## 1ac /1ar

#### Same as octos

#### 1ar:

#### Ellis is too slow for cards

## 2ac

### AT: case

#### Linearity might not be true but it’s provisionally useful

Dr. Sebastian L. V. Gorka et al 12, Director of the Homeland Defense Fellows Program at the College of International Security Affairs, National Defense University, teaches Irregular Warfare and US National Security at NDU and Georgetown, et al., Spring 2012, “The Complexity Trap,” Parameters, <http://www.carlisle.army.mil/USAWC/parameters/Articles/2012spring/Gallagher_Geltzer_Gorka.pdf>These competing views of America’s national security concerns indicate an important and distinctive characteristic of today’s global landscape: prioritization is simultaneously very difficult and very important for the United States. Each of these threats and potential threats—al Qaeda, China, nuclear proliferation, climate change, global disease, and so on—can conjure up a worstcase scenario that is immensely intimidating. Given the difficulty of combining estimates of probabilities with the levels of risk associated with these threats, it is challenging to establish priorities. Such choices and trade-offs are difficult, but not impossible. 30 In fact, they are the stock-in-trade of the strategist and planner. If the United States is going to respond proactively and effectively to today’s international environment, prioritization is the key first step—and precisely the opposite reaction to the complacency and undifferentiated fear that the notion of unprecedented complexity encourages. Complexity suggests a maximization of flexibility and minimization of commitment; but prioritization demands wise allotment of resources and attention in a way that commits American power and effort most effectively and efficiently. Phrased differently, complexity induces deciding not to decide; prioritization encourages deciding which decisions matter most. Today’s world of diverse threats characterized by uncertain probabilities and unclear risks will overwhelm us if the specter of complexity seduces us into either paralysis or paranoia. Some priorities need to be set if the United States is to find the resources to confront what threatens it most. 31 As Michael Doran recently argued in reference to the Arab Spring, “the United States must train itself to see a large dune as something more formidable than just endless grains of sand.”32 This is not to deny the possibility of nonlinear phenomena, butterfly effects, self-organizing systems that exhibit patterns in the absence of centralized authority, or emergent properties. 33 If anything, these hallmarks of complexity theory remind strategists of the importance of revisiting key assumptions in light of new data and allowing for tactical flexibility in case of unintended consequences. Sound strategy requires hard choices and commitments, but it need not be inflexible. We can prioritize without being procrustean. But a model in which everything is potentially relevant is a model in which nothing is.

### AT: Risk

#### Epistemic uncertainty isn’t a voting issue: imaging scenarios, even if unlikely or flawed is a pre requisite to good analysis – the aff isn’t a research paper, just dismiss poorly constructed impacts

Wimbush, 08 – director of the Center for Future Security Strategies

(S. Enders, senior fellow at the Hudson Institute and the author of several books and policy articles, “A Parable: The U.S.-ROK Security Relationship Breaks Down”, Asia Policy, Number 5 (January 2008), 7-24)

What if the U.S.-ROK security relationship were to break down? This essay explores the alternative futures of such a scenario. **Analyzing scenarios is one technique** for trying to understand the increasing complexity of strategic environments. A scenario is **an account of an imagined sequence of events.** The intent of a scenario is to **suggest how alternative futures might arise** **and where they might lead**, where conflicts might occur, **how the interests of different actors** might be challenged, and the kinds of strategies actors might pursue to achieve their objectives. Important to keep in mind is that **scenarios are nothing more than** invented, in-depth stories—stories about what different futures could look like and what might happen along plausible pathways to those futures. The trends and forces that go into building a scenario **may be carefully researched,** yet a scenario is not a research paper. Rather, it is a work of the imagination. As such, scenarios are, first, **tools that can help bring order to the way analysts think** about what might happen in future security environments; **second**, scenarios are a provocative way of revealing possible dynamics of future security environments that might not be apparent simply by projecting known trends into the future. Scenarios are particularly useful in suggesting where the interests and actions of different actors might converge or collide with other forces, trends, attitudes, and influences. By using scenarios, to explore the question “what if this or that happened?” in a variety of different ways, with the objective of uncovering as many potential answers as possible, **analysts can build hedging strategies for dealing with many different kinds of potential problems**. Though they may choose to discount some of these futures and related scenarios, analysts will not be ignorant of the possibilities, with luck avoiding having to say: “I never thought about that.”

#### Debating risk analysis is key to averting lash out

Langford 3 (Ian, Centre for Social and Economic Research on the Global Environment School of Environmental Sciences University of East Anglia and University College London, AN EXISTENTIAL APPROACH TO RISK PERCEPTION)

The above case studies show that other perspectives on risk perception can be gained by examining underlying existential anxieties, and existential analysis can provide a link between widely differing risk issues and across very different methodologies. Existential analysis is, of course, only one of a number of theoretical and practical approaches that can be taken towards risks, but it is potentially capable of transcending the difference between cultures and histories. Whilst the challenges and risks posed by living today in a techno-logically advanced society are very different from those faced a thousand years ago in the same geographical locations, the existential anxieties remain the same, as they are a common property of being human, although coping strategies may change somewhat. ‘Millenium anxiety’ in 1999 was not so different from that displayed in 999 AD. Further, existential analysis can reflect on the societal challenges posed by ‘modern’ risks as well as the individual adaptations required in order to survive in the 21st century. Giddens (1991) links existential anxiety to loss of trust, and Beck (1999) comments on how the World Risk Society brings people together as well as separating them though the operation of the global political economy. There are winners and losers, but all are beginning to play on the same field. Although cross-cultural comparisons are not the focus of this paper, it is worth mentioning that from research conducted in the UK, and also in Greece (Kontogianni et al., 2001), it is possible to see the commonalities between at least these two cultures, as well as the differences. With regard to risks, respondents in the UK generally took a more individualistic ‘personal specialness’ approach, for example, in the research on perceptions of climate change, whilst in Greece respondents still held more belief in the divine order of things. Greek respondents often expressed a belief in θεοπρωνια (theo-pronia), which has no direct English translation, but can be interpreted as meaning that ‘if you do the right thing, God will give you luck’. So, for example, if you fish according to ‘natural laws’, God will make sure the fish don’t run out.……....in general, Greeks favoured the ‘ultimate rescuer’ defense. In terms of the World Risk Society, and individual coping mechanisms, it appears that death anxiety is particularly prevalent when people consider their fears of the unknown and unknowable. The unknown is represented by uncertainties over the future, given the current rate of technological change, and conflicting messages received from the scientists, government and the media about a wide range of risk issues. The unknowable is represented by fear of the complexity of scientific knowledge, and its inaccessibility to lay people, as well as the complex and interwoven nature of many environmental and health risks. With many ‘20th century diseases’, such as allergic and immunocompetence conditions, traditional epidemiological methods of finding a single cause for a single disease fail because the 26 causes are multiple and synergistic, and the conditions ill-defined and variable between individuals. Existential isolation anxiety is characterized by feelings of hopelessness and helplessness in the face of the global political economy, and the striving for ‘community’ or ‘togetherness’ is often founded on making joint protests or opting out of conventional lifestyles and discourses. This can sometimes lead to ‘idealistic tribalism’, which replaces ‘geographical tribalism’ via the sharing and reinforcement of common ideas amongst similar thinking people via the ease of modern day travel and information/communication technologies such as email and the internet. Alienation is often a matter of scale, with individuals feeling powerless in the face of world markets and international agreements. However, modern forms of communication and lifestyles and the social structures they support may themselves be alienating in containing little face-to-face human contact or ‘quality time’. Freedom and responsibility are again often framed in terms of not being subjugated by the global political economy or the discourses it promotes – the modern equivalent of Hiedegger’s impersonal ‘They-Self’. Individuals and groups can choose to opt out, give up, try their best, or carry on regardless – but it is always in opposition to or in collusion with political and economic forces seen as being at a scale beyond the individual’s power to change, and individual action is hence usually framed in terms of personal lifestyle choice to reduce risks, protect the environment or promote social equity. Meaninglessness anxiety seems to be a common response in the World Risk Society. Identity and self-esteem are either maintained by small-scale successes, or reliance on being informed and using common sense, but pessimism, crusad-ism, nihilism and vegetativeness are all common responses to technological and environmental risks. Unfortunately, the great increase in information in techno-logical societies has created more confusion and, in the opinion of many people, devalued all information – leading to more reliance on ‘folklore’, lay epidemiology and ‘common sense’ to evaluate uncertain and ill-defined risks. Rebellion against political and institutional structures has often been reduced to stigmatization of particular organizations (such as the privatized water companies, see Langford et al., 1999a; Georgiou et al., 1998) or products (such as GM foods). This atomization of protest increases the sense of meaningless-ness, where one can only hope to achieve something small – and hence potentially meaningless – or else give up hope of things ever being different and merely find a comfortable way to survive the inevitable. In conclusion, this paper has attempted, via theoretical argument, case studies and discussion, to present a different analysis of risk perception by individuals within social and political systems. Existential issues and anxieties, that are common to being human across space and time, have been explored whilst at the same time examining the relationship between humans and risk in contemporary post-industrial society. One conclusion that can be drawn from this analysis is that the range of individual and social responses to risk are symptomatic of far more global anxieties about the functioning and future of the world in general. Risk issues and conflicts are therefore not merely a product of a risk society, but an integral part of its operation. Only by providing people with a genuine chance to understand, have hope and believe in the possibility of instigating change, can risk managers provide risk communication strategies that actually communicate about risk. This is because of the complex and profound role that risk perception plays in structuring identities, defining discourses and bringing order and sense to the world. Otherwise, fear of the unknown, alienation, helplessness and reactions to these states of mind will always win the day.

#### Vote aff despite prior questions—impact timeframe means you gotta act on the best info available

Kratochwil, professor of international relations – European University Institute, 2008 (Friedrich, “The Puzzles of Politics,” pg. 200-213)

The lesson seems clear. Even at the danger of “fuzzy boundaries”, when we deal with “practice” ( just as with the “pragmatic turn”), we would be well advised to rely on the use of the term rather than on its reference (pointing to some property of the object under study), in order to draw the bounds of sense and understand the meaning of the concept. My argument for the fruitful character of a pragmatic approach in IR, therefore, does not depend on a comprehensive mapping of the varieties of research in this area, nor on an arbitrary appropriation or exegesis of any specific and self-absorbed theoretical orientation. For this reason, in what follows, I will not provide a rigidly specified definition, nor will I refer exclusively to some prepackaged theoretical approach. Instead, I will sketch out the reasons for which a pragmatic orientation in social analysis seems to hold particular promise. These reasons pertain both to the more general area of knowledge appropriate for praxis and to the more specific types of investigation in the field. The follow- ing ten points are – without a claim to completeness – intended to engender some critical reflection on both areas. Firstly, a pragmatic approach does not begin with objects or “things” (ontology), or with reason and method (epistemology), but with “acting” (prattein), thereby preventing some false starts. Since, **as historical beings placed in a** specific situations**, we do not have the luxury** of deferring decisions **until we have** found the “truth”, **we have to act and must do so always under time pressures and in the face of incomplete information.** Pre- cisely because the social world is characterised by strategic interactions, what a situation “is”, is hardly ever clear ex ante, because it is being “produced” by the actors and their interactions, and the multiple possibilities are rife with incentives for (dis)information. This puts a premium on quick diagnostic and cognitive shortcuts informing actors about the relevant features of the situ- ation, and on leaving an alternative open (“plan B”) in case of unexpected difficulties. Instead of relying on certainty and universal validity gained through abstraction and controlled experiments, we know that completeness and attentiveness to detail, rather than to generality, matter. To that extent, likening practical choices to simple “discoveries” of an already independently existing “reality” which discloses itself to an “observer” – or relying on optimal strategies – is somewhat heroic. These points have been made vividly by “realists” such as Clausewitz in his controversy with von Bülow, in which he criticised the latter’s obsession with a strategic “science” (Paret et al. 1986). While Clausewitz has become an icon for realists, only a few of them (usually dubbed “old” realists) have taken seriously his warnings against the misplaced belief in the reliability and use- fulness of a “scientific” study of strategy. Instead, most of them, especially “neorealists” of various stripes, have embraced the “theory”-building based on the epistemological project as the via regia to the creation of knowledge. A pragmatist orientation would most certainly not endorse such a position. Secondly, since acting in the social world often involves acting “for” someone, special responsibilities arise that aggravate both the incompleteness of knowledge as well as its generality problem. Since we owe special care to those entrusted to us, for example, as teachers, doctors or lawyers, we cannot just rely on what is generally true, but have to pay special attention to the particular case. Aside from avoiding the foreclosure of options, we cannot refuse to act on the basis of incomplete information or insufficient know- ledge, and the necessary diagnostic will involve typification and comparison, reasoning by analogy rather than generalization or deduction. Leaving out the particularities of a case, be it a legal or medical one, in a mistaken effort to become “scientific” would be a fatal flaw. Moreover, **there still remains the crucial element of “timing” –** of knowing when to act. Students of crises have always pointed out the importance of this factor but, in attempts at building a general “theory” of international politics analogously to the natural sci- ences, such elements are neglected on the basis of the “continuity of nature” and the “large number” assumptions. Besides, “timing” seems to be quite recalcitrant to analytical treatment.

#### Alt fails – risk-based policymaking inevitable

Danzig 11 Richard Danzig, Center for a New American Security Board Chairman, Secretary of the Navy under President Bill Clinton, October 2011, Driving in the Dark Ten Propositions About Prediction and National Security, <http://www.cnas.org/files/documents/publications/CNAS_Prediction_Danzig.pdf>

The Propensity to Make Predictions – and to Act on the Basis of Predictions – Is Inherently Human “No one can predict the future” is a common saying, but people quite correctly believe and act otherwise in everyday life. In fact, daily life is built on a foundation of prediction. One expects (predicts) that housing, food and water will be safe and, over the longer term, that saved money will retain value. These predictions are typically validated by everyday experience. As a consequence, people develop expectations about prediction and a taste, even a hunger, for it. If security in everyday life derives from predictive power, it is natural to try to build national security in the same way. This taste for prediction has deep roots.16 Humans are less physically capable than other species but more adept at reasoning.17 Reasoning is adaptive; it enhances the odds of survival for the species and of survival, power, health and wealth for individuals. Reasoning depends on predictive power. If what was benign yesterday becomes unpredictably dangerous today, it is hard to develop protective strategies, just as if two plus two equals four today and five tomorrow, it is hard to do math. Rational thought depends on prediction and, at the same time, gives birth to prediction. Humans are rational beings and, therefore, make predictions. The taste for prediction has roots, moreover, in something deeper than rationality. Emotionally, people are uncomfortable with uncertainty and pursue the illusion of control over events beyond their control. Systematic interviews of those who have colostomies, for example, show that people are less depressed if they are informed that their impaired condition will be permanent than if they are told that it is uncertain whether they will be able to return to normal functioning.19 Citing this and other work, Daniel Gilbert concludes that “[h]uman beings find uncertainty more painful than the things they’re uncertain about.”20 An “illusion of control,” to employ a term now recognized in the literature of psychology, mitigates the pain of uncertainty.21 People value random lottery tickets or poker cards distributed to themselves more than they do tickets or cards randomly assigned to others.22 A discomfort with uncertainty and desire for control contribute to an unjustifiable over-reliance on prediction. 2. Requirements for Prediction Will Consistently Exceed the Ability to Predict The literature on predictive failure is rich and compelling.23 In the most systematic assessment, conducted over 15 years ending in 2003, Philip Tetlock asked 284 established experts24 more than 27,000 questions about future political and economic outcomes (expected electoral results, likelihoods of coups, accession to treaties, proliferation, GDP growth, etc.) and scored their results.25 Collateral exercises scored predictive achievement in the wake of the breakup of the Soviet Union, the transition to democracy in South Africa and other events. There are too many aspects of Tetlock’s richly textured discussion to permit a simple summary, but his own rendering of a central finding will suffice for this discussion: “When we pit experts against minimalist performance benchmarks – dilettantes, dart-throwing chimps, and assorted extrapolation algorithms – we find few signs that expertise translates into greater ability to make either ‘well calibrated’ or ‘discriminating’ forecasts.”26 As described below,27 there are strong reasons for a high likelihood of failure of foresight when DOD attempts to anticipate the requirements for systems over future decades. Recent experience makes this point vividly. Over the past 20 years,28 long-term predictions about the strategic environment and associated security challenges have been wrong, like most multi-year predictions on complex subjects.29 It is simple to list a halfdozen failures:30 American defense planners in 1990 did not anticipate the breakup of the Soviet Union, the rapid rise of China, Japan’s abrupt transition from decades of exceptional economic growth to decades of no growth,31 an attack like that on September 11, 2001 or the United States invasions of (and subsequent decade-long presences in) Afghanistan and Iraq.32 So, in this light, why does the defense community repeatedly over-invest in prediction? A common conceptual error intensifies the hunger for prediction. History celebrates those who made good predictions. Because Winston Churchill’s fame rests on, among other things, his foresight about German militarism and the accuracy of his demands for preparation for World War II, it appears evident that confident prediction is the road to success. Yet it is an error to focus on numerators (instances of success) without asking about denominators (instances of failure). 33 Accordingly, there is a tendency to ignore Churchill’s failures in many other predictions (his disastrous expectations from military operations in Gallipoli, his underestimation of Gandhi, etc.). There is also a tendency to ignore the great number of other predictors who are not celebrated by history because they failed in analogous circumstances. Moreover, prediction is subject to refinement and is often a competitive enterprise. As a result, predictive power is like wealth – gaining some of it rarely satisfies the needs of those who receive it. Predictive power intensifies the demand for more predictive power. Tell a national security advisor that another country is likely to develop a nuclear weapon, and – after all his or her questions have been answered about the basis of the prediction – he or she will want to know when, in what numbers, with what reliability, at what cost, with what ability to deploy them, to mount them on missiles, with what intent as to their use, etc. It is no wonder that U.S. intelligence agencies are consistently regarded as failing. Whatever their mixtures of strengths and weaknesses, they are always being pushed to go beyond the point of success. Put another way, the surest prediction about a credible prediction is that it will induce a request for another prediction. This tendency is intensified when, as is commonly the case, prediction is competitive. If you can predict the price of a product but I can predict it faster or more precisely, I gain an economic advantage. If I can better predict the success of troop movements over difficult terrain, then I gain a military advantage. As a result, in competitive situations, my fears of your predictive power will drive me to demand more prediction regardless of my predictive power. Moreover, your recognition of my predictive power will lead you to take steps to impair my predictive ability.34 Carl von Clausewitz saw this very clearly: “The very nature of interaction is bound to make [warfare] unpredictable.”35 These inherent psychological and practical realities will consistently lead to over-prediction. People are doomed repeatedly to drive beyond their headlights.

#### The aff’s investigation of scenerios is good - even if its low probability it sharpens political science analysis and allows us to test theories

**Mahnken and Junio 13** – (2013, Thomas, PhD, Jerome E. Levy Chair of Economic Geography and National Security at the U.S. Naval War College and a Visiting Scholar at the Philip Merrill Center for Strategic Studies at The Johns Hopkins University’s Paul H. Nitze School of Advanced International Studies, and Timothy, Predoctoral Fellow, Center for International Security and Cooperation, Stanford University, PhD in Political Science expected 2013, “Conceiving of Future War: The Promise of Scenario Analysis for International Relations,” International Studies Review Volume 15, Issue 3, pages 374–395, September 2013)

This article introduces political scientists to scenarios—future counterfactuals—and demonstrates their value in tandem with other methodologies and across a wide range of research questions. The authors describe best practices regarding the scenario method and argue that scenarios contribute to theory building and development, identifying new hypotheses, analyzing data-poor research topics, articulating “world views,” setting new research agendas, avoiding cognitive biases, and **teaching**. The article also establishes the low rate at which scenarios are used in the international relations subfield and situates scenarios in the broader context of political science methods. The conclusion offers two detailed examples of the effective use of scenarios.

In his classic work on scenario analysis, The Art of the Long View, Peter Schwartz commented that “social scientists often have a hard time [building scenarios]; they have been trained to stay away from ‘what if?’ questions and concentrate on ‘what was?’” (Schwartz 1996:31). While Schwartz's comments were impressionistic based on his years of conducting and teaching scenario analysis, his claim withstands empirical scrutiny. Scenarios—counterfactual narratives about the future—are woefully underutilized among political scientists. The method is almost never taught on graduate student syllabi, and a survey of leading international relations (IR) journals indicates that scenarios were used in only 302 of 18,764 sampled articles. The low rate at which political scientists use scenarios—less than 2% of the time—is surprising; the method is popular in fields as disparate as business, demographics, ecology, pharmacology, public health, economics, and epidemiology (Venable, Li, Ginter, and Duncan 1993; Leufkens, Haaijer-Ruskamp, Bakker, and Dukes 1994; Baker, Hulse, Gregory, White, Van Sickle, Berger, Dole, and Schumaker 2004; Sanderson, Scherbov, O'Neill, and Lutz 2004). Scenarios also are a **common tool employed by the policymakers** whom political scientists study.

This article seeks to elevate the status of scenarios in political science by demonstrating their usefulness for **theory building and pedagogy**. Rather than constitute mere speculation regarding an unpredictable future, **as critics might suggest**, scenarios assist scholars with developing testable hypotheses, gathering data, and identifying a theory's upper and lower bounds. Additionally, **scenarios are an effective way to teach students to apply theory to policy**. In the pages below, a “best practices” guide is offered to advise scholars, practitioners, and students, and an argument is developed in favor of the use of scenarios. The article concludes with two examples of how political scientists have invoked the scenario method to improve the specifications of their theories, propose falsifiable hypotheses, and design new empirical research programs.

Scenarios in the Discipline

What do counterfactual narratives about the future look like? Scenarios may range in length from a few sentences to many pages. One of the most common uses of the scenario method, which will be referenced throughout this article, is to study the conditions under which **high-consequence, low-probability** events may occur. Perhaps the best example of this is **nuclear warfare**, a circumstance that has never resulted, but has captivated generations of political scientists. For an introductory illustration, let us consider a very simple scenario regarding how a first use of a nuclear weapon might occur:

During the year 2023, the US military is ordered to launch air and sea patrols of the Taiwan Strait to aid in a crisis. These highly visible patrols disrupt trade off China's coast, and result in skyrocketing insurance rates for shipping companies. Several days into the contingency, which involves over ten thousand US military personnel, an intelligence estimate concludes that a Chinese conventional strike against US air patrols and naval assets is imminent. The United States conducts a preemptive strike against anti-air and anti-sea systems on the Chinese mainland. The US strike is far more successful than Chinese military leaders thought possible; a new source of intelligence to the United States—unknown to Chinese leadership—allowed the US military to severely degrade Chinese targeting and situational awareness capabilities. Many of the weapons that China relied on to dissuade escalatory US military action are now reduced to single-digit-percentage readiness. Estimates for repairs and replenishments are stated in terms of weeks, and China's confidence in readily available, but “dumber,” weapons is low due to the dispersion and mobility of US forces. Word of the successful US strike spreads among the Chinese and Taiwanese publics. The Chinese Government concludes that for the sake of preserving its domestic strength, and to signal resolve to the US and Taiwanese Governments while minimizing further economic disruption, it should escalate dramatically with the use of an extremely small-yield nuclear device against a stationary US military asset in the Pacific region.

This short story reflects a future event that, while unlikely to occur and far too vague to be used for military planning, contains many dimensions of political science theory. These include the following: what leaders perceive as “limited,” “proportional,” or “escalatory” uses of force; the importance of private information about capabilities and commitment; audience costs in international politics; the relationship between military expediency and political objectives during war; and the role of compressed timelines for decision making, among others. The purpose of this article is to explain to scholars how **such stories**, and more rigorously developed narratives that specify variables of interest and draw on extant data, may **improve the study of IR**. An important starting point is to explain how future counterfactuals fit into the methodological canon of the discipline.

#### Specifically true for nuclear miscalc

**Mahnken and Junio 13** – (2013, Thomas, PhD, Jerome E. Levy Chair of Economic Geography and National Security at the U.S. Naval War College and a Visiting Scholar at the Philip Merrill Center for Strategic Studies at The Johns Hopkins University’s Paul H. Nitze School of Advanced International Studies, and Timothy, Predoctoral Fellow, Center for International Security and Cooperation, Stanford University, PhD in Political Science expected 2013, “Conceiving of Future War: The Promise of Scenario Analysis for International Relations,” International Studies Review Volume 15, Issue 3, pages 374–395, September 2013)

Scenarios are a useful method for theory building and research design for topics that, **despite being of high importance, lack an empirical base**. The best example of this type of research is scholarship on nuclear warfare. An enormous literature evolved during the Cold War regarding how a nuclear war might be fought and how escalation dynamics might occur (Kahn 1962; Brown and Mahnken 2011). This literature was based almost exclusively on future counterfactuals, as there were no nuclear wars to study and a very low “n”—consisting of the Cuban Missile Crisis and very few other crises—for publicly acknowledged “close calls” (Sagan 1995). Indeed, in our survey of the use of scenarios in the discipline, more than 25% were about nuclear warfare. Other topics that are of high importance but have a very low or zero “n” include **great-power war, global epidemics, climate change, large-scale cyber attack, and weapon of mass destruction terrorism.**

The points made earlier regarding the identification of new variables and hypotheses are relevant here. In addition to these advantages to new research topics, **scenario analysis helps to identify new sources of data.** This is partially because scenarios help to identify new independent variables, thus leading the researcher to think about how to measure their values, but also by helping him to think of proxies for measurement when direct observation is not possible. For instance, a day-after analysis of a scenario of interest would cause the researcher to ask what he would have needed to know to predict the occurrence of the future counterfactuals and in turn help the researcher to think about ways in which the discipline could **identify that low-probability process if it begins to happen in the real world**.

#### Communicating risk is productive - inaction is worse – only debating risk mobilizes effective action

Kurasawa, 04 [Fuyuki Kurasawa is Assistant Professor of Sociology at York University, Toronto, and a Faculty Associate of the Center for Cultural Sociology at Yale University. He is the author of The Ethnological Imagination: A Cross-Cultural Critique of Modernity (2004), Cautionary Tales: The Global Culture of Prevention and the Work of Foresight, Constellations Volume 11, No 4, 2004. © Blackwell Publishing Ltd., 9600 Garsington Road, Oxford OX4 2DQ, UK, <http://www.yorku.ca/kurasawa/Kurasawa%20Articles/Constellations%20Article.pdf>]

Introduction As we float in a mood of post-millennial angst, the future appears to be out of favor. Mere mention of the idea of farsightedness – of **trying to analyze what may** **occur** in our wake in order to better understand how to live in the here and now – conjures up images of fortune-telling crystal balls and doomsday prophets, or of eccentric pundits equipped with data-crunching supercomputers spewing forth fanciful prognostications. The future, then, has seemingly become the province of mystics and scientists, a realm into which the rest of us rarely venture. This curious situation goes back to a founding paradox of early modernity, which sought to replace pagan divination and Judeo-Christian eschatology with its own rational system of apprehending time. Thus came into being the philosophy of history, according to which human destiny unfolds teleologically by following a knowable and meaningful set of chronological laws leading to a final state of perfection; Condorcet, Kant, Hegel, and Marx, to name but a few, are the children of this kind of historicism that expresses an unwavering faith in the Enlightenment’s credo of inherent progress over time. Yet in our post-metaphysical age, where the idea of discovering universal and stable temporal laws has become untenable, the philosophy of history lies in ruins. What has stepped into the breach **is** a variety of sciences of governance of the future, ranging from social futurism to **risk management**. By developing sophisticated modeling techniques, prognosticators aim to convert the future into a series of predictable outcomes extrapolated from present-day trends, or a set of possibilities to be assessed and managed according to their comparative degrees of risk and reward.1 Although commendable in their advocacy of farsightedness, these scientistic forms of knowledge are hampered by the fact that their longing for surefire predictive models have inevitably come up short. If historicism and scientistic governance offer rather unappealing paradigms for contemplating the future, a turn to the conventional political forecasts of the post-Cold War world order hardly offers more succor. Entering the fray, one is rapidly submerged by Fukuyama’s “end of history,” Huntington’s “clash of civilizations,” Kaplan’s “coming anarchy,” or perhaps most distressing of all, the so-called ‘Bush Doctrine’ of unilateral pre-emption. For the Left, this array of unpalatable scenarios merely prolongs the sense of hope betrayed and utopias 454 *Constellations Volume 11, Number 4, 2004 © 2004 Blackwell Publishing Ltd.* crushed that followed the collapse of the socialist experiment. Under such circumstances, is it any wonder that many progressive thinkers dread an unwelcomed future, preferring to avert their gazes from it while eyeing foresight with equal doses of suspicion and contempt? But **neither** evasionnorfatalismwill do. Some authors have grasped this, reviving hope in large-scale socio-political transformation by sketching out utopian pictures of an alternative world order. Endeavors like these are essential, for they spark ideas **about possible and desirable futures** that transcend the existing state of affairs and undermine the flawed prognoses of the post-Cold War world order; what ought to be and the Blochian ‘Not-Yet’ remain powerful figures of critique of what is, and inspire us to contemplate how social life could be organized differently. Nevertheless, my aim in this paper is to pursue a different tack by exploring how a **dystopian imaginary can lay the foundations for a constructive engagement with the future.** In the twenty-first century, the lines of political cleavage are being drawn along those of competing dystopian visions. Indeed, one of the notable features of recent public discourse and socio-political struggle is their negationist hue, for they are devoted as much to the prevention of disaster as to the realization of the good, less to what ought to be than what could but must not be.2 The debates that preceded the war in Iraq provide a vivid illustration of this tendency, as both camps rhetorically invoked incommensurable catastrophic scenarios to make their respective cases. And as many analysts have noted, the multinational antiwar protests culminating on February 15, 2003 marked the first time that a mass movement was able to mobilize substantial numbers of people dedicated to averting war before it had actually broken out. More generally, given past experiences and awareness of **what might occur** in the future, given the cries of ‘never again’ (the Second World War, the Holocaust, Bhopal, Rwanda, etc.) and ‘not ever’ (e.g., nuclear or ecological apocalypse, human cloning) that are emanating from different parts of the world, the avoidance of crises is seemingly on everyone’s lips – and everyone’s conscience. From the United Nations and regional multilateral organizations to states, from non-governmental organizations to transnational social movements, the determination to prevent the actualization of potential cataclysms has become a new imperative in world affairs. Allowing past disasters to reoccur and unprecedented calamities to unfold is now widely seen as unbearable when, in the process, the suffering of future generations is callously tolerated and our survival is being irresponsibly jeopardized. Hence, we need to pay attention to what a widely circulated report by the International Commission on Intervention and State Sovereignty identifies as a burgeoning “culture of prevention,”3 a dynamic that carries major, albeit still poorly understood, normative and political implications. Rather than bemoaning the contemporary preeminence of a dystopian imaginary, I am claiming that it **can enable a novel form of transnational socio-political** action, a manifestation of globalization from below **that can be termed preventive foresight.** We should not reduce the latter to a formal principle regulating international relations or an ensemble of policy prescriptions for official players on the world stage, since it is, just as significantly, a mode of ethico-political practice enacted by participants in the emerging realm of global civil society. In other words, what I want to underscore is the work of farsightedness, the social processes through which civic associations are simultaneously constituting and putting into practice a sense of responsibility for the future by attempting to prevent global catastrophes. Although the labor of preventive foresight takes place in varying political and socio-cultural settings – and with different degrees of institutional support and access to symbolic and material resources – it is underpinned by three distinctive features: dialogism, publicity, and transnationalism. In the first instance, preventive foresight is **a**n intersubjective or **dialogical process of address**, recognition, and **response** between two parties in global civil society: the ‘warners,’ who anticipate and send out word of possible perils, and the audiences being warned, those who heed their interlocutors’ messages by demanding that governments and/or international organizations take measures to steer away from disaster. Secondly, **the work of farsightedness derives its effectiveness and legitimacy from public debate** and deliberation. This is not to say that a fully fledged global public sphere is already in existence, since transnational “strong publics” with decisional power in the formal-institutional realm are currently embryonic at best. Rather, in this context, publicity signifies that “weak publics” with distinct yet occasionally overlapping constituencies are coalescing around struggles to avoid specific global catastrophes.4 Hence, despite having little direct decision-making capacity, the environmental and peace movements, humanitarian NGOs, and other similar globally-oriented civic associations are becoming significant actors involved in public opinion formation. Groups like these are active in disseminating information and alerting citizens about looming catastrophes, lobbying states and multilateral organizations from the ‘inside’ and pressuring them from the ‘outside,’ as well as fostering public participation in debates about the future. This brings us to the transnational character of preventive foresight, which is most explicit in the now commonplace observation that we live in an interdependent world because of the globalization of the perils that humankind faces (nuclear annihilation, global warming, terrorism, genocide, AIDS and SARS epidemics, and so on); individuals and groups from far-flung parts of the planet are being brought together into “risk communities” that transcend geographical borders.5 Moreover, due to dense media and information flows, knowledge of impeding catastrophes can instantaneously reach the four corners of the earth – sometimes well before individuals in one place experience the actual consequences of a crisis originating in another. My contention is that civic associations are engaging in dialogical, public, and transnational forms of ethico-political action that contribute to the creation of a fledgling global civil society existing ‘below’ the official and institutionalized architecture of international relations.6 **The work of preventive foresight consists** 456 Constellations Volume 11, Number 4, 2004 *© 2004 Blackwell Publishing Ltd.* **of forging ties between citizens**; participating in the circulation of flows of claims, images, and information across borders; promoting an ethos of farsighted cosmopolitanism; **and** forming and **mobilizing** weak **publics that debate and** **struggle against** possible **catastrophes**. Over the past few decades, states and international organizations have frequently been content to follow the lead of globally- minded civil society actors, who have been instrumental in placing on the public agenda a host of pivotal issues (such as nuclear war, ecological pollution, species extinction, genetic engineering, and mass human rights violations). To my mind, this strongly indicates that if prevention of global crises is to eventually rival the assertion of short-term and narrowly defined rationales (national interest, profit, bureaucratic self-preservation, etc.), weak publics must begin by convincing or compelling official representatives and multilateral organizations to act differently; **only then will farsightedness be in a position to ‘move up’ and become institutionalized** via strong publics.7 Since the global culture of prevention remains a work in progress, the argument presented in this paper is poised between empirical and normative dimensions of analysis. It proposes a theory of the practice of preventive foresight based upon already existing struggles and discourses, at the same time as it advocates the adoption of certain principles that would substantively thicken and assist in the realization of a sense of responsibility for the future of humankind. I will thereby proceed in four steps, beginning with a consideration of the shifting socio-political and cultural climate that is giving rise to farsightedness today (I). I will then contend that the development of a public aptitude for early warning about global cataclysms can overcome flawed conceptions of the future’s essential inscrutability (II). From this will follow the claim that an ethos of farsighted cosmopolitanism – of solidarity that extends to future generations – can supplant the preeminence of ‘short-termism’ with the help of appeals to the public’s moral imagination and use of reason (III). In the final section of the paper, I will argue that the commitment of global civil society actors to norms of precaution and transnational justice can hone citizens’ faculty of critical judgment against abuses of the dystopian imaginary, thereby opening the way to public deliberation about the construction of an alternative world order (IV). II. The Aptitude for Early Warning When engaging in the labor of preventive foresight, the first obstacle that one is likely to encounter from some intellectual circles is a deep-seated skepticism Cautionary Tales: Fuyuki Kurasawa 459 © 2004 Blackwell Publishing Ltd. about the very value of the exercise. A radically postmodern line of thinking, for instance, would lead us to believe that it is pointless, perhaps even harmful, to strive for farsightedness in light of the aforementioned crisis of conventional paradigms of historical analysis. If, contra teleological models, history has no intrinsic meaning, direction, or endpoint to be discovered through human reason, and if, contra scientistic futurism, prospective trends cannot be predicted without error, then the abyss of chronological inscrutability supposedly opens up at our feet. The future appears to be unknowable, an outcome of chance. Therefore, rather than embarking upon grandiose speculation about what may occur, we should adopt a pragmatism that abandons itself to the twists and turns of history; let us be content to formulate ad hoc responses to emergencies as they arise. While this argument has the merit of underscoring the fallibilistic nature of all predictive schemes, it conflates the necessary recognition of the contingency of history with unwarranted assertions about the latter’s total opacity and indeterminacy. Acknowledging the fact that the future cannot be known with absolute certainty does not imply abandoning the task of trying to understand what is brewing on the horizon and to prepare for crises already coming into their own. In fact, the incorporation of the principle of fallibility into the work of prevention means that we must be ever more vigilant for warning signs of disaster and for responses that provoke unintended or unexpected consequences (a point to which I will return in the final section of this paper). In addition, from a normative point of view, the acceptance of historical contingency and of the self-limiting character of farsightedness **places the duty of preventing catastrophe** squarely **on** the shoulders of **present generations.** The future no longer appears to be a metaphysical creature of destiny or of the cunning of reason, nor can it be sloughed off to pure randomness. It becomes, instead, a result of human action shaped by decisions in the present – including, of course, trying to anticipate and prepare for possible and avoidable sources of harm to our successors.

#### Ethical policymaking requires calculation of our impacts—refusing consequentialism allows atrocity in the name of ethical purity

Nikolas Gvosdev, ‘5 (Nikolas, Exec Editor of The National Interest, The Value(s) of Realism, SAIS Review 25.1, Muse)
As the name implies, realists focus on promoting policies that are achievable and sustainable. In turn, the morality of a foreign policy action is judged by its results, not by the intentions of its framers. A foreign policymaker must weigh the consequences of any course of action and assess the resources at hand to carry out the proposed task. As Lippmann warned, Without the controlling principle that the nation must maintain its objectives and its power in equilibrium, its purposes within its means and its means equal to its purposes, its commitments related to its resources and its resources adequate to its commitments, it is impossible to think at all about foreign affairs.8 Commenting on this maxim, Owen Harries, founding editor of The National Interest, noted, "This is a truth of which Americans—more apt to focus on ends rather than means when it comes to dealing with the rest of the world—need always to be reminded."9 In fact, Morgenthau noted that "there can be no political morality without prudence."10 This virtue of prudence—which Morgenthau identified as the cornerstone of realism—should not be confused with expediency. Rather, it takes as its starting point that it is more moral to fulfill one's commitments than to make "empty" promises, and to seek solutions that minimize harm and produce sustainable results. Morgenthau concluded: [End Page 18] Political realism does not require, nor does it condone, indifference to political ideals and moral principles, but it requires indeed a sharp distinction between the desirable and the possible, between what is desirable everywhere and at all times and what is possible under the concrete circumstances of time and place.11 This is why, prior to the outbreak of fighting in the former Yugoslavia, U.S. and European realists urged that Bosnia be decentralized and partitioned into ethnically based cantons as a way to head off a destructive civil war. Realists felt this would be the best course of action, especially after the country's first free and fair elections had brought nationalist candidates to power at the expense of those calling for inter-ethnic cooperation. They had concluded—correctly, as it turned out—that the United States and Western Europe would be unwilling to invest the blood and treasure that would be required to craft a unitary Bosnian state and give it the wherewithal to function. Indeed, at a diplomatic conference in Lisbon in March 1992, the various factions in Bosnia had, reluctantly, endorsed the broad outlines of such a settlement. For the purveyors of moralpolitik, this was unacceptable. After all, for this plan to work, populations on the "wrong side" of the line would have to be transferred and resettled. Such a plan struck directly at the heart of the concept of multi-ethnicity—that different ethnic and religious groups could find a common political identity and work in common institutions. When the United States signaled it would not accept such a settlement, the fragile consensus collapsed. The United States, of course, cannot be held responsible for the war; this lies squarely on the shoulders of Bosnia's political leaders. Yet Washington fell victim to what Jonathan Clarke called "faux Wilsonianism," the belief that "high-flown words matter more than rational calculation" in formulating effective policy, which led U.S. policymakers to dispense with the equation of "balancing commitments and resources."12 Indeed, as he notes, the Clinton administration had criticized peace plans calling for decentralized partition in Bosnia "with lofty rhetoric without proposing a practical alternative." The subsequent war led to the deaths of tens of thousands and left more than a million people homeless. After three years of war, the Dayton Accords—hailed as a triumph of American diplomacy—created a complicated arrangement by which the federal union of two ethnic units, the Muslim-Croat Federation, was itself federated to a Bosnian Serb republic. Today, Bosnia requires thousands of foreign troops to patrol its internal borders and billions of dollars in foreign aid to keep its government and economy functioning. Was the aim of U.S. policymakers, academics and journalists—creating a multi-ethnic democracy in Bosnia—not worth pursuing? No, not at all, and this is not what the argument suggests. But aspirations were not matched with capabilities. As a result of holding out for the "most moral" outcome and encouraging the Muslim-led government in Sarajevo to pursue maximalist aims rather than finding a workable compromise that could have avoided bloodshed and produced more stable conditions, the peoples of Bosnia suffered greatly. In the end, the final settlement was very close [End Page 19] to the one that realists had initially proposed—and the one that had also been roundly condemned on moral grounds.

#### Terrorism studies are epistemologically valid---our authors are self-reflexive

Boyle, 08 – Michael J. Boyle, School of International Relations, University of St. Andrews, and John Horgan, International Center for the Study of Terrorism, Department of Psychology, Pennsylvania State University, April 2008, “A Case Against Critical Terrorism Studies,” Critical Studies On Terrorism, Vol. 1, No. 1, p. 51-64

Jackson (2007c) calls for the development of an explicitly CTS on the basis of what he argues preceded it, dubbed ‘Orthodox Terrorism Studies’. The latter, he suggests, is characterized by: (1) its poor methods and theories, (2) its state centricity, (3) its problem-solving orientation, and (4) its institutional and intellectual links to state security projects. Jackson argues that the major defining characteristic of CTS, on the other hand, should be ‘a skeptical attitude towards accepted terrorism “knowledge”’. An implicit presumption from this is that terrorism scholars have laboured for all of these years without being aware that their area of study has an implicit bias, as well as definitional and methodological problems. In fact, terrorism scholars are not only well aware of these problems, but also have provided their own searching critiques of the field at various points during the last few decades (e.g. Silke 1996, Crenshaw 1998, Gordon 1999, Horgan 2005, esp. ch. 2, ‘Understanding Terrorism’). Some of those scholars most associated with the critique of empiricism implied in ‘Orthodox Terrorism Studies’ have also engaged in deeply critical examinations of the nature of sources, methods, and data in the study of terrorism. For example, Jackson (2007a) regularly cites the handbook produced by Schmid and Jongman (1988) to support his claims that theoretical progress has been limited. But this fact was well recognized by the authors; indeed, in the introduction of the second edition they point out that they have not revised their chapter on theories of terrorism from the first edition, because the failure to address persistent conceptual and data problems has undermined progress in the field. The point of their handbook was to sharpen and make more comprehensive the result of research on terrorism, not to glide over its methodological and definitional failings (Schmid and Jongman 1988, p. xiv). Similarly, Silke's (2004) volume on the state of the field of terrorism research performed a similar function, highlighting the shortcomings of the field, in particular the lack of rigorous primary data collection. A non-reflective community of scholars does not produce such scathing indictments of its own work.

#### No risk of endless warfare

**Gray 7**—Director of the Centre for Strategic Studies and Professor of International Relations and Strategic Studies at the University of Reading, graduate of the Universities of Manchester and Oxford, Founder and Senior Associate to the National Institute for Public Policy, formerly with the International Institute for Strategic Studies and the Hudson Institute (Colin, July, “The Implications of Preemptive and Preventive War Doctrines: A Reconsideration”, <http://www.ciaonet.org/wps/ssi10561/ssi10561.pdf>)

7. A policy that favors preventive warfare expresses a futile quest for absolute security. It could do so. Most controversial policies contain within them the possibility of misuse. In the hands of a paranoid or boundlessly ambitious political leader, prevention could be a policy for endless warfare. However, the American political system, with its checks and balances, was designed explicitly for the purpose of constraining the executive from excessive folly. Both the Vietnam and the contemporary Iraqi experiences reveal clearly that although the conduct of war is an executive prerogative, in practice that authority is disciplined by public attitudes. Clausewitz made this point superbly with his designation of the passion, the sentiments, of the people as a vital component of his trinitarian theory of war. 51 It is true to claim that power can be, and indeed is often, abused, both personally and nationally. It is possible that a state could acquire a taste for the apparent swift decisiveness of preventive warfare and overuse the option. One might argue that the easy success achieved against Taliban Afghanistan in 2001, provided fuel for the urge to seek a similarly rapid success against Saddam Hussein’s Iraq. In other words, the delights of military success can be habit forming. On balance, claim seven is not persuasive, though it certainly contains a germ of truth. A country with unmatched wealth and power, unused to physical insecurity at home—notwithstanding 42 years of nuclear danger, and a high level of gun crime—is vulnerable to demands for policies that supposedly can restore security. But we ought not to endorse the argument that the United States should eschew the preventive war option because it could lead to a futile, endless search for absolute security. One might as well argue that the United States should adopt a defense policy and develop capabilities shaped strictly for homeland security approached in a narrowly geographical sense. Since a president might misuse a military instrument that had a global reach, why not deny the White House even the possibility of such misuse? In other words, constrain policy ends by limiting policy’s military means. This argument has circulated for many decades and, it must be admitted, it does have a certain elementary logic. It is the opinion of this enquiry, however, that the claim that a policy which includes the preventive option might lead to a search for total security is **not at all convincing**. Of course, folly in high places is always possible, which is one of the many reasons why popular democracy is the superior form of government. It would be absurd to permit the fear of a futile and dangerous quest for absolute security to preclude prevention as a policy option. Despite its absurdity, this rhetorical charge against prevention is a stock favorite among prevention’s critics. It should be recognized and dismissed for what it is, a debating point with little pragmatic merit. And strategy, though not always policy, **must be nothing if not pragmatic**.

#### A new study incorporating long-term metrics proves counter-terrorism is successful

**Price, 12** - major in the U.S. Army and former Assistant Professor of Social Sciences at the U.S. Military Academy (Bryan, “Targeting Top Terrorists” International Security, Spring, <http://shakes31471.typepad.com/files/how-leadership-decapitation-contributes-to-counterterrorism.pdf>)

I argue that leadership decapitation significantly increases the mortality rate of terrorist groups, even after controlling for other factors. Using an original database—the largest and most comprehensive of its kind—I analyzed the effects of leadership decapitation on the mortality rate of 207 terrorist groups from 1970 to 2008. The analysis differs from previous quantitative studies because it evaluates the effects of decapitation on the duration of terrorist groups as opposed to the number, frequency, or lethality of attacks after a group experiences leadership decapitation.15 In doing so, it challenges the conventional wisdom regarding terrorist group duration and addresses some of the most pressing questions about the effectiveness of decapitation. For example, does it matter whether a terrorist group leader is killed versus captured? Does the size, ideology, or age of the group increase its susceptibility to organizational death? In addition to answering these questions, this study illustrates the importance of evaluating the long-term effects of counterterrorism policies in conjunction with the short-term metrics more commonly used today.

The article is structured as follows. First, I survey the literature on leadership decapitation and show why new metrics are needed to accurately evaluate its effectiveness. I then use concepts from leadership studies, organizational ecology, and terrorism to provide a theoretical explanation for why terrorist groups are particularly susceptible to decapitation tactics. I argue that terrorist groups have unique organizational characteristics that amplify the importance of their top leaders and make leadership succession more difficult. After discussing the data limitations inherent in terrorism research, I identify the covariates most likely to influence terrorist group duration and then explain how I estimated them. Following a review of the main findings, I conclude with some thoughts on the possible implications of bin Laden’s death for al-Qaida and recommendations for policymakers.

### AT: Speciesism

#### Nuclear war makes earth uninhabitable

**Mosher 2011** (2/25, Dave, Wired Science, “How one nuclear skirmish could wreck the planet”, <http://www.wired.com/wiredscience/2011/02/nuclear-war-climate-change/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed:+wiredscience+(Blog+-+Wired+Science)>, WEA)

WASHINGTON — Even a small nuclear exchange could ignite mega-firestorms and wreck the planet’s atmosphere.

New climatological simulations show 100 Hiroshima-sized nuclear bombs — relatively small warheads, compared to the arsenals military superpowers stow today — detonated by neighboring countries would destroy more than a quarter of the Earth’s ozone layer in about two years.

Regions closer to the poles would see even more precipitous drops in the protective gas, which absorbs harmful ultraviolet radiation from the sun. New York and Sydney, for example, would see declines rivaling the perpetual hole in the ozone layer above Antarctica. And it may take more than six years for the ozone layer to reach half of its former levels.

Researchers described the results during a panel Feb. 18 at the [annual meeting of the American Association for the Advancement of Science](http://www.aaas.org/meetings/2011/), calling it “a real bummer” that such a localized nuclear war could bring the modern world to its knees.

“This is tremendously dangerous,” said environmental scientist [Alan Robock of Rutgers University](http://envsci.rutgers.edu/~robock/), one of the climate scientists presenting at the meeting. “The climate change would be unprecedented in human history, and you can imagine the world … would just shut down.”

To defuse the complexity involved in a nuclear climate catastrophe, Wired.com sat down with [Michael Mills](http://acd.ucar.edu/~mmills/), an atmospheric chemist at the National Center for Atmospheric Research, who led some of the latest simulation efforts.

‘It’s pretty clear this would lead to a global nuclear famine.’

Wired.com: In your simulation, a war between India and Pakistan breaks out. Each country launches 50 nukes at their opponent’s cities. What happens after the first bomb goes off?

Michael Mills: The initial explosions ignite fires in the cities, and those fires would build up for hours. What you eventually get is a firestorm, something on the level we saw in World War II in cities like Dresden, in Tokyo, Hiroshima and so on.

Today we have larger cities than we did then — mega cities. And using 100 weapons on these different mega cities, like those in India and Pakistan, would cause these firestorms to build on themselves. They would create their own weather and start sucking air through bottom. People and objects would be sucked into buildings from the winds, basically burning everything in the city. It’ll burn concrete, the temperatures get so hot. It converts mega cities into black carbon smoke.

Wired.com: I see — the firestorms push up the air, and ash, into the atmosphere?

Mills: Yeah. You sometimes see these firestorms in large forest fires in Canada, in Siberia. In those cases, you see a lot of this black carbon getting into the stratosphere, but not on the level we’re talking about in a nuclear exchange.

The primary cause of ozone loss is the heating of the stratosphere by that smoke. Temperatures initially increase by more than 100 degrees Celsius, and remain more than 30 degrees higher than normal for more than 3 years. The higher temperatures increase the rates of two reaction cycles that deplete ozone.

Wired.com: And the ozone layer is in the stratosphere, correct?

Mills: OK, so we live in the troposphere, which is about 8 kilometers [5 miles] thick at the poles, and 16 km [10 miles] at the equator.

At the top of the troposphere, you start to encounter the stratosphere. It’s defined by the presence of the ozone layer, with the densest ozone at the lowest part, then it tails off at the stratopause, where the stratosphere ends about 50 km [30 miles] up.

We have a lot of weather in the troposphere. That’s because energy is being absorbed at the Earth’s surface, so it’s warmest at the surface. As you go up in the atmosphere it gets colder. Well, that all turns around as you get to the ozone layer. It starts getting hotter because ozone is absorbing ultraviolet radiation, until you run out of ozone and it starts getting colder again. Then you’re at the mesosphere.

How Nukes Gobble Up Ozone

When we talk about ozone, we’re talking about the odd oxygen family, which includes both ozone (O3) and atomic oxygen (O). Those two gases can interchange rapidly within hours.

Ozone is produced naturally by the breakdown of molecules of oxygen, O2, which makes up 20 percent of the atmosphere. O2 breaks down from ultraviolet solar radiation and splits it into two molecules of O. Then the O, very quickly, runs into another O2 and forms O3. And the way O3 forms O again is by absorbing more UV light, so it’s actually more protective than O2.

Ozone is always being created and destroyed by many reactions. Some of those are catalytic cycles that destroy ozone, and in those you have something like NO2 plus O to produce NO plus O2. In that case, you’ve gotten rid of a member of the odd oxygen family and converted it to O2. Well, then you’ve got an NO which can react with ozone and produce the NO2 back again and another O2. So the NO and NO2 can go back and forth and in the process one molecule can deplete thousands of molecules of ozone.

It’s a similar process to chlorofluorocarbons, Those are the larger molecules that we’ve manufactured that don’t exist naturally. They break down into chlorine in the stratosphere, which has a powerful ozone-depleting ability. —Michael Mills

Wired.com: Where do the nukes come in? I mean, in eroding the ozone layer?

Mills: It’s not the explosions that do it, but the firestorms. Those push up gases that lead to oxides of nitrogen, which act like[chlorofluorocarbons](http://www.wired.com/wiredscience/2010/12/siberian-traps/). But let’s back up a little.

There are two important elements that destroy ozone, or O3, which is made of three atoms of oxygen. One element involves oxides of nitrogen, including nitrogen dioxide, or NO2, which can be made from nitrous oxide, or N2O — laughing gas.

The other element is a self-destructive process that happens when ozone reacts with atomic oxygen, called O. When they react together, they form O2, which is the most common form of oxygen on the planet. This self-reaction is natural, but takes off the fastest in the first year after the nuclear war.

In years two, three and four, the NO2 builds up. It peaks in year two because the N2O, the stuff that’s abundant in the troposphere, rose so rapidly with the smoke that it’s pushed up into the stratosphere. There, it breaks down into the oxides like NO2, which deplete ozone.

Wired.com: So firestorms suck up the N2O, push it up into the stratosphere, and degrade the ozone layer. But where does this stuff come from?

Mills: N2O is among a wide class of what we call tracers that are emitted at the ground. It’s produced by bacterias in soil, and it’s been increasing due to human activities like nitrogen fertilizers used in farming. N2O is actually now the most significant human [impact on the ozone](http://www.wired.com/wiredscience/2008/05/reactive-nitrog/), now that we’ve mostly taken care of CFCs.

Wired.com: You did [similar computer simulations](http://www.wired.com/wiredscience/2008/04/regional-nuclea/) in the past few years and saw this [ozone-depleting effect](http://www.pnas.org/content/105/14/5307.abstract). What do the new simulations tell us?

Mills: Before, we couldn’t look at the ozone depletion’s effects on surface temperatures; we lacked a full ocean model that would respond realistically. The latest runs are ones I’ve done in the Community Earth System Model. It has an atmospheric model, a full-ocean model, full-land and sea-ice models, and even a glacier model.

We see significantly greater cooling than other studies, perhaps because of ozone loss . Instead of a globally averaged 1.3-degree–Celsius drop, which [Robock’s atmospheric mode](http://onlinelibrary.wiley.com/doi/10.1002/wcc.45/abstract)l produced, it’s more like 2 degrees. But we both see a 7 percent decrease in global average precipitation in both models. And in our model we see a much greater global average loss of ozone for many years, with even larger losses everywhere outside of the tropics.

I also gave this to my colleague [Julia Lee-Taylor](http://acd.ucar.edu/~julial/) at NCAR. She calculated the UV indexes across the planet, and a lot of major cities and farming areas would be exposed to a UV index similar to the Himalayas, or the hole over the Antarctic. We’re starting to look at the response of sea ice and land ice in the model, and it seems to be heavily increasing in just a few years after the hypothetical war.

Wired.com: What would all of this do to the planet, to civilization?

Mills: UV has big impacts on whole ecosystems. Plant height reduction, decreased shoot mass, reduction in foliage area. It can affect genetic stability of plants, increase susceptibility to attacks by insects and pathogens, and so on. It changes the whole competitive balance of plants and nutrients, and it can affect processes from which plants get their nitrogen.

Then there’s marine life, which depends heavily on [phytoplankton](http://www.wired.com/wiredscience/2010/08/phytoplankton-blooms-gallery/). Phytoplankton are essential; they live in top layer of the ocean and they’re the plants of the ocean. They can go a little lower in the ocean if there’s UV, but then they can’t get as much sunlight and produce as much energy. As soon as you cut off plants in the ocean, the animals would die pretty quickly. You also get damage to larval development and reproduction in fish, shrimp, crabs and other animals. Amphibians are also very susceptible to UV.

#### The earth would explode

Chalko, 03 (Tom J., PhD, Prof Geophysics, Mt Best, Australia, Scientific Engineering Research, 3-3, <http://sci-e-research.com/neutron_bomb.html>

Consequences of using modern nuclear weapons can be far more serious than previously imagined. These consequences relate to the fact that most of the heat generated in the planetary interior is a result of nuclear decay. Over the last few decades, all superpowers have been developing so-called "neutron bombs". These bombs are designed to emit intensive neutron radiation while creating relatively little local mechanical damage. Military are very keen to use neutron bombs in combat, because lethal neutron radiation can peneterate even the largest and deepest bunkers. However, the military seem to ignore the fact that a neutron radiation is capable to reach significant depths in the planetary interior. In the process of passing through the planet and losing its intensity, a neutron beam stimulates nuclei of radioactive isotopes naturally present inside the planet to disintegrate. This disintegration in turn, generates more neutrons and other radiation. The entire process causes increased nuclear heat generation in the planetary interior, **far greater than the initial energy of the bomb**. It typically takes many days or even weeks for this extra heat to conduct/convect to the surface of the planet and cause increased seismic/volcanic activity. Due to this variable delay, nuclear tests are not currently associated with seismic/volcanic activity, simply because it is believed that there is no theoretical basis for such an association. Perhaps you heard that after every major series of nuclear test there is always a period of increased seismic activity in some part of the world. This observable fact CANNOT be explained by direct energy of the explosion. The mechanism of neutron radiation accelerating decay of radioactive isotopes in the planetary interior, however, is a VERY PLAUSIBLE and realistic explanation. The process of accelerating volcanic activity is nuclear in essence. Accelerated decay of unstable radioactive isotopes already present in the planetary interior provides the necessary energy. The TRUE danger of modern nuclear weaponry is that their neutron radiation is capable to induce global overheating of the planetary interior, global volcanic activity and, in extreme circumstances, may even **cause the entire planet to explode**.

**Avoiding nuclear war is key to tech development for new civ types**

**Kaku 4** (Michio, Prof. Theoretical Physics @ City College New York, “Parallel Universes”, p. 360-361)

Our grandchildren, however, will live at the dawning of Earth's first planetary civilization. If we don't allow our often brutal instinct for self-destruction to consume us, our grandchildren could live in an age when want, hunger, and disease no longer haunt our destiny. For the first time in human history, we possess both the means for destroying all life on Earth or realizing a paradise on the planet. As a child, I often wondered what it would be like to live in the far future. Today, I believe that if I could choose to be alive in any particular era of humanity, I would choose this one. We are now at the most exciting time in human history, the cusp of some of the greatest cosmic discoveries and technological advances of all time. [end page 360] nature, with the ability to manipulate life, matter, and intelligence. With this awesome power, however, comes great responsibility, to ensure that the fruits of our efforts are used wisely and for the benefit of all humanity. The generation now alive is perhaps the most important generation of humans ever to walk the Earth. We hold in our hands the future destiny of our species, whether we soar into fulfilling our promise as a type I civilization or fall into the abyss of chaos, pollution, and war. How we resolve global wars, proliferating nuclear weapons, and sectarian and ethnic strife will either lay or destroy the foundations of a type I civilization.Perhaps the purpose and meaning of the current generation are to make sure that the transition to a type I civilization is a smooth one.

**That's key to avoid the big freeze by traversing wormholes**

**Kaku ‘4** (Michio, Prof. Theoretical Physics @ City College New York, Discover, “How to Survive the End of the Universe”, 12-3, http://discovermagazine.com/2004/dec/survive-end-of-universe)

To journey safely from this universe to another—to investigate the various options and do some trial runs—an advanced civilization will need to be able to harness energy on a scale that dwarfs anything imaginable by today’s standards. To grasp the challenge, consider a schema introduced in the 1960s by Russian astrophysicist Nikolai Kardashev that classified civilizations according to their energy consumption. According to his definition, a Type I civilization is planetary: It is able to exploit all the energy falling on its planet from the sun (1016 watts). This civilization could derive limitless hydrogen from the oceans, perhaps harness the power of volcanoes, and maybe even control the weather. A Type II civilization could control the energy output of the sun itself: 1026 watts, or 10 billion times the power of a Type I civilization. Deriving energy from solar flares and antimatter, Type IIs would be effectively immune to ice ages, meteors, even supernovas. A Type III civilization would be 10 billion times more powerful still, capable of controlling and consuming the output of an entire galaxy (1036 watts). Type IIIs would derive energy by extracting it from billions of stars and black holes. A Type III civilization would be able to manipulate the Planck energy (1019 billion electron volts), the energy at which space-time becomes foamy and unstable, frothing with tiny wormholes and bubble-size universes. The aliens in Independence Day would qualify as a Type III civilization. By contrast, ours would qualify as a Type 0 civilization, deriving its energy from dead plants—oil and coal. But we could evolve rapidly. A civilization like ours growing at a modest 1 to 2 percent per year could make the leap to a Type I civilization in a century or so, to a Type II in a few thousand years, and to a Type III in a hundred thousand to a million years. In that time frame,a Type III civilization could colonize the entire galaxy, even if their rockets traveled at less than the speed of light. With the inevitable Big Freeze at least tens of billions of years away, a Type III civilization would have plenty of time to develop and test an escape plan.

#### All life anywhere dies ---- biggest impact in debate

**Kaku in ‘4** (Michio, Prof. Theoretical Physics @ City College New York, “Parallel Universes”, p. 19-20)

Unless something happens to reverse this expansion, within 150 billion years our Milky Way galaxy will become quite lonely, with 99:99999 percent of all the nearby galaxies speeding past the edge of the visible universe. The familiar galaxies in the night sky will be rushing so fast away from us that their light will never reach us. The galaxies themselves will not disappear, but they will be too far for our telescopes to observe them anymore. Although the visible universe contains approximately l00 billion galaxies, in 150 billion years only a few thousand galaxies in the local supercluster of galaxies will be visible. Even further in time, only our local group, consisting of about thirty-six galaxies, will comprise the entire visible universe, with billions of galaxies drifting past the edge of the horizon. (This is because the gravity within the local group is sufficient to overcome this expansion. Ironically, as the distant galaxies slip away from view, any astronomer living in this dark era may fail to detect an expansion in the universe at all, since the local group of galaxies itself does not expand internally. In the far future, astronomers analyzing the night sky for the first time might not realize that there is any expansion and conclude that the universe is static and consists of only thirty-six galaxies.) If this antigravity force continues, the universe will ultimately die in a big freeze. All intelligent life in the universe will eventually freeze in an agonizing death, as the temperature of deep space plunges toward absolute zero, where the molecules themselves can hardly move. At some point trillions upon trillions of years from now, the stars will cease to shine, their nuclear fires extinguished as they exhaust their fuels, forever darkening the night sky. The cosmic expansion will leave only a cold, dead universe of black dwarf stars, neutron stars, and black holes. And even further into the future, the black holes themselves will evaporate their energy away, leaving a lifeless, cold mist of drifting elementary particles. In such a bleak, cold universe, intelligent life by any conceivable definition is physically impossible. The iron laws of thermodynamics forbid the transfer of any information in such a freezing environment, and all life will necessarily cease. The first realization that the universe may eventually die in ice was made in the eighteenth century. Commenting on the depressing concept that the laws of physics seemingly doom all intelligent life, Charles Darwin wrote, "Believing as I do that man in the distant future will be a far more perfect creature than he now is, it is an intolerable thought that he and all other sentient beings are doomed to complete annihilation after such long-continued slow progress." Unfortunately, the latest data from the WMAP satellite seem to confirm Darwin's worst fears.

#### Link is inevitable and the alt can’t remedy it – ethics focus bad

**Paterson, 03** – Department of Philosophy, Providence College, Rhode Island (Craig, “A Life Not Worth Living?”, Studies in Christian Ethics, <http://sce.sagepub.com>)

Contrary to those accounts, I would argue that it is death per se that is really the objective evil for us, not because it deprives us of a prospective future of overall good judged better than the alter- native of non-being. It cannot be about harm to a former person who has ceased to exist, for no person actually suffers from the sub-sequent non-participation. Rather, death in itself is an evil to us because it ontologically destroys the current existent subject — it is the ultimate in metaphysical lightening strikes.80 The evil of death is truly an ontological evil borne by the person who already exists, independently of calculations about better or worse possible lives. Such an evil need not be consciously experienced in order to be an evil for the kind of being a human person is. Death is an evil because of the change in kind it brings about, a change that is destructive of the type of entity that we essentially are. Anything, whether caused naturally or caused by human intervention (intentional or unintentional) that drastically interferes in the process of maintaining the person in existence is an objective evil for the person. What is crucially at stake here, and is dialectically supportive of the self-evidency of the basic good of human life, is that death is a radical interference with the current life process of the kind of being that we are. In consequence, death itself can be credibly thought of as a ‘primitive evil’ for all persons, regardless of the extent to which they are currently or prospectively capable of participating in a full array of the goods of life.81 In conclusion, concerning willed human actions, it is justifiable to state that any intentional rejection of human life itself cannot therefore be warranted since it is an expression of an ultimate disvalue for the subject, namely, the destruction of the present person; a radical ontological good that we cannot begin to weigh objectively against the travails of life in a rational manner. To deal with the sources of disvalue (pain, suffering, etc.) we should not seek to irrationally destroy the person, the very source and condition of all human possibility.82

#### Violence is proximately caused – root cause logic is poor scholarship

**Sharpe**, lecturer, philosophy and psychoanalytic studies, and Goucher, senior lecturer, literary and psychoanalytic studies – Deakin University, **‘10**

(Matthew and Geoff, Žižek and Politics: An Introduction, p. 231 – 233)

We realise that this argument, which we propose as a new ‘quilting’ framework to explain Žižek’s theoretical oscillations and political prescriptions, raises some large issues of its own. While this is not the place to further that discussion, we think its analytic force leads into a much wider critique of ‘Theory’ in parts of the latertwentieth- century academy, which emerged following the ‘cultural turn’ of the 1960s and 1970s in the wake of the collapse of Marxism. Žižek’s paradigm to try to generate all his theory of culture, subjectivity, ideology, politics and religion is psychoanalysis. But a similar criticism would apply, for instance, to theorists who feel that the method Jacques Derrida developed for criticising philosophical texts can meaningfully supplant the methodologies of political science, philosophy, economics, sociology and so forth, when it comes to thinking about ‘the political’. Or, differently, thinkers who opt for Deleuze (or Deleuze’s and Guattari’s) Nietzschean Spinozism as a new metaphysics to explain ethics, politics, aesthetics, ontology and so forth, seem to us candidates for the same type of **criticism, as a reductive passing over** the **empirical and analytic distinctness of** the **different** object **fields in complex societies.**

In truth, we feel that Theory, and the continuing line of ‘master thinkers’ who regularly appear particularly in the English- speaking world, is the last gasp of what used to be called First Philosophy. The philosopher ascends out of the city, Plato tells us, from whence she can espie the Higher Truth, which she must then bring back down to political earth. From outside the city, we can well imagine that she can see much more widely than her benighted political contemporaries. But from these philosophical heights, we can equally suspect that the ‘master thinker’ is also **always in danger of passing over** the **salient differences** and features of political life – differences only too evident to people ‘on the ground’. Political life, after all, is always a more complex affair than a bunch of ideologically duped fools staring at and enacting a wall (or ‘politically correct screen’) of ideologically produced illusions, from Plato’s timeless cave allegory to Žižek’s theory of ideology.

We know that Theory largely understands itself as avowedly ‘post- metaphysical’. It aims to erect its new claims on the gravestone of First Philosophy as the West has known it. But it also tells us that people very often do not know what they do. And so it seems to us that too many of its proponents and their followers are mourners who remain in the graveyard, propping up the gravestone of Western philosophy under the sign of some totalising account of absolutely everything – enjoyment, différance, biopower . . . Perhaps the time has come, we would argue, less for one more would- be global, allpurpose existential and political Theory than for a **multi- dimensional and interdisciplinary** critical **theory** that would challenge the chaotic specialisation neoliberalism speeds up in academe, which mirrors and accelerates the splintering of the Left over the last four decades. This would mean that we would have to shun the hope that one method, one perspective, or one master thinker could single- handedly decipher all the complexity of socio- political life, the concerns of really existing social movements – which specifi cally does not mean mindlessly celebrating difference, marginalisation and multiplicity as if they could be suffi cient ends for a new politics. **It would be to reopen critical theory and non- analytic philosophy to the other intellectual disciplines**, most of **whom** today **pointedly reject Theory’s legitimacy,** neither reading it nor taking it seriously.

#### Human’s distinct – we can recognize, control and reverse instincts

Linker, 5 – Damon, Animal Rights: Contemporary Issues (Compilation), Thompson-Gale, p. 23-25.

That such arguments have found an audience at this particular cultural moment is not so hard to explain. Our popular and elite media are saturated with scientific and quasi-scientific reports claiming to prove the basic thesis of the animal-rights movement. Having once believed ourselves to be made in the image of God, we now learnfrom the human genome project, the speculations of evolutionary psychologists, and numerous other sources-that humankind, too, is determined by genetic predispositions and the drive to reproduce. We are cleverer than other animals, to be sure, but the difference is one of degree, not of kind. As Verlyn Klinkenborg wrote on the editorial page of the New York Times, "Again and again, after starting from an ancient premise of radical differences between humans and other creatures, scientists have discovered profound similarities." But have they? Genetics and evolutionary biology may be, indeed, extremely effective at identifying the traits we share with other species. But chemistry, for its part, can tell us about the ways in which we resemble chunks of charcoal, and physics can point to fundamental similarities between a man and all the matter in the universe. The problem with these observations is not that they are untrue. It is that they shed no light whatsoever on, or rather they are designed to obfuscate, what makes humanity unique as a species-the point on which an answer to the likes of Peter Singer and Steven Wise must hinge. For his part, Singer commits the same error that John Stuart Mill found in the system of Jeremy Bentham: he makes no distinction among kinds of pleasure and pain. That animals feel emotions can hardly be doubted; but human beings experience life, even at its most "animalistic" level, in a way that fundamentally differs from other creatures. Thus, Singer can account for the pain that humans and animals alike experience when they are hungry and the pleasure they feel when they eat, but he cannot explain, for example, a person's choice to starve himself for a cause. He understands that human beings, like animals, derive pleasure from sex and sometimes endure pangs of longing when they are deprived of it, but he cannot explain how or why, unlike animals, some choose to embrace celibacy for the sake of its noble purity. He is certainly attuned to the tendency we share with animals to fear and avoid pain and bodily harm, but he is incapable of understanding a man's willingness to face certain death on the battlefield when called upon to do so by his country. Still less can he explain why stories of such sacrifice sometimes move us to tears. In much the same way, the evidence adduced by Steven Wise to suggest that primates are capable of forming rudimentary plans and expectations fails to demonstrate they are equal to human beings in any significant sense. Men and women use their "autonomy" in a world defined not by the simple imperatives of survival but by ideas of virtue and vice, beauty and ugliness, right and wrong. Modern scientific methods, including those of evolutionary psychology, have so far proved incapable of detecting and measuring this world, but that does not make any less real the experience that takes place within it. Western civilization has tended to regard animals as resembling things more than human beings precisely because, like jnanimate objects, and unlike the authors of the real Magna Carta, animals have no perception of morality. Until the day when a single animal stands up and, led by a love of justice and a sense of self-worth, insists that the world recognize and respect its dignity, all the philosophical gyrations of the activists will remain so much sophistry. Putting Human Interests First **None of this**, of course, **exempts human beings from behaving decently toward animals**, but it does provide a foundation, when necessary, for giving pride of place to the interests of human beings. This has particular relevance for biomedical research. Among the most vociferous critics of the USDA's capitulation to the animal-rights movement were the nation's leading centers of medical science. The National Association for BiOlnedical Research estimated that the new regulations would cost universities alone as much as $280 million a year. Nor is the issue simply one of dollars. As Estelle Fishbein, counsel for Johns Hopkins University, recently argued in the SHOULD ANIMALS HAVE THE SAME STATUS AS PEOPLE? Journal of the American Medical Association, Genetic research promises to bring new therapies to alleviate human suffering from the acquired immunodeficiency syndrome, Parkinson's disease and other neurological diseases, and virtually all other human and animal diseases. However, the promise of this new era of medical research is highly dependent on the ready availability of mice, rats, and birds. 2S Far from being a mere administrative hassle, she concluded, the new regulations would "divert scarce grant funds from actual research use, distract researchers from their scientific work, and overload them with documentation requirements. II Serious as this threat is, a still more troubling one is the effect that the arguments of animal-rights proponents may have, in the long term, on our regard for human life itself. Peter Singer's apPOintment at Princeton caused a stir not because of his writings about animals but because of his endorsement of euthanasia, unrestricted abortion, and, in some instances, infanticide. But all of his views, as he himself maintains, are of a piece. The idea that "human infants and retarded adults II are superior to animaLs can only be based, he writes, on "a bare-faced-and morally indefensible-prejudice for members of our own species. II In much the same way, Steven Wise urges us to reject absolute demarcations between species and instead focus on the capacities of individual humans and individual apes. If we do that, we will find that many adult chimpanzees and bonobos are far more "human" than newborn and mentally disabled human beings, and thus just as worthy of being recognized as IIpersons." Though Wise's inference is the opposite of Singer's-he does not wish to deprive underdeveloped humans of rights so much as to extend those rights to primates-he is playing the same game of baitand- switch: in this case projecting the noblest human attributes onto animals while quietly limiting his sample of human beings to newborns and the mentally disabled. When raising animals to our level proves to be impossible, as it inevitably must, equal consideration can only be won by attempting to lower us to theirs.

#### Permutation do the plan and embrace the ethical imperative for political scholarship and speech against the oppression of humanism -- solves

Light, Andrew, Assistant Professor of Environmental Philosophy and Director, Environmental Conservation Education Program, 2002 (Environmental Ethics: What Really Matters What Really Works David Schmidtz and Elizabeth Willott, p. 556-57)

In recent years a critique of this predominant trend in environmental ethics has emerged from within the pragmatist tradition in American philosophy.' The force of this critique is driven by the intuition that **environmental philosophy cannot afford to be qui­escent about the public reception of ethical argu­ments over the value of nature.** The original moti­vations of environmental philosophers for turning their philosophical insights to the environment sup­port such a position., **Environmental philosophy evolved out of a concern about the state of the grow­ing environmental crisis,** and a conviction that a philosophical contribution could be made to the res­olution of this crisis. **But if environmental philoso­phers spend all of their time debating non­-human centered forms of value theory they will ar­guably never get very far in making such a contri­bution.** For example, to continue to ignore human motivations for the act of valuing nature causes many in the field to overlook the fact that most people find it very difficult to extend moral consideration to plants and animals on the grounds that these entities possess some form of intrinsic, inherent, or other­wise conceived nonanthropocentric value. It is even more difficult for people to recognize that non­humans could have rights. **Claims about the value of nature as such do not appear to resonate with the or­dinary moral intuitions of most people who**, after all, **spend most of their lives****thinking of value**, moral obligations, and rights **in exclusively human terms.** Indeed, while most environmental philosophers be­gin their work with the assumption that most people think of value in human-centered terms (a problem that has been decried since the very early days of the field), few have considered the problem of how a non-human-centered approach to valuing nature can ever appeal to such human intuitions. The particular version of the pragmatist critique of environmental ethics that I have endorsed recognizes that **we need to rethink the utility of anthropocentric arguments in environmental moral and political theory, not nec­essarily because the traditional** nonanthropocentric **arguments** in the field **are false, but because they hamper attempts to contribute to the public discus­sion of environmental problems, in terms familiar to the public**.

#### Their ethics isn’t viable

Duckler 8 – PhD in Biology

Geordie, ARTICLE: TWO MAJOR FLAWS OF THE ANIMAL RIGHTS MOVEMENT, PhD in Biology, JD from Northwestern, 14 Animal L. 179

Another example of ethical conflict created by the animal rights position is that the entire animal world must be seen to be inherently immoral because the new "rights" will never be respected between and among animals other than humans. [n89](http://www.lexisnexis.com.www2.lib.ku.edu:2048/us/lnacademic/frame.do?tokenKey=rsh-20.997959.0518058672&target=results_DocumentContent&reloadEntirePage=true&rand=1220848443484&returnToKey=20_T4504110919&parent=docview#n89) God help the activist who tries valiantly to hold long onto the argument that it is morality that demands legal rights for animals: A basic biology text would stop them absolutely cold at the early chapter describing the major division of all  [\*198]  life into prokaryotes and eukaryotes. [n90](http://www.lexisnexis.com.www2.lib.ku.edu:2048/us/lnacademic/frame.do?tokenKey=rsh-20.997959.0518058672&target=results_DocumentContent&reloadEntirePage=true&rand=1220848443484&returnToKey=20_T4504110919&parent=docview#n90) If activists gleaned their information from a college science lesson instead of from a religious tome, they would find that prokaryotes engage in immoral acts: Throughout earth history, prokaryotes have created immense global "crises of starvation, pollution, and extinction" [n91](http://www.lexisnexis.com.www2.lib.ku.edu:2048/us/lnacademic/frame.do?tokenKey=rsh-20.997959.0518058672&target=results_DocumentContent&reloadEntirePage=true&rand=1220848443484&returnToKey=20_T4504110919&parent=docview#n91) that make human parallels appear trivial in comparison. Prokaryotes destroy other organisms by the great multitude, routinely transfer genetic material freely from individual to individual, fool around with genetic engineering, create "chimeras" at a level that our most ill-advised laboratory technicians could only dream about, and fundamentally alter the biotic and abiotic world in doing so. [n92](http://www.lexisnexis.com.www2.lib.ku.edu:2048/us/lnacademic/frame.do?tokenKey=rsh-20.997959.0518058672&target=results_DocumentContent&reloadEntirePage=true&rand=1220848443484&returnToKey=20_T4504110919&parent=docview#n92)

#### Alt doesn’t solve—and if it does its worse for non-humans

Machan, 04[Tibor, Distinguished Fellow and Prof. @ Leatherby Center for Entrepreneurship & Business Ethics at Chapman University, “Putting Humans First: Why We Are Nature’s Favorite”, p. 11-13]

Now, one can dispute Hospers, but only by averting one's gaze from the facts. If animals in fact did have rights as you and I understand the concept of rights—rights that entail and mandate a hands-off policy toward other rights possessors—most of the creatures now lurking in lawns and jungles, at the very least all the carnivores, would have to be brought up on murder charges. This is what all the animal rights champions fail to heed, including Ingrid Newkirk, radical leader of People for the Ethical Treatment of Animals (PETA), who holds that it is unacceptable for us to use animals in any way at all.13 This is why they allow themselves such vile thoughts as that "the world would be an infinitely better place without humans in it at all."'4

If the scenario is absurd, it's so not because the concept of animal rights has been unfairly reduced to absurdity but because there is nowhere else to go. The idea of animal rights is impracticable to begin with; any attempt to visualize the denizens of the animal world benefiting from and respecting rights must collapse into fantasy willy-nilly.

The concept of rights emerged with the rise of human civilization precisely because it is needed by and applicable to human beings, given the specifically moral nature of human beings and their ambition to live with each other in mutual harmony and to mutual benefit. Rights have nothing to do with the lives of wolves and turtles because of what animal rights champions themselves admit, namely, the amoral nature of at least the bulk of the animal world.15

Advocates of animal rights in at least one way do admit the vast gulf between animals and humans and that humans alone are equipped to deal with moral issues. When they address us alone about these matters—when they accept all the carnage that is perpetrated by other living things, including what would be infanticide and worse if human beings were to engage in it—they clearly imply that human beings are indeed special. They imply, first and foremost, that people are indeed the only living beings capable of understanding a moral appeal. Only human beings can be implored to do right rather than wrong. Other animals just don't have the capacity for this. And so the environmentalists don't confront them with any moral arguments no matter how politically incorrect the animals may be toward one another.

#### The law isn’t a monolith – their links are reductionist and wrong

Smith 2012 (Andrea, “The Moral Limits of the Law: Settler Colonialism and the Anti-Violence Movement” settler colonial studies 2, 2 (2012) Special Issue: Karangatia: Calling Out Gender and Sexuality in Settler Societies)

Aside from Derrick Bell, because racial and gender justice legal advocates are so invested in the morality of the law, there has not been sustained strategising on what other possible frameworks may be used. Bell provides some possibilities, but does not specifically engage alternative strategies in a sustained fashion. Thus, it may be helpful to look for new possibilities in an unexpected place, the work of anti-trust legal scholar Christopher Leslie. Again, the work of Leslie may seem quite remote from scholars and activists organizing against the logics of settler colonialism. But it may be the fact that Leslie is not directly engaging in social justice work that allows him to disinvest in the morality of the law in a manner which is often difficult for those who are directly engaged in social justice work to do. This disinvestment, I contend is critical for those who wish to dismantle settler colonialism to rethink their legal strategies. In ‘Trust, Distrust, and Anti-Trust’, Christopher Leslie explains that while the economic impact of cartels is incalculable, cartels are also unstable.18 Because cartel members cannot develop formal relationships with each other, they must develop partnerships based on informal trust mechanisms in order to overcome the famous ‘prisoners’ dilemma’. The prisoner’s dilemma, as described by Leslie, is one in which two prisoners are arrested and questioned separately with no opportunity for communication between them. There is enough evidence to convict both of minor crimes for a one year sentence but not enough for a more substantive sentence. The police offer both prisoners the following deal: if you confess and implicate your partner, and your partner does not confess, you will be set free and your partner will receive a ten-year sentence. If you confess, and he does as well, then you will both receive a five-year sentence. In this scenario, it becomes the rational choice for both to confess because if the first person does not confess and the second person does, the first person will receive a ten-year sentence. Ironically, however, while both will confess, it would have been in both of their interests not to confess. Similarly, Leslie argues, cartels face the prisoners’ dilemma. If all cartel members agree to fix a price

, and abide by this price fixing, then all will benefit. However, individual cartel members are faced with the dilemma of whether or not they should join the cartel and then cheat by lowering prices. They fear that if they do not cheat, someone else will and drive them out of business. At the same time, by cheating, they disrupt the cartel that would have enabled them to all profit with higher prices. In addition, they face a second dilemma when faced with anti-trust legislation. Should they confess in exchange for immunity or take the chance that no one else will confess and implicate them? Cartel members can develop mechanisms to circumvent pressures. Such mechanisms include the development of personal relationships, frequent communication, goodwill gestures, etc. In the absence of trust, cartels may employ trust substitutes such as informal contracts and monitoring mechanisms. When these trust and trust substitute mechanisms break down, the cartel members will start to cheat, thus causing the cartel to disintegrate. Thus, Leslie proposes, anti-trust legislation should focus on laws that will strategically disrupt trust mechanisms. Unlike racial or gender justice advocates who focus on making moral statements through the law, Leslie proposes using the law for strategic ends, **even if the law makes a morally suspect statement.** For instance, in his article, ‘Anti-Trust Amnesty, Game Theory, and Cartel Stability’, Leslie critiques the federal Anti-Trust’s 1993 Corporate Lenience Policy that provided greater incentives for cartel partners to report on cartel activity. This policy provided ‘automatic’ amnesty for the first cartel member to confess, and decreasing leniency for subsequent confessors in the order to which they confessed. Leslie notes that this amnesty led to an increase of amnesty applications.19 However, Leslie notes that the effectiveness of this reform is hindered by the fact that the ringleader of the cartel is not eligible for amnesty. This policy seems morally sound. Why would we want the ringleader, the person who most profited from the cartel, to be eligible for amnesty? The problem, however, with attempting to make a moral statement through the law is that it is counter-productive if the goal is to actually break up cartels. If the ringleader is never eligible for amnesty, the ringleader becomes inherently trustworthy because he has no incentive to ever report on his partners. Through his inherent trustworthiness, the cartel can build its trust mechanisms. Thus, argues Leslie, the most effective way to destroy cartels is to render all members untrustworthy by granting all the possibility of immunity. While Leslie’s analysis is directed towards policy, it also suggests an alternative framework for pursuing social justice through the law, to employ it for its strategic effects rather than through the moral statements it purports to make. It is ironic that an anti-trust scholar such as Leslie displays less ‘trust’ in the law than do many anti-racist/anti-colonial activists and scholars who work through legal reform.20 It also indicates that it is possible to engage legal reform more strategically if one no longer trusts it. As Beth Richie notes, the anti-violence movement’s primary strategy for addressing gender violence was to articulate it as a crime.21 because it is presumed that the best way to address a social ill is to call it a ‘crime’, this strategy is then deemed the correct moral strategy. When this strategy backfires and does not end violence, and in many cases increases violence against women, it becomes difficult to argue against this strategy because it has been articulated in moral terms. If, however, we were to focus on legal reforms chosen for their strategic effects, it would be easier to change the strategy should our calculus of its strategic effects suggest so. **We would** also **be less complacent about the** legal **reforms we advocate** as has happened with most of the laws that have been passed on gender violence. Advocates presume that because they helped pass a ‘moral’ law, then their job is done. If, however, the criteria for legal reforms are their strategic effects, we would then be continually monitoring the operation of these laws to see if they were having the desired effects. For instance, since the primary reason women do not leave battering relationships is because they do not have another home to go, what if our legal strategies shifted from criminalising domestic violence to advocating affordable housing? While the shift from criminalisation may seem immoral, women are often removed from public housing under one strike laws in which they lose access to public housing if a ‘crime’ (including domestic violence) happens in their residence, whether or not they are the perpetrator. If our goal was actually to keep women safe, we might need to creatively rethink what legal reforms would actually increase safety.

#### Defer negative on morality arguments – anthropocentrism independently preserves environmental responsibility and intervening actors prevent a gradual slide into extinction

Hwang, ‘3. Kyung-sig, Professor in the Department of Philosophy at Seoul National University. “Apology for Environmental Anthropocentrism,” Asian Bioethics in the 21st Century, http://eubios.info/ABC4/abc4304.htm.

The third view, which will be defended here, is that there is no need for a specifically ecological ethic to explain our obligations toward nature, that our moral rights and duties **can satisfactorily be explained in terms of traditional, human-centered ethical theory**.[4] In terms of this view, ecology bears on ethics and morality in that it brings out the far-reaching, extremely important effects of man's actions, that much that seemed simply to happen-extinction of species, depletion of resources, pollution, over rapid growth of population, undesirable, harmful, dangerous, and damaging uses of technology and science - is due to human actions that are controllable, preventable, by men and hence such that men can be held accountable for what occurs. Ecology brings out that, often acting from the best motives, however, simply from short-sighted self-interest without regard for others living today and for those yet to be born, brings about very damaging and often irreversible changes in the environment, changes such as the extinction of plant and animal species, destruction of wilderness and valuable natural phenomena such as forests, lakes, rivers, seas. Many reproduce at a rate with which their environment cannot cope, so that damage is done, to and at the same time, those who are born are ill-fed, ill-clad, ill-sheltered, ill-educated. Moralists concerned with the environment have pressed the need for a basic rethinking of the nature of our moral obligations in the light of the knowledge provided by ecology on the basis of personal, social, and species prudence, as well as on general moral grounds in terms of hitherto unrecognized and neglected duties in respect of other people, people now living and persons yet to be born, those of the third world, and those of future generation, and also in respect of preservation of natural species, wilderness, and valuable natural phenomena. Hence we find ecological moralists who adopt this third approach, writing to the effect that concern for our duties entail concern for our environment and the ecosystems it contains. Environmental ethics is concerned with the moral relation that holds between humans and the natural world, the ethical principles governing those relations determine our duties, obligations, and responsibilities with regard to the earth's natural environment and all the animals and plants inhabit it. A **human-centered theory of environmental ethics** holds that our moral duties with respect to the natural world are all **ultimately derived from the duties we owe to one another as human beings**. It is because we should respect the human rights, or should protect and promote the well being of humans, that we must place certain constraints on our treatment of the earth's environment and its non-human habitants.[5]

#### Extinction turns their impacts

**Matheny, 07** [J. G. Matheny, Ph. D. candidate, Bloomberg School of Public Health, Johns Hopkins University, December 6, “Ought we worry about human extinction?,” online: <http://jgmatheny.org/extinctionethics.htm>]

For instance, some moral theories value things like experiences, satisfied preferences, achievements, friendships, or virtuous acts, which take place only in lives. On this view, an early death is bad (at least in part) because it cuts short the number of these valuable things. Similarly, on this view, an early extinction is bad (at least in part) because it cuts short the number of these valuable things. I think this view is plausible and think our best reasons for believing an early death is bad are our best reasons for believing an early extinction is bad. But such a view is controversial and I will not settle the controversy here.

I start from the premise that we ought to increase moral value by increasing both the quality and number of lives throughout history. I also take it, following Singer (2002), this maxim applies to all sentient beings capable of positive subjective feelings.

Life’s prospects

The human population is now 6 billion (6 x 109). There are perhaps another trillion (1012) sentient animals on Earth, maybe a few orders more, depending on where sentience begins and ends in the animal kingdom (Gaston, Blackburn, and Goldewijk, 2003; Gaston and Evans, 2004).

Animal life has existed on Earth for around 500 million years. Barring a dramatic intervention, all animal life on Earth will die in the next several billion years. Earth is located in a field of thousands of asteroids and comets. 65 million years ago, an asteroid 10 kilometers in size hit the Yucatan , creating clouds of dust and smoke that blocked sunlight for months, probably causing the extinction of 90% of animals, including dinosaurs. A 100 km impact, capable of extinguishing all animal life on Earth, is probable within a billion years (Morrison et al., 2002).

If an asteroid does not extinguish all animal life, the Sun will. In one billion years, the Sun will begin its Red Giant stage, increasing in size and temperature. Within six billion years, the Sun will have evaporated all of Earth’s water, and terrestrial temperatures will reach 1000 degrees -- much too hot for amino acid-based life to persist. If, somehow, life were to survive these changes, it will die in 7 billion years when the Sun forms a planetary nebula that irradiates Earth (Sackmann, Boothroyd, Kraemer, 1993; Ward and Brownlee, 2002).

Earth is a dangerous place and animal life here has dim prospects. If there are 1012 sentient animals on Earth, only 1021 life-years remain. The only hope for terrestrial sentience surviving well beyond this limit is that some force will deflect large asteroids before they collide with Earth, giving sentients another billion or more years of life (Gritzner and Kahle, 2004); and/or terrestrial sentients will colonize other solar systems,

giving sentients up to another 100 trillion years of life until all stars begin to stop shining (Adams and Laughlin, 1997). Life might survive even longer if it exploits non-stellar energy sources. But it is hard to imagine how life could survive beyond the decay of nuclear matter expected in 1032 to 1041 years (Adams and Laughlin, 1997). This may be the upper limit on the future of sentience.[4]

Deflecting asteroids and colonizing space could delay the extinction of Earth-originating sentience from 109 to 1041 years. Assuming an average population of one trillion sentients is maintained (which is a conservative assumption under colonization[5]), these interventions would create between 1021 and 1053[billion] life-years.

At present on Earth, only a human civilization would be remotely capable of carrying out such projects. If humanity survives the next few centuries, it’s likely we will develop technologies needed for at least one of these projects. We may already possess the technologies needed to deflect asteroids (Gritzner and Kahle, 2004; Urias et al., 1996). And in the next few centuries, we’re likely to develop technologies that allow colonization. We will be strongly motivated by self-interest to colonize space, as asteroids and planets have valuable resources to mine, and as our survival ultimately requires relocating to another solar system (Kargel, 1994; Lewis, 1996).

Extinction risks

Being capable of preserving sentient life for another 1041 years makes human survival important. There may be nothing more important. If the human species is extinguished, all known sentience and certainly all Earth-originating sentience will be extinguished within a few billion years. We ought then pay more attention to what Bostrom (2002) has called “existential risks” -- risks “where an adverse outcome would either annihilate Earth-originating intelligent life or permanently and drastically curtail its potential.”

Such risks include: an asteroid or comet strikes Earth, creating enough debris to shut down photosynthesis for months; a supervolcano erupts, creating enough debris to shut down photosynthesis; a nearby supernova unleashes deadly radiation that reaches Earth; greenhouse gasses cause a radical change in climate; a nuclear holocaust creates enough debris to cause a “nuclear winter,” shutting down photosynthesis; a genetically engineered microbe is unleashed, by accident or design, killing most or all of humanity; or a high-energy physics experiment goes awry, creating a “true” vacuum or strangelets, destroying the Earth (Bostrom 2002; Bostrom and Cirkovic 2006; Leslie 1996, Posner 2004, Rees 2003).

To me, most of these risks seem very unlikely. But dishearteningly, in their catalogs of these risks, Britain ’s Astronomer Royal, Sir Martin Rees (2003), gives humanity 50-50 odds of surviving the next few centuries, and philosophers John Leslie (1996) and Nick Bostrom (2002) put our chances at 70% and 75%, respectively.

Estimating the probabilities of unprecedented events is subjective, so we should treat these numbers skeptically. Still, even if the probabilities are orders lower, because the stakes are high, it could be justified to invest in extinction countermeasures. Matheny (2007) found that, even with traditional social discounting, investing in asteroid detection and mitigation is justified under standard cost-effectiveness analysis.

Ought humanity be saved?

Even accepting that future lives have value and that extinction risks can be cost-effectively reduced, there could still be reasons not to worry about human extinction. For instance, human lives might have negative moral value, in which case human extinction could be a good thing. This might have been Bertrand Russell’s sentiment when he wrote, “Although it is a gloomy view to suppose that life will die out, sometimes when I contemplate the things that people do with their lives I think it is almost a consolation.”[6]

In the 20th century, more people, in absolute numbers, died of war, famine, and pestilence than ever before. But in the same century, more people did not die of war, famine, and pestilence than ever before. So even if we're especially pessimistic about average human welfare during the last century compared to others, it would be hard to argue that total welfare decreased. As long as average welfare was greater than zero – that is, the average life was preferable to suicide – then the century was a success for humanity. We will be capable of even greater moral nightmares in this century than in the last, but we will also be capable of securing greater welfare for a larger fraction of humanity. I suspect in this century, the average life will again be worth living, assuming we survive the century to judge.

We should be more pessimistic when we review how nonhuman animals have fared in the last century. At present around 50 billion animals are raised and killed each year to feed humanity. (Many million animals are used for clothing, product testing, research, and entertainment, but their numbers are insignificant by comparison.) Since World War 2, with the invention of "factory farming," farm animals’ welfare has significantly deteriorated, as they now live in conditions that frustrate their most basic instincts (Singer, 2002, chapter 3).

At the same time, we’re probably the only animal on Earth that routinely demonstrates compassion for other species. Such compassion is nearly universal in developed countries but we usually know too little, too late, for deeply ingrained habits, such as diets, to change. If improvements in other public morals were possible without any significant biological change in human nature, then the same should be true for our treatment of nonhuman animals, though it will take some time.

Even without any change in public morals, it seems unlikely we will continue to use animals for very long – at least, nowhere near 50 billion per year. Our most brutal use of animals results not from sadism but from old appetites now satisfied with inefficient technologies that have not fundamentally changed in 10,000 years. Ours is the first century where newer technologies -- plant or in vitro meats, or meat from brainless animals -- could satisfy human appetites for meat more efficiently and safely (Edelman et al, 2005). As these technologies mature and become cheaper, they will likely replace conventional meat. If the use of sentient animals survives much beyond this century, we should be very surprised.

This thought is a cure for misanthropy. As long as most humans in the future don't use sentient animals, the vast number of good lives we can create would outweigh any sins humanity has committed or is likely to commit. Even if it takes a century for animal farming to be replaced by vegetarianism (or in vitro meats or brainless farm animals), the century of factory farming would represent around 1012 miserable life-years. That is one-billionth of the 1021 animal life-years humanity could save by protecting Earth from asteroids for a billion years.

The century of industrialized animal use would thus be the equivalent of a terrible pain that lasts one second in an otherwise happy 100-year life. To accept human extinction now would be like committing suicide to end an unpleasant itch. If human life is extinguished, all known animal life will be extinguished when the Sun enters its Red Giant phase, if not earlier. Despite its current mistreatment of other animals, humanity is the animal kingdom’s best long-term hope for survival.