POLITICAL GEOGRAPHY IN THE 21ST CENTURY: UNDERSTANDING THE PLACE - LOOKING AHEAD

POLITIČNA GEOGRAFIJA V 21. STOLETJU - RAZUMETI PROSTORSKO STVARNOST IN (U)VIDETI PRIHODNOST

UDK
32: 911.3

Institute of Geography
Inštitut za geografijo

Ljubljana 2001
Geopolitics @ Millennium: Paranoid Fantasies and Technological Fundamentalism amidst the Contradictions of Contemporary Modernity

Gerard Toal (Gearóid Ó Tuathail)
School of Public and International Affairs, Virginia Tech, 205 South Patrick Street, Alexandria, VA 22314, USA.

Abstract
In this paper the question of geopolitics at the new millennium will be approached through a consideration of the geopolitical metanarrative used by the Clinton administration to describe the contemporary conjuncture in world affairs. In its celebration of globalization, a technoscientific society, and the enlargement of the community of ‘market democracies’, this metanarrative functions as a discourse of power which seeks to generate popular consent for contemporary modernity and manage its already visible contradictions and crises. In co-opting the language of human rights, labor and environmental movements, it acknowledges the world these groups represent while simultaneously refusing to address the very practices that help produce it. The paper concludes by discussing a critical paranoid fantasy that may not be crazy, a vision of the United States as a technologically fundamentalist state. Challenging the deep technological fundamentalism of contemporary modernity requires the development of a broad array of new concepts that problematize the existing socio-technical order and render visible some of hidden ecological consequences of our current technological prejudices, for example concepts like ‘ecological footprint’ and ‘real cost economics’.

Keywords: Political geography, USA and the world, market democracy, future geopolitics, Ulrich Beck, Halford Mackinder, William (Bill) Clinton
Introduction

The end of one century and the beginning of a new one is a compelling moment that inevitably inspires sweeping consideration of the past and grand speculation about the future. As a distinctive twentieth century mode of discourse on world politics, geopolitics was the product of a desire to rise to just such an occasion almost one hundred years ago for, in January 1904, Halford Mackinder gave his famous address to the Royal Geographical Society on The Geographical Pivot of History. In this subsequently famous talk, Mackinder evokes the significance of the moment to offer his sweeping and speculative thesis: the opening of the twentieth century is appropriate as the end of a great historic epoch, what he termed the ‘Columbian epoch’ of European overseas expansionism. In the first years of the new twentieth century Mackinder discerned the beginnings of a new ‘post-Columbian epoch,’ an era where the balance of power was tilting away from traditional sea powers like the British Empire and towards land powers, most alarmingly to Britain’s major continental rival, the German Reich. Trans-continental railways are now transmuting the conditions of land-power, and no where can they have such effect as in the closed heartland of Euro-Asia. Thinking and theorizing from the perspective of a British imperialist, Mackinder made a case that the British Empire needed to respond to this tendency with a strategy of ‘national efficiency’ and imperial modernization based around imperial preferences and tariff reform. Giving voice to a paranoid fantasy that weighed heavily upon the mind of British imperialists at the beginning of the twentieth century, he predicted that the empire of the world... be in sight... if Germany were to ally herself with Russia. Such exaggerated fear about a single power dominating the empire of the world was later reduced to a pithy slogan by Mackinder which claimed that who commands East Europe commands the Heartland, and who commands the Heartland controls the World-Island.

Perhaps it was because great power rivalries unleashed so many paranoid fantasies in the twentieth century that Halford Mackinder’s ideas were later considered prophetic and profound, by German imperialists dreaming of a thousand year Reich and anxious American Cold Warriors fearing a worldwide Communist conspiracy. When such fantasies fell away and the complexity of world politics allowed to return, Mackinder’s ideas appeared as neither prophetic nor profound. In focusing on a mythic heartland Mackinder, after all, missed the significant role the United States was to play in the twentieth century, what some Americans have ethnocentrically dubbed ‘the American century.’ In focusing on a nineteenth century technology, railways, he missed the significance of airspace and how technoscientific developments in the field of information could transform geo-strategy. Yet, registered in Mackinder’s centennial speculations are very modern problems concerning the balance of power across states, the impact of technological systems on time-space and power, and the globalization of economic activity. Such problems remain at the center of speculative geopolitical enterprise as we live through an even grander moment of apparent transcendence significance: the millennium.

The millennium has long been associated with apocalyptic thinking and paranoid fantasies, most counter-modern end-of-times thinking inspired by religious scriptures. Secular alternatives are the paranoid visions offered by sensationalist media culture and reflexively modern transnational movements. Some, for example, see the deepening informationalization of everyday life in modern states as ushering in a ‘superranopianic’ of surveillance and control. Others see globalization as a form of modernity that is out of control and pro-

---


5 H. G. Wells, a science fiction writer and companion of Mackinder, was more prescient about the new century when he wrote in 1914 a short story called The World Set Free. The story concerns the obliteration of Berlin by an atomic bomb dropped from an airplane. In the story, the world’s states come to the realization that warfare is anachronistic as a means of settling international disputes and set up an international organization to enforce peace. Boyer (1985, 75) writes of Wells: Not only in his prediction of the atomic bomb, but also in his anticipation of the uses to which its horror would be put by advocates of peace and international cooperation, Wells in 1914 proved himself an uncanny prophet. Only in his conclusion – that all the talk of peace, disarmament, and world harmony through atomic fear would actually produce that result – did Wells miss the mark. — Paul Boyer, By the Bomb’s Early Light: American Thought and Culture at the Dawn of the Atomic Age (New York: Pantheon, 1985).

6 For a consideration of Mackinder’s ideas at the turn of the century see Gerry Kearns, Fin de Siecle Geopolitics: Mackinder, Hobson and Theories of Global Closures in Peter Taylor, ed., Political Geography of the Twentieth Century: A Global Analysis. (London: Belhaven, 1993).


---


pelling the downward leveling of labor standards and working conditions. Yet others describe a 'coming plague' of 'emerging diseases' that threaten to overwhelm the power of established antibiotic medicine. Perhaps most well known and controversial are the dark ecological visions of a planet enveloped by global warming, environmental degradation, and pervasive toxicity.

Millennial visions and paranoid fantasies are part of the battle of ideas over the meaning of the present and future. Though it is an essentially arbitrary cultural construct, the millennium is an interesting moment to consider the meaning of geopolitics or, more precisely, how geopolitics is made meaningful in our time. Motivated by the unique point in time and the official celebrations of it, leaders use the occasion to create meaning from the past, impose meaning upon the present, and project meaning upon the future. Inspired by the occasion, the leaders of powerful institutions and states are drawn to grandiloquent statements and visions. Inevitably, this produces vast and sweeping judgments but these in themselves can reveal something of the hegemonic geopolitical metanarrative or overarching story of stories of our time and how they conceptualize and represent change. In this short paper, I wish to approach the question of geopolitics at the millennium through a consideration of the geopolitical metanarrative used by the Clinton administration to describe the contemporary conjuncture in world affairs. This metanarrative, I wish to suggest, is comprised of a series of largely celebratory visions of global change which, while they recognize the unstable and contradictory nature of contemporary world affairs, nevertheless understate and mask the deep contradictions of contemporary global modernity. In its celebration of globalization, a technoscientific society, and the enlargement of the community of 'market democracies,' this metanarrative functions as a discourse of power which seeks to generate popular consent for contemporary modernity and manage its already visible contradictions and crises.

In co-opting the language of human rights, labor and environmental movements, it acknowledges the world these groups represent while simultaneously refusing to address the very practices that help produce it. Using critical geopolitical concepts and the work of Ulrich Beck, the paper outlines an alternative interpretation of the contemporary geopolitical condition, one that foregrounds the contradictions the hegemonic geopolitical narrative does not acknowledge. The paper concludes by discussing a critical paranoid fantasy that may not be crazy, a vision of the United States as a technologically fundamentalist state.

**Geopolitical meaning at the millennium: the Clinton vision**

To the extent that it is still meaningful to speak of a 'hegemon' in a multipolar and deeply complex transnationalizing world, that position belongs to the 'lone remaining superpower,' the United States of America. Under the informal leadership of the US President, the United States, the European Union and Japan constitute a tripartite power bloc that share a 'common sense' set of assumptions, beliefs, and convictions about the contemporary world order. These beliefs and convictions constitute an adaptable and frequently articulated geopolitical metanarrative that is used to explain and give meaning to the contemporary geopolitical conjuncture.

Throughout his two administrations, President Clinton articulated a story about the post-Cold War world that evolved over the years but remained consistent in its essential structure. This story combined a neoliberal belief in the promise of 'free trade' and 'open markets,' a techno-optimistic vision of the power of technology to enrich human lives, and a constrained missionary vision of the US role in world affairs, a vision more preached than realized. The narrative is flexible enough to change with the times and sufficiently robust to recognize certain contradictions in its visions and promises. It holds that the world is moving away from geo-strategic competition to an era of geo-economics and geo-finance. Power is no longer measured by military might alone but by the ability of a state to take advantage of 'the information age' and 'globalization.' Together with the expansion of 'freedom' and 'democracy,' these processes are the defining dynamics of our time. States should do all they can to embrace free trade, free markets, and the free flow of information. With the adoption of such policies, the story goes, states can secure for their citizens a future of peace and prosperity.

---


---

The great challenge for states and the world is to manage the upheavals and dislocations caused by the transition to a future based on globalization, democracy, and information technology. That globalization, informationalization, and the 'extension of freedom' may be processes characterized by contradictions and tensions is sometimes acknowledged. One example is a speech by President Clinton to the Electronic Industries Alliance dinner in Washington, DC on the 30 March 1999 at the outset of NATO's war against Yugoslavia over its actions in Kosovo. Clinton sought to link the Kosovo crisis to the broader challenge of globalization and information technology and he does so through the recognition of globalization and informationalization as processes containing promises but also dangers:

If you think about the major forces alive in the world today, the move toward globalization and the explosion in technology, especially in information and communications, they really...are dramatically changing the way we work and live and relate to each other and to the rest of the world. They represent both a pull toward integration and a dramatic force toward decentralization. And I would argue to you that both forces have within them the potential for enormous good and enormous trouble for the world of the 21st century.

If you think about the forces toward integration of the global economy, for example, that's a wonderful thing. But it can be very destabilizing if we leave whole countries and vast populations within countries behind. If you think about the explosion in technology and how wonderful it is in empowering individuals and small firms and communities, and enabling communities—little schools I've seen in poor African and Latin American villages to hook up to the Internet and have access to learning that would have taken them a whole generation, at least, to achieve through traditional economic development processes in their countries. It is breathtaking.

But looked at another way, it also provides access to technology for every terrorist in the world to have their own weapons site, and for independent operators to figure out how to make bombs and set up chemical and biological labs. And when married together with the most primitive hatreds, like those we see manifest in Kosovo today, the advent of technology and decentralized decision-making and access to information can be a very potent, but destructive force.¹³


This passage is interesting for how it articulates the potential contradictions of the expansion of globalization and technology in today's world. Both processes are celebrated for the 'dramatic,' 'wonderful,' 'empowering,' 'enabling' and 'breathtaking' changes they permit. Yet, there is potential for 'enormous trouble.' This trouble takes the form of 'outsiders'—terrorists—using technological change for destructive ends. The nightmare of advanced modernity is the marriage of modern technology with 'primitive hatreds.' The threat comes not from globalization or the technologies themselves but from pre-moderns, those outside the modern project of progress through economic growth and technological innovation, who have the opportunity to use the tools of modernity against it in order to destroy it.

This theme of expanding possibilities but remaining 'primitive hatreds' found expression in the various events organized by the Clinton administration to commemorate the millennium. At a »Millennium Around the World« event on 31 December 1999, Clinton begins by celebrating the time-space compression enabled by communications: »On this day 100 years ago, when President William McKinley marked the start of the twentieth century, it took six seconds to send a text by telegraph. Today satellites and the Internet carry our voices and images instantaneously all around the world.« This leads Clinton to evoke the dream of universal understanding and communication through technology.¹⁴ The millennium is, he claims, a celebration of a »common future for all people of goodwill, a future of peace and harmony.« It is a celebration of a »future rooted in the forces of freedom and enterprise and globalization and science and technology that have powered so much of the twentieth century.«

What have also characterized the twentieth century are the expansion of democracy and the triumph of 'democratic countries' over the forces of totalitarianism, apartheid, and ethnic cleansing. Clinton declared that the »forces of science, technology and globalization have shattered the boundaries of possibility. And in the new century, our achievements will be bounded mostly by the limits on our own imagination, understanding, and wisdom.« Yet »tremendous challenges lie ahead:

The old problems are there: leaders all too willing to exploit human difference to preserve their own power; places where freedom still is silenced and basic rights denied; outdated, unnecessary industries: practices endangering our global environment; abject poverty, with more than 1 billion people living

¹⁴ On the history of this theme see Armand Mattelart, The Invention of Communication. (Minneapolis: University of Minnesota, 1996).
on less than a dollar a day. And then there are the new problems: the organized forces of crime, narco-trafficking, terror; governments too weak to handle the sweeping forces of globalization and their impact on their people; ordinary people across the world who have yet to see the benefits of democracy and free enterprise, but have borne the burden of the economic and social changes some can delay, but none can avoid.15

The story Clinton articulates on the occasion of the millennium is a sustained celebration of world communications, democratization, globalization and the wonders of science and technology. But it is also a vision that interprets the problems that remain as a consequence of the unfulfilled and imperfect unfolding of the potentialities of democratization, globalization and technoscientific progress.

The geopolitical metanarrative President Clinton articulated at the millennium is not a disinterested analysis of world politics but a discourse of power that justifies an American led geopolitical strategy of enlargement/containment, capitalist technoscientific modernization, and neoliberal globalization. Enlargement/containment is given meaning by the practical division of the world into three different zones: ‘market democracies,’ referring to ‘mature’ states with capitalist markets and regularized procedures for electing their leaders, ‘emerging markets’ referring to ‘transitional’ states with imperfect structures of capitalism and democracy, and ‘rogue states’ (recently rebranded as ‘states of concern’) referring to states that are considered outside or at the margins of the ‘world community of states.’ In rhetorical terms at least, enlargement is a policy commitment to help expand the domain of ‘market democracies’ by aiding states to become ‘emerging markets’ and later mature ‘market democracies.’ Containment is the policy response to so-called ‘rogue states’ like Iraq, North Korea and Iran.16 In practical policy terms, the United States holds that the security structures and institutions that ‘won’ the Cold War are a suitable foundation for security in the post-Cold War era. Updated and modernized, these institutions comprise a core region of strength and stability that should be selectively extended to incorporate former ‘eastern bloc’ states, like Hungary, Poland and the Czech Republic. Alliances with other states through such

states through such programs as Partnerships for Peace are also part of this enlargement geopolitical strategy.17

In its celebration of the ‘breathtaking’ change made possible by science and technology, the Clinton metanarrative reveals a deep belief and faith in technological progress. Technological achievements like the creation of the Internet and the mapping of the human genome are considered the measure of modernity. While certain anxieties and fears about the implications of technical progress are expressed from time to time, the predominant attitude is that technological innovation is an inevitable and a positive force for change in world affairs. Technological innovations should be embraced as a matter of faith for technology brings economic growth and prosperity, facilitates greater communication and understanding between the world’s peoples, and offers cures for diseases. Technology functions, in parts of Clinton’s discourse, as a secular substitute for god, a source of inspiration with a transcendent and spiritual appeal. It has the capacity to inspire awe and induce experiences of the sublime and spiritual.18

Globalization, like technological progress, is viewed as an inevitable and positive transformative force in world affairs. It is the name given to what is in effect transnational corporate capitalist modernization and capital accumulation, a process represented as offering the possibility for all the world’s peoples to become prosperous if they follow a neoliberal recipe of open markets, deregulation and privatization. Global prosperity is to be secured through the freedom of transnational corporations to accumulate capital on a worldwide scale.

Specifying contemporary modernity as ‘reflexive modernity’

Critical geopolitics is an approach within political geography that seeks to challenge hegemonic discourses of power about world politics. In particular, it seeks to break away from geopolitical knowledge being philosophy of and for the state, a descriptive analysis of the condition of inter-state alliances and enmities followed by a recipe book of strategies to be followed by state leaders. Criti

16 Raymond Tanter, Rogue Regimes: Terrorism and Proliferation. (New York: St Martin’s Griffin, 1999).
18 For an exploration of this theme see Erik Davis, Technotopia: Myth, Magic and Mysticism in the Age of Information. (New York: Random House, 1998).
cal geopolitics can be divided into four different critical enterprises: the analysis of formal geopolitics, practical geopolitics, popular geopolitics and structural geopolitics. This latter enterprise involves analysis of the contemporary geopolitical condition, the structures, processes and tendencies characterizing world politics today.

Consideration of the contemporary geopolitical condition first requires reflection upon the nature of modernity. A useful theorization is that proposed by the German sociologist Ulrich Beck. Beck divided modernity into a classic modernity that produced 'industrial society' and a reflexive modernity that is the consequence of what he terms 'risk society.' Risk society, for Beck, is a new phase in the history of modernity brought about by the normal functioning of modernization encountering the 'side effects' of earlier ages of modernization. Reflexive modernity is a second wave of modernization, a confrontation with and an attempt to modernize the forms, institutions and legacy of classic modernity. Reflexive modernity is a product of a series of related dynamics. First, Beck claims that the normal functioning of scientific innovation and technological development over the course of the twentieth century has produced a radically new human condition. The Manhattan Project during World War II produced a weapons system capable of destroying human cities in a matter of minutes. Developments in chemistry and biology, like the widespread use of pesticides in food production and the manipulations made possible by genetic engineering, have enabled unprecedented levels of human intervention in what was previously termed 'nature.' Where 'nature' ends and the 'social' starts is increasingly unclear. Everyday life in contemporary modern societies is secured, surrounded and sustained by military machines, energy networks, and biochemical complexes that have unknown and unknowable consequences for human health and the ecosystems that sustain life. The normalized and taken-for-granted functioning of ever more complex and pervasive formations of technoscientific modernization has produced a range of 'manu-


factured uncertainties' at the very heart of contemporary modernity, many with catastrophic potential.

Second, reflexive modernity is characterized by a rising consciousness of the condition of self-endangerment that the routine functioning of contemporary modernization produces. Uneven and erratic, this consciousness has both local and global dimensions. Citizens slowly become aware of toxins in their everyday environment and food through the localized risks and illnesses they produce (issues like health concerns over the safety of beef and the use of genetically modified foodstuffs). Pollution becomes a political issue when it becomes a spectacle of failure in the media. 'Lifestyle politics' begins to emerge and spawn different consumer and environmental social movements. Consciousness of risks becomes global as 'worlds' are constituted and given definition by unanticipated consequences and 'side effects' of complex technological systems. An imperiled planet was constituted in 1970's from the realization of 'mutually assured destruction' by the nuclear superpowers and by scenarios of 'nuclear winter' in the 1980's. An endangered world was exposed by the radioactive cloud released by the Chernobyl explosion. A fragile planet is currently being imagined by discourses on global warming, rising ocean levels, and the common experience of erratic weather patterns across the world's regions.

Third, reflexive modernity is a condition of self-confrontation and crisis for modernity. Previously marginalized 'side effects' can no longer be so easily contained and become more central to debates about growth and technological development. The irreversible and long term negative impact of 'progress' upon the environment becomes more difficult to conceal and ignore. That the problems of pollution and global warming know no boundaries calls into question hegemonic ways of thinking and acting. The progressive accumulation of developments in science and technology, Beck claims, have produced a society where our inherited categories of thought, systems of governance and divisions of geopolitics no longer make sense. >The dangers of highly developed nuclear and chemical productive forces abolish the foundations and categories according to which we have thought and acted at this point, such as space and time, work and leisure time, factory and nation state, indeed even the borders between continents.<22 There is a disjuncture between the hegemonic conceptual categories of our time and the dilemmas we face:

At the threshold of the twenty-first century, the challenges of the age of atomic, genetic and chemical technology are being handled with concepts and recipes that are derived from early industrial society in the nineteenth and the early twentieth centuries.  

Reflexive modernity, for Beck, is an objective condition produced by the contradictions of modernity. The dynamics of industrial society undermine its own foundations through its very success not through its failure. In modernity, Beck claims, more of the same produces an ‘age of side-effects’ that is qualitatively new. The institutionally automated dynamics of modernity—increasing levels of economic growth, greater degrees of consumption, further intensifications of scientific and technological innovation, expansive depletion of the planet’s natural resources — produce exponential risks and dangers as a normal matter of course. Threats, Beck claims, are produced industrially, externalized economically, individualized juridically, legitimized scientifically and minimized politically. These threats exceed the political capacity of regulatory agencies and structures of governance to control them. Consequently, reflexive modernity is characterized by ongoing crises of governance as political institutions and public bodies struggle to comprehend, conceptualize and contain the proliferating risks produced by global scale modernization. 

Reflexive modernity also means a politicized modernity but the nature and degree of this politicization is highly contested. Reflexive modernity may be an objective condition where the ‘side effects’ of modernity are no longer so easily dismissed but reflexivity upon that condition may not necessarily be critical. Reflexive modernity is not necessarily reflexive modernity, though Beck’s normative vision is that it be a radically reflective and critical political process that challenges the unquestioned operational assumptions of modernization. The political battles characterizing reflexive modernity concern the specification of ‘dangers’ and ‘risks,’ and the degree of politicization of modernity as a process fraught with contradictions and dangers. Dangers, as Beck notes, do not exist ‘in themselves,’ independent of our perceptions. They become a political issue only when people are generally aware of them; they are social constructs which are strategically defined, covered up or dramatized in the public sphere with the help of scientific material supplied for that purpose. The same could be said for consciousness of contradictions. In both cases, there is a political power struggle over meaning. 

Specifying the contemporary geopolitical condition

Having specified contemporary modernity as a ‘reflexive modernity,’ we can proceed to introduce further critical geopolitical concepts. Three concepts are useful in the analysis of geopolitical conditions:

- Geopolitical world order: the distribution of power and the configuration of alliances and enmity across the world political map.
- Techno-territorial complexes, the assemblages of technologies of communication, transportation and warfare that condition and shape world strategic space. In compressing space and time, techno-territorial complexes influence the relationship between defense and offensive in warfare and help shape the practice of geopolitical power.
- Geopolitical Economy: the geopolitical order governing economic production, trade and consumption of goods across the world, and the geo-ecological consequences of this order.

Using these concepts together with Beck’s specification of modernity, Table I offers a suggestive schematic interpretation of the contemporary geopolitical condition. Clinton’s metanarrative can be understood as a contemporary effort at reflexive modernization. But it is a superficial and contradictory form of reflexive modernization for three reasons.

23 Ibid, p. 22.
25 Peter Hugill, Global Communications Since 1844: Geopolitics and Technology, (Baltimore: Johns Hopkins Press, 1999).
26 This concept is discussed in John Agnew and Stuart Corbridge, Mastering Space: Hegemony, Territory and International Political Economy (London: Routledge, 1995), though they do not discuss its geo-ecological dimensions.
American way of life. Consequently, the discourse of the Clinton administration refuses to acknowledge the contradiction between the rapacious globalization that is needed to sustain the American way of life and the current environmental crisis. The profound and disturbing contradictions of contemporary modernity, in short, are not acknowledged by the Clinton administration.

Second, the techno-optimism of the Clinton administration rarely acknowledges the ambivalences and contradictions of technoscientific modernity. The freedom to pursue whatever forms of technoscientific innovation ‘show progress and profit’ is a deeply held dogma in US political culture. As we enter the 21st century, the US can perhaps be best described as a technologically fundamentalist state. Better living through technoscientific progress has become a civil religion in the US, a dogma preached everyday by a barrage of television and magazine advertisements and propagated by high tech evangelists like Bill Gates. Its stock market rewards ‘high technology’ corporations, its military imagines itself as ‘high tech’ fighting force, and its political culture imagines modernity’s future almost exclusively in ‘high tech’ terms. The Clinton presidency has given voice to this fundamentalism in its celebration of the ‘breathtaking’ quality of contemporary technological and scientific innovations.

Third, the specification of the ‘risks’ and ‘dangers’ of contemporary scientific and technological developments is organized into a convenient and self-serving geography of the civilized and the primitive, the peaceful ‘us’ and the terrorist ‘them.’ Advanced technology controlled by ‘our’ institutions is not a threat or danger whereas advanced technology in the hands of those not as modern and rational as ‘us’ is a danger that should be mobilized against. The risks and dangers produced as a matter of course by our modernity are projected onto the distorted and primitive modernity of outside ‘others.’

---


Paranoid fantasies and the future of geopolitics

History indicates that the everyday practice of geopolitics is often motivated and given meaning by paranoid fantasies of various sorts. In the twentieth century the paranoid fantasies that informed geopolitics were state-centric and nationalist territorial visions of world domination and control. There is no shortage of paranoid visions of the future at the opening of the 21st century. Rather than dismiss all paranoid fantasies as irrational, it is may be worthwhile in the coming century to distinguish between counter-modern ones (usually based on religious and/or nationalist romantic visions) that attempt to impose certitude upon modernity, classic modern fantasies about limitless progress and growth that recycle already bankrupt myths to serve particularistic interests, and reflexively modern visions that sometimes throw the contradictions of the contemporary geopolitical condition into stark relief. The paranoid visions of environmentalists and peace activists today are part of the struggle to imagine and transform the future of modernity. Though these visions sometimes appear fantastic they are far from being crazy. Unlike the paranoid power fantasies and conspiracies that gave meaning to international politics for much of the twentieth century, visions of increasing planetary temperatures and rising ocean levels, unfolding global pandemics and irreversible technoscientific manipulations, proliferating weapons of destruction and deepening vulnerability to potentially catastrophic accidents, can be empirically documented and supported in great scientific detail. As Athansiou remarks about those studying the rising levels toxicity in the environment, 'the paranoids, it happens, do not have a bad record at all.'

Beck's arguments can be construed as a critical paranoid fantasy about the tyranny of technoscience in contemporary modernity. He has argued that democracy in advanced industrial states rests on the fiction that the technological decisions of industry (and, it can be added, the military apparatus of the state) cannot nullify and modify the foundations of social coexistence and cooperation. Technological decision-making and techno-territorial paradigm choice do not require special public consent since these are technical matters, matters of specialized rationality best left to 'engineers' and experts.' The calculus for decision-making is that provided by technocratic rationality, the 'imperatives' of capitalist markets, or the 'requirements of national security.' The result is a permanent government of technological paradigms – nuclear power systems, the petroleum-automobile complex, biotechnology and genetic engineering, defense via a triad of intercontinental nuclear missiles, and now missile defense systems – that cannot be removed from office even when they have questionable legitimacy, catastrophic potential, and significantly harmful side-effects. Governments may change but nuclear power and its consequences, for example, appear to be forever (though the German Greens are putting this to the test). A dictatorship of technological systems develops – the latest example is wireless communication systems – beneath, behind, and beyond the conventional political arena.

Certain social movements, from anti-nuclear peace activists to Green Party environmentalists, are challenging this constricted form of democracy but their effort at forcing technological decision-making and paradigm choice into the area of public discussion and debate is a slow struggle. Meanwhile, new technological systems proliferate without proper regulation and debate. Slow democratic debate gets bypassed by fast market-driven science and technology. As Beck remarks, 'blinded to the consequences by the central ideology of economic growth, and with the blessings of a policy that invokes safety and order, predictably unpredictable side-effects are continuously unleashed that are irrevocably binding on future generations, which are excluded from the decision-making process and for which no one can be held liable.'

In geo-strategic and military terms, these 'predictably unpredictable side-effects' are sometimes described as 'blowback' or the boomerang effect of technological weapons systems upon the security and quality of life of those that first introduced these systems. Weapons of mass destruction, invented by states and corporations in the name of 'national security,' end up producing 'global insecurity' as they proliferate beyond their places of origin. These 'predictably unpredictable side-effects' are then used to justify further technoscientific systems of defense, producing a risk proliferating version of the classic 'security dilemma.' Everyone ends up a lot less safe and a lot more threatened, insecure and dependent upon technoscientific systems for their defense.

The latest example of this is the debate over the US state's commitment to research and possibly build a missile defense program to protect itself from missiles from 'rogue states.' The strategic logic for the program is a paranoid

33 Ibid, p. 41.
fantasy that rejects deterrence: North Korea or some other ‘rogue state’ will launch intercontinental nuclear missiles against the US even though this means certain destruction for these states. The ‘national security’ goal is a long-standing fantasy: the construction of a defensive shield with the capability of destroying incoming intercontinental nuclear missiles aimed at the US territory. Political motivations for the program range from its financial benefits for the defense industry to the political cover it provides Democratic Party against the charge that it is ‘weak’ on defense, but at a certain level the scheme is indicative of a technological fundamentalism, a belief in the redemptive and salvational power of technology, in American political life. The program holds out the possibility of a technological solution to an inevitable geopolitical problem, the efforts by third order states to obtain nuclear weapons and war-fighting technologies. The US state is, in effect, seeking to return to the era when its security was guaranteed by its geographic isolation from the rest of the world, the geopolitical equivalent, Zbigniew Brzezinski notes, of a ‘gated community’. As during the Cold War, technical fixes are given more priority than diplomatic efforts. Indeed, the program can be interpreted as a deepening of the contradictions of reflexive modernity for in response to the uncertainties of a world of proliferating nuclear weapons and missile technology, it promises to re-establish certainty through more technological modernization. Such an attitude is evident in presidential candidate George W. Bush’s attitude to the system when he noted that ‘one of the things we Republicans stand for is to use our technologies in research and development to the point where we can bring certainty into an uncertain world.’

The missile defense program is premised on the delusional assertion that the system is only being developed for defensive purposes against so-called ‘rogue states.’ That the system can be part of an offensive strategy is obvious as is the fact that it could be used to counter missiles from China and Russia. Chinese officials not unreasonably see the system as a way of neutralizing their developing offensive capability and have vowed to respond appropriately if the US develops it. The program requires the modification of the 1972 Anti Ballistic Missile treaty signed by the US and Russia, a cornerstone of arms control during the Cold War. The irony of such technological fundamentalism is all too apparent: a technological project designed to improve US security ends up undermining it even further by deepening insecurities and uncertainties across the world.

There are many other examples of the irony of technological fundamentalism and of ‘blowback’ from contemporary technoscientific modernity. That an amateur computer programmer in the Philippines writing 50 lines of code could produce a virus that circulated around the world disrupting communications and knocking millions of stock markets is a remarkable example of how vulnerable contemporary informationized modernity is to disruptions and crashes. More serious attacks on critical info-structures and catastrophic events are sure to characterize the coming century. President Clinton’s fears on this score may be realized, but what his geopolitical metanarrative does not allow is that unreflective attempts to address these dangers (more technological fixes to fix technological fixes) may actually compound them.

The key question for the new century is how do we reflexively modernize security and modernity itself? Do we modernize by deepening our dependence upon technological systems and technical solutions or do we modernize by always adopting the ‘precautionary principle’ and by being skeptical of the culture of the ‘technological sublime,’ the unqualified embrace and celebration of technoscience as the transcendent of limits? Are we, in order words, going to challenge the dictatorship of certain technological paradigms and systems over human affairs? Challenging the deep technological fundamentalism of contemporary modernity requires the development of a broad array of new concepts that problematize the existing socio-technical order and render visible some of hidden ecological consequences of our current technological prejudices (for example, concepts like ‘ecological footprint’ and ‘real cost economics’).