering off the correct path, while the other side (Lomborg and other sceptics) argues that we are still pretty much on nature’s course. With our gaze firmly fixed on capturing an imaginary ‘idealised’ Nature, the controversy further solidifies our conviction of the possibility of a harmonious, balanced, and fundamentally benign ONE Nature if we would just get our interaction with it right, an argument blindly (and stubbornly) fixed on the question of where Nature’s rightful point of benign existence resides. This futile debate, circling around an assumedly centred, known, and singular Nature, certainly permits -- in fact invites -- imagining ecological catastrophe at some distant point (global burning (or freezing) through climate change, resource depletion, death by overpopulation). Indeed, imagining catastrophe and fantasising about the final ecological Armageddon seems considerably easier for most environmentalists than envisaging relatively small changes in the socio-political and cultural-economic organisation of local and global life here and now. Or put differently, the world’s premature ending in a climatic Armageddon seems easier to imagine (and sell to the public) than a transformation of (or end to) the neo-liberal capitalist order that keeps on practicing expanding energy use and widening and deepening its ecological footprint. It is this sort of considerations that led Slavoj Žižek controversially to state that “nature does not exist”. Of course, he does not imply that there are no such ‘things’ as quarks or other subatomic particles, black holes, tsunamis, sunshine, trees, or HIV viruses. Even less would he decry the radical effects of CO2 and other greenhouse gases on the climate or the lethal consequences of water contamination for the world’s poor. On the contrary, they are very real, many posing serious environmental problems, occasionally threatening entire populations (AIDS, for example), but he insists that the Nature we see and work with is necessarily radically imagined, scripted, symbolically charged; and is radically distant from the natures that are there, which are complex, chaotic, often unpredictable, often radically contingent, risky, patterned in endlessly complex ways, ordered along ‘strange’ attractors. In other words, there is no balanced, dynamic equilibrium based nature out there that needs or requires salvation in name of either Nature itself or of an equally imagined universal human survival. ‘Nature’ simply does not exist. There is nothing foundational in nature that needs, demands, or requires sustaining. The debate and controversies over nature and what do with it, in contrast, signals rather our political inability to engage in directly political and social argument and strategies about re-arranging the social co-ordinates of everyday life and the arrangements of socio-metabolic organisation (something usually called capitalism) that we inhabit. In order words, imagining a benign and ‘sustainable’ Nature avoids asking the politically sensitive, but vital, question as to what kind of socio-environmental arrangements do we wish to produce, how can this be achieved, and what sort of natures do we wish to inhabit.

#### The AFF’s ontology reduces the world to “Standing Reserve” to be called upon as it benefits the Self and refuses to value the world as anything else. This renders all beings objects—setting the tone for global warfare.

Zimmerman 81

[Michael E. Zimmerman, Tulane University. *Eclipse of the Self: The Development of Heidegger's Concept of Authenticity*. 220-224. // myost]

In 1951 Heidegger noted that Spengler's idea of the "decline of the West" is "only the negative, though correct, consequence of Nietzsche's word, 'the wasteland grows'." (WHO, 14/38) Spengler's estimation is negative because it only describes the symptoms of decay, not the origins. Recalling the destruction caused by World War II, Heidegger asserted that the present spiritual devastation is more uncanny than physical destruction. "The devastation of the earth can easily go hand in hand with a guaranteed supreme living standard for [humans], and just as easily with the organized establishment of a uniform state of happiness for all [humanity]." (WHO, 11/29-30) He denied that he was part of the "chorus of voices" which condemned the "sickness" of Europe. While some writers took the easy road of describing the absurdity of modern life, Heidegger sought to discover the source of this absurdity. This source turns out to be: our destiny to understand ourselves as absolute subjects in a universe of commodities. Life in such a world cannot help but be absurd or, to use Heidegger's early terminology, inauthentic. Although technological culture is supposedly our destiny, Heidegger is not pleased with its traits—the self-sustaining, constantly expanding, and ultimately aimless systems of mass production and consumption; power politics; global warfare; mass-culture; and the collapse of great art, literature, philosophy, and religion. Already in "The Age of the World Picture" (1938), he writes that once the world becomes a mere picture (Bild) for the human subject, men contend for the "right" to organize the picture as it suits them. There arises the struggle of "world views," for whose sake "man brings into play his unlimited power for the calculating, planning, and molding of all things. Science as research is an absolutely necessary form of this establishing of self in the world...." (Hw, 87/135) Each competing world-view declares that its system of values best promotes human life; that is, the life of the people of the nation promoting the particular world-view. Values become nothing more than the "objectification of needs as goals." (Hw, 94/142) Refusing to acknowledge anything transcendent, nation-states try to dominate each other in their quest for markets, raw material, and "Lebensraum." Anything which enhances the power of the state, including the politicalization of education, art, religion, and science, is justified. (Nil, 28, 362-363) Production and consumption are, of course, organized as part of the push for total power. In a public lecture in 1939, Heidegger said that people expect that this drive for power necessarily establishes life-enhancing values, as if total mobilization were something in itself and not the organization of unconditioned senselessness for and from the Will to Power. Such power-empowering positings no longer direct themselves according to "masses" and "ideals," which could still be grounded in themselves; they stand "In the service" of the pure expansion of power and are evaluated only according to the thus esteemed economic value. The age of fulfilled senselessness is thus the time of the power-like discovery and accomplishment of "world-views," which drive all reckoning of re-presenting and re-producing [Vor- and Herstellens] to the uttermost extreme, because according to their essence they arise from a self-posited self-directing of mankind into beings and its [humankind's] unconditioned domination over all means of power of the earth and over [the earth] itself. (Nil, 21-22) The analysis of the clash of world-views was directed primarily against Germany under National Socialism, but against other Western nations as well. This is evident in a comment Heidegger made in 1940 concerning how one nation "justifies" all actions, so long as they promote greater power: "For example, if the English thoroughly blast the French fleet anchored in the harbor of Oran, this is from their power-standpoint wholly 'justified' [gerecht]; for 'justified' means only: what is useful for power-enhancement." (Nil, 198) This remarkable statement anticipated by almost two years the Japanese attack on the American fleet at Pearl Harbor. The statement was made around the time Hitler ordered the invasion of Poland for reasons of "national security." When Heidegger said in 1951 that World War II "decided nothing" (WHO, 65/166), he did not mean that it was unimportant for Hitler to have been defeated. His point was that world wars arc only offshoots of the industrialization and "planetary imperialism" (Hw, 102/152-153) which are the key symptoms of the modem age. In a marginal note found in his own copy of his "Letter on Humanism," Heidegger wrote: "Industrial society as the authoritative subject-and thinking as 'politics'."13 World wars are ways of shoring up faltering economies; wars provide "the stability of a constant form of using things up." Leaders of power-hungry nations are not merely individuals caught up in the "blind rage of a selfish egoism," but are instruments of world-destiny. (VA, I, 84-85/104-105) Everything is planned for the sake of accelerating the process of production and consumption, as Ernst Jiinger pointed out in the 1920s.14 The push for power will finally lead to attempts to "breed" human beings in factories, because humans are the most important raw material. The increase in the number of masses of human beings is done explicitly by plan so that the opportunity will never run out for claiming more "room to live" for the large masses whose size then requires correspondingly higher masses of human beings for their arrangement. This circularity of consumption for the sake of consumption is the sole procedure which distinctively characterizes the history of a world which has become an unworld. (VA, I, 88/107) The Will to Power manifests itself primarily, therefore, in economic terms. Self-willed man turns everything into a commodity. [Man] himself, along with everything else, is turned into a "calculated market value" of a world-wide market. (Hw, 270/114-115) Heidegger was aware of the international corporations which ignore national boundaries in the search for cheaper material, labor, and new markets.15 In the world run by corporate interests, everyday life becomes the effort to succeed in the marketplace. (Hw, 290/136) Heidegger sounds like Marx in saying: Self-willed man reckons everywhere with things and men as with objects. What is so reckoned becomes merchandise. Everything is constantly changed about into new orders.... Self-assertive man lives by staking his will. He lives essentially by risking his essence [Wesen] in the vibration of money and the currency [Geltens] of values. As the constant trader and middleman, man is the "merchant." He weighs and measures constantly, yet does not know the real weight of things. He also does not know what in himself has authentic weight [Gewicht] and prevails [iiberwiegt]. (Hw, 289/135) Everyday life is determined according to the demands of the economic system. In this hectic world, we no longer understand death, pain, or love. (Hw, 253/96) We are uprooted and alienated; great masses move across continents in search of "better opportunities," "personal improvement," and a "higher standard of living"; the self disappears in the process of production (ZSF, 74/75); rivers and streams become sewers; the air is poisoned; forests are annihilated; mountains are flattened for their ore, or to make room for highways; farms become "agri-business" operations which degrade the soil with the imposition of artificial fertilizers and pesticides; homes become high-rise apartment complexes; work becomes repetitive, simplified, and boring; biochemists study how to manipulate man's genetic structure; and all of this happens under the aegis of self-development, self-emancipation, and progress. No human action can bring about a change in the technological impulse, for "Self-assertive [human]...is the functionary of Technik." (Hw, 271/116)16 The momentum of the technological Will to Power has outstripped [humanity's] capacity to control it. (G, 19/51) Before World War II, Heidegger speculated that "Before Being can occur in its primal truth, Being as the will must be broken, the world must be forced to collapse and the earth must be driven to desolation, and [human] to mere labor." (VI, I, 65/86) But even the devastation of the wars did not essentially change the situation in the modern world. Human life in the technological age bears important similarities to what Heidegger called "inauthentic everydayness" in Being and Time. There he suggested that inauthenticity resulted when an individual chose to conceal the truth. In his later work, he argues that inauthenticity reigns because humanity has become the self-certain subject who yearns to dominate everything. Heidegger personifies the subject, talking as if it were a conscious agent manipulating individuals to act according to its dictates. He makes individuals appear to be functions of the subject in a way analogous to how Marx makes them appear to be functions of "Lord Capital." In Capital, we read: As the conscious bearer of this movement [of capital], the possessor of money becomes a capitalist. His person, or rather his pocket, is the point from which the money starts, and to which it returns. The objective content of the circulation we have been discussing—the valorization of value—is his subjective purpose, and it is only insofar as the appropriation of ever more wealth in the abstract is the sole driving force behind his operations that he functions as a capitalist, i.e., as capital personified and endowed with consciousness and will. Use-values must therefore never be treated as the immediate aim of the capitalist; nor must the profit of any single transaction. This boundless drive for enrichment, this passionate chase after value, is common to the capitalist and the miser, but while the miser is merely a capitalist gone mad, the capitalist is a rational miser.

#### The alternative is to do nothing. This isn't a question of passivity but of a releasement from the Will to Technology and an openness to the mystery of Being which transcends activity. Only such an ontological disarmament inaugurates new modes of revealing that don't depend on the world's subordination to human motivations.

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[Ladelle McWhorter, University of Richmond. *Heidegger and the Earth: Issues in Environmental Philosophy*. Kirksville, MO: Truman State University Press, 1992. 3-7. // myost]

Heidegger's work is a call to reflect to think in some way other than calculatively, technologically, pragmatically. Once we begin to move with and into Heidegger's call, and begin to see our trying to seize control and solve problems as itself a problematic approach if we still believe that thinking's only real purpose is to function as a prelude to action, we who attempt to think will twist within the agonizing grip of paradox, feeling nothing but frustration, unable to conceive of ourselves as anything but paralyzed. However, as so many peoples before us have known, paradox is not only a trap; it is also a scattering point and passageway. Paradox invites examination of its own constitution (hence of the patterns of thinking within which it occurs) and thereby breaks a way of thinking open, revealing the configurations of power that propel it and hold it on track. And thus it makes possible the dissipation of that power and the deflection of thinking into new paths and new possibilities. Heidegger frustrates us. At a time when the stakes are so very high and decisive action is so loudly and urgently called for, Heidegger apparently calls us to do – nothing. If we get beyond the revulsion and anger that such a call initially inspires and actually examine the feasibility of response, we begin to undergo the frustration attendant upon paradox: how is it possible, we ask, to choose, to will, to do nothing? The call itself places in question the bimodal logic of activity and passivity; it points up the paradoxical nature of our passion for action, of our passion for maintaining control. The call itself suggests that our drive for acting decisively and forcefully is part of what must be thought through, that the narrow option of will versus surrender is one of the power configurations of current thinking that must be allowed to dissipate. But of course, those drives and those conceptual dichotomies are part of the very structure of our self-understanding both as individuals and as a tradition and a civilization. Hence, Heidegger's call is a threatening one, requiring great courage, "the courage to make the truth of our own presuppositions and the realm of our own goals into the things that most deserve to be called in question."3 Heidegger's work pushes thinking to think through the assumptions that underlie both our ecological vandalism and our love of scientific solutions, assumptions that also ground the most basic patterns of our current ways of being human. What is most illustrative is often also what is most common. Today, on all sides of ecological debate we hear, with greater and greater frequency, the word management. On the one hand, business people want to manage natural resources so as to keep up profits. On the other hand, conservationists want to manage natural resources so that there will be plenty of coal and oil and recreational facilities for future generations. These groups and factions within them debate vociferously over which management policies are the best, that is, the most efficient and manageable. Radical environmentalists damn both groups and claim it is human population growth and rising expectations that are in need of management. But wherever we look, wherever we listen, we see and hear the term management. We are living in a veritable age of management. Before a middle class child graduates from high school she or he is already preliminarily trained in the arts of weight management, stress management, and time management, to name just a few. As we approach middle age we continue to practice these essential arts, refining and adapting our regulatory regimes as the pressures of life increase and the body begins to break down. We have become a society of managers - of our homes, careers, portfolios, estates, even of our own bodies - so is it surprising that we set ourselves up as the managers of the earth itself? And yet, as thoughtful earth-dwellers we must ask, what does this signify? In numerous essays - in particular the beautiful 1953 essay, "The Question Concerning Technology" - Heidegger speaks of what he sees as the danger of dangers in this, our, age. This danger is a kind of forgetfulness - a forgetfulness that Heidegger thought could result not only in nuclear disaster or environmental catastrophe, but in the loss of what makes us the kind of beings we are, beings who can think and who can stand in thoughtful relationship to things. This forgetfulness is not a forgetting of facts and their relationships; it is a forgetfulness of something far more important and far more fundamental than that. He called it forgetfulness of 'the mystery’. It would be easy to imagine that by 'the mystery' Heidegger means some sort of entity, some thing, temporarily hidden or permanently ineffable. But 'the mystery’ is not the name of some thing; it is the event of the occurring together of revealing and concealing. Every academic discipline, whether it be biology or history, anthropology or mathematics, is interested in discovery, in the revelation of new truths. Knowledge, at least as it is institutionalized in the modern world, is concerned, then, with what Heidegger would call revealing, the bringing to light, or the coming to presence of things. However, in order for any of this revealing to occur, Heidegger says, concealing must also occur. Revealing and concealing belong together. Now, what does this mean? We know that in order to pay attention to one thing, we must stop paying close attention to something else. In order to read philosophy we must stop reading cereal boxes. In order to attend to the needs of students we must sacrifice some of our research time. Allowing for one thing to reveal itself means allowing for the concealing of something else. All revealing comes at the price of concomitant concealment. But this is more than just a kind of Kantian acknowledgment of human limitation. Heidegger is not simply dressing up the obvious, that is, the fact that no individual can undergo two different experiences simultaneously. His is not a point about human subjectivity at all. Rather, it is a point about revealing itself. When revealing reveals itself as temporally linear and causally ordered, for example, it cannot simultaneously reveal itself as ordered by song and unfolding in dream. Furthermore, in revealing, revealing itself is concealed in order for what is revealed to come forth. Thus, when revealing occurs concealing occurs as well. The two events are one and cannot be separated.4 Too often we forget. The radiance of revelation blinds us both to its own event and to the shadows that it casts, so that revealing conceals itself and its self-concealing conceals itself, and we fall prey to that strange power of vision to consign to oblivion whatever cannot be seen. Even our forgetting is forgotten, and all traces of absence absent themselves from our world. The noted physicist Stephen Hawking, in his popular book A Brief History of Time, writes, "The eventual goal of science is to provide a single theory that describes the whole universe."5 Such a theory, many people would assert, would be a systematic arrangement of all knowledge both already acquired and theoretically possible. It would be a theory to end all theories, outside of which no information, no revelation could, or would need to, occur. And the advent of such a theory would be as the shining of a light into every corner of being. Nothing would remain concealed. This dream of Hawking's is a dream of power; in fact, it is a dream of absolute power, absolute control. It is a dream of the ultimate managerial Utopia. This, Heidegger would contend, is the dream of technological thought in the modern age. We dream of knowing, grasping everything, for then we can control, then we can manage, everything. But it is only a dream, itself predicated, ironically enough, upon concealment, the self-concealing of the mystery. We can never control-the mystery the belonging together of revealing and concealing. In order to approach the world in a manner exclusively technological, calculative, mathematical, scientific, we must already have given up (or lost, or been expelled by, or perhaps ways of being such as we are even impossible within) other approaches or modes of revealing that would unfold into knowledges of other sorts. Those other approaches or paths of thinking must already have been obliterated; those other knowledges must already have concealed themselves in order for technological or scientific revelation to occur. The danger of a managerial approach to the world lies not, then, in what it knows - not in its penetration into the secrets of galactic emergence or nuclear fission - but in what it forgets, what it itself conceals. It forgets that any other truths are possible, and it forgets that the belonging together of revealing with concealing is forever beyond the power of human management. We can never have, or know, it all; we can never manage everything. What is now especially dangerous about this sense of our own managerial power, born of forgetfulness, is that it results in our viewing the world as mere resources to be stored or consumed. Managerial or technological thinkers, Heidegger says, view the earth, the world, all things as mere Bestand, standing-reserve. All is here simply for human use. No plant, no animal, no ecosystem has a life of its own, has any significance, apart from human desire and need. Nothing, we say, other than human beings, has any intrinsic value. All things are instruments for the working out of human will. Whether we believe that God gave Man dominion or simply that human might (sometimes called intelligence or rationality) in the face of ecological fragility makes us always right, we managerial, technological thinkers tend to believe that the earth is only a stockpile or a set of commodities to be managed, bought, and sold. The forest is timber; the river, a power source. Even people have become resources, human resources, personnel to be managed, or populations to be controlled. This managerial, technological mode of revealing, Heidegger says, is embedded in and constitutive of Western culture and has been gathering strength for centuries. Now it is well on its way to extinguishing all other modes of revealing, all other ways of being human and being earth. It will take tremendous effort to think through this danger, to think past it and beyond, tremendous courage and resolve to allow thought of the mystery to come forth; thought of the inevitability, along with revealing, of concealment, of loss, of ignorance; thought of the occurring of things and their passage as events not ultimately under human control. And of course even the call to allow this thinking - couched as it so often must be in a grammatical imperative appealing to an agent - is itself a paradox, the first that must be faced and allowed to speak to us and to shatter us as it scatters thinking in new directions, directions of which we have not yet dreamed, directions of which we may never dream. And shattered we may be, for our self-understanding is at stake; in fact, our very selves - selves engineered by the technologies of power that shaped, that are, modernity - are at stake. Any thinking that threatens the notion of human being as modernity has posited it - as rationally self-interested individual, as self-possessed bearer of rights and obligations, as active mental and moral agent - is thinking that threatens our very being, the configurations of subjective existence in our age.

#### They don’t solve the impact to their diffusion advantage their kassedies and Kunetzov says that they can only solve for some developing countries that already have small electric grids, they don’t solve the impact to their kumar evidence which specifically says that the the people who are in the most trouble don’t even have heating or gas for cooking water and have to use biomass, they do not this into account smrs can’t solve for the nations their impact evidenc is talking about

#### SMRs don’t solve climate change

Makhijani and Boyd 10 (ARJUN MAKHIJANI, electrical and nuclear engineer who is President of the Institute for Energy and Environmental Research AND MICHELE BOYD, September, former director of the Safe Energy Program at Physicians for Social Responsibility, “Small Modular Reactors No Solution for the Cost, Safety, and Waste Problems of Nuclear Power’, (www.psr.org/nuclear-bailout/.../small-modular-reactors-no.pdf)CD)

Efficiency and most renewable technologies are already cheaper than new large reactors. The long time — a decade or more — that it will take to certify SMRs will do little or nothing to help with the global warming problem and will actually complicate current efforts underway. For example, the current schedule for commercializing the above-ground sodium cooled reactor in Japan extends to 2050, making it irrelevant to addressing the climate problem. Relying on assurances that SMRs will be cheap is contrary to the experi-ence about economies of scale and is likely to waste time and money, while creating new safety and proliferation risks, as well as new waste disposal problems.

### 1NC Frontline

#### a) The end of American dominance is inevitable and already underway

Layne 12 [Christopher, Robert M. Gates Chair in Intelligence and National Security at Texas A&M University, “This Time It’s Real: The End of Unipolarity and the Pax Americana,” *International Studies Quarterly* 56 (2012): 203-213.] // myost

There are two drivers of American decline, one external and one domestic. The external driver of US decline is the emergence of new great powers in world politics and the unprecedented shift in the center of global economic power from the EuroAtlantic area to Asia. In this respect, the relative decline of the United States and the end of unipolarity are linked inextricably: the rise of new great powers—especially China—is in itself the most tangible evidence of the erosion of the United States’ power. China’s rise signals unipolarity’s end. Domestically, the driver of change is the relative—and in some ways absolute—decline in America’s economic power, the looming fiscal crisis confronting the United States, and increasing doubts about the dollar’s long-term hold on reserve currency status. Unipolarity’s demise marks the end of era of the post-World War II Pax Americana. When World War II ended, the United States, by virtue of its overwhelming military and economic supremacy, was incontestably the most powerful actor in the international system. Indeed, 1945 was the United States’ first unipolar moment. The United States used its commanding, hegemonic position to construct the postwar international order—the Pax Americana— which endured for more than six decades. During the Cold War, the Pax Americana reflected the fact that outside the Soviet sphere, the United States was the preponderant power in the three regions of the world it cared most about: Western Europe, East Asia, and the Persian Gulf. The Pax Americana rested on the foundational pillars of US military dominance and economic leadership and was buttressed by two supporting pillars: America’s ideological appeal (‘‘soft power’’) and the framework of international institutions that the United States built after 1945. Following the Cold War’s end, the United States used its second unipolar moment to consolidate the Pax Americana by expanding both its geopolitical and ideological ambitions. In the Great Recession’s aftermath, however, the economic foundation of the Pax Americana has crumbled, and its ideational and institutional pillars have been weakened. Although the United States remains preeminent militarily, the rise of new great powers like China, coupled with US fiscal and economic constraints, means that over the next decade or two the United States’ military dominance will be challenged. The decline of American power means the end of US dominance in world politics and a transition to a new constellation of world power. Without the ‘‘hard’’ power (military and economic) upon which it was built, the Pax Americana is doomed to wither in the early twenty-first century. Indeed, because of China’s great-power emergence, and the United States’ own domestic economic weaknesses, it already is withering.

#### b) The only question of this transition is whether it will be violent or peaceful – clinging to hegemony ensures bloody conflicts

Quinn 11 (Adam, Department of Political Science and International Studies School of Government and Society Muirhead Tower University of Birmingham, “The art of declining politely: Obama's prudent presidency and the waning of American power,” *International Affairs* 87.4 (July 2011): 803-824)CD)

As noted in the opening passages of this article, the narratives of America’s decline and Obama’s restraint are distinct but also crucially connected. Facing this incipient period of decline, America’s leaders may walk one of two paths. Either the nation can come to terms with the reality of the process that is under way and seek to finesse it in the smoothest way possible. Or it can ‘rage against the dying of the light’, refusing to accept the waning of its primacy. President Obama’s approach, defined by restraint and awareness of limits, makes him ideologically and temperamentally well suited to the former course in a way that, to cite one example, his predecessor was not. He is, in short, a good president to inaugurate an era of managed decline. Those who vocally demand that the President act more boldly are not merely criticizing him; in suggesting that he is ‘weak’ and that a ‘tougher’ policy is needed, they implicitly suppose that the resources will be available to support such a course. In doing so they set their faces against the reality of the coming American decline.97 If the United States can embrace the spirit of managed decline, then this will clear the way for a judicious retrenchment, trimming ambitions in line with the fact that the nation can no longer act on the global stage with the wide latitude once afforded by its superior power. As part of such a project, it can, as those who seek to qualify the decline thesis have suggested, use the significant resources still at its disposal to smooth the edges of its loss of relative power, preserving influence to the maximum extent possible through whatever legacy of norms and institutions is bequeathed by its primacy. The alternative course involves the initiation or escalation of conflictual scenarios for which the United States increasingly lacks the resources to cater: provocation of a military conclusion to the impasse with Iran; deliberate escalation of strategic rivalry with China in East Asia; commitment to continuing the campaign in Afghanistan for another decade; a costly effort to consistently apply principles of military interventionism, regime change and democracy promotion in response to events in North Africa.

**No solvency- manufacturing delays mean that SMR’s can’t even get built**

**Department of commerce 11** (U.S. Department of Commerce International Trade Administration, “The Commercial Outlook for U.S. Small Modular Nuclear Reactors”, ([http://www.trade.gov/publications/pdfs/the-commercial-outlook-for-us-small-modular-nuclear-reactors.pdf)CD](http://www.trade.gov/publications/pdfs/the-commercial-outlook-for-us-small-modular-nuclear-reactors.pdf%29CD))

**One obstacle is diminished manufacturing capac­ity. U.S. nuclear competitiveness is hampered because U.S. manufacturing capacity has been eroded through the lack of new reactor construc­tion** during the past few decades. Some **govern­ment resources to help manufacturers are not appropriate for nuclear suppliers**, or the resources exclude the suppliers entirely. For example, **only two U.S. nuclear manufacturers qualified for the advanced energy manufacturing tax credit**. The timeline to be eligible for the credit requires a facil­ity to be up and running four years from certifica­tion. **Some U.S. firms say that the timeline is too short for many nuclear suppliers; just acquiring the high-precision machines necessary to retool and rebuild capacity can require a lead time of several years.**

#### Small reactors are expensive

Makhijani and Boyd 10 (September, ARJUN MAKHIJANI, electrical and nuclear engineer who is President of the Institute for Energy and Environmental Research AND MICHELE BOYD, former director of the Safe Energy Program at Physicians for Social Responsibility, Small Modular Reactors No Solution for the Cost, Safety, and Waste Problems of Nuclear Power, www.psr.org/nuclear-bailout/.../small-modular-reactors-no.pdf,)

SMR proponents claim that small size will en- able mass manufacture in a factory, enabling considerable savings relative to field construc- tion and assembly that is typical of large reac- tors. In other words, modular reactors will be cheaper because they will be more like as- sembly line cars than hand-made Lamborghi- nis. In the case of reactors, however, several offsetting factors will tend to neutralize this advantage and make the costs per kilowatt of small reactors higher than large reactors. First, in contrast to cars or smart phones or similar widgets, the materials cost per kilowatt of a reactor goes up as the size goes down. This is because the surface area per kilowatt of capacity, which dominates materi- als cost, goes up as reactor size is decreased. Similarly, the cost per kilowatt of secondary containment, as well as independent systems for control, instrumentation, and emergency management, increases as size decreases. Cost per kilowatt also increases if each reac- tor has dedicated and independent systems for control, instrumentation, and emergency management. For these reasons, the nuclear industry has been building larger and larger reactors in an effort to try to achieve economies of scale and make nuclear power economically competitive. Proponents argue that because these nuclear projects would consist of several smaller reactor modules instead of one large reactor, the construction time will be shorter and therefore costs will be reduced. How- ever, this argument fails to take into account the implications of installing many reactor modules in a phased manner at one site, which is the proposed approach at least for the United States. In this case, a large contain- ment structure with a single control room would be built at the beginning of the project that could accommodate all the planned capacity at the site. The result would be that the first few units would be saddled with very high costs, while the later units would be less expensive. The realization of economies of scale would depend on the construction period of the entire project, possibly over an even longer time span than present large- reactor projects. If the later-planned units are not built, for instance due to slower growth than anticipated, the earlier units would likely be more expensive than present reactors, just from the diseconomies of the containment, site preparation, instrumentation and control system expenditures. Alternatively, a contain- ment structure and instrumentation and control could be built for each reactor. This would greatly increase unit costs and per kilo- watt capital costs. Some designs (such as the PBMR) propose no secondary containment, but this would increase safety risks. These cost increases are unlikely to be offset even if the entire reactor is manufac- tured at a central facility and some economies are achieved by mass manufacturing com- pared to large reactors assembled on site. Furthermore, estimates of low prices must be regarded with skepticism due to the history of past cost escalations for nuclear reactors and the potential for cost increases due to require- ments arising in the process of NRC certifica- tion. Some SMR designers are proposing that no prototype be built and that the necessary licensing tests be simulated. Whatever the process, it will have to be rigorous to ensure safety, especially given the history of some of proposed designs.