# Astrosociology Aff

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# Contention 1: They’re Out There (Not E.T.)

Status-quo NASA programs are insufficient to detect a significant number of near-earth objects – expanding survey capacity is key to discovering potentially hazardous asteroids

National Academies, 10

[ Over many decades, the National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council have earned a solid reputation as the nation's premier source of independent, expert advice on scientific, engineering, and medical issues, “Defending Planet Earth: Near-Earth Object Surveys and Hazard Mitigation Strategies” http://books.nap.edu/openbook.php?record\_id=12842&page=41]

Congress has established for NASA two mandates addressing near-Earth object (NEO) detection. The first mandate, now known as the Spaceguard Survey, directed the agency to detect 90 percent of near-Earth objects 1 kilometer in diameter or greater by 2008. By 2009, the agency was close to meeting that goal. Although the estimate of this population is continually revised, as astronomers gather additional data about all NEOs (and asteroids and comets in general), these revisions are expected to remain. The 2009 discovery of asteroid 2009 HC82, a 2- to 3-kilometer-diameter NEO in a retrograde (“backwards”) orbit, is, however, a reminder that some NEOs 1 kilometer or greater in diameter remain undetected. The second mandate, the George E. Brown, Jr. Near-Earth Object Survey section of the NASA Authorization Act of 2005 (Public Law 109-155), directed that NASA detect 90 percent of near-Earth objects 140 meters in diameter or greater by 2020. However, what the surveys actually focus on is not all NEOs but the potentially hazardous NEOs. It is possible for an NEO to come close to Earth but never to intersect Earth’s orbit and therefore not be potentially hazardous. The surveys are primarily interested in the potentially hazardous NEOs, and that is the population that is the focus of this chapter. Significant new equipment (i.e., ground-based and/or space-based telescopes) will be required to achieve the latter mandate. The administration did not budget and Congress did not approve new funding for NASA to achieve this goal, and little progress on reaching it has been made during the past 5 years. The criteria for the assessment of the success of an NEO detection mandate rely heavily on estimates that could be in error, such as the size of the NEO population and the average reflectivity properties of an object’s surface. For many years, the average albedo (fraction of incident visible light reflected from an object’s surface) of NEOs was taken to be 0.11. More recent studies (Stuart and Binzel, 2004) determined that the average albedo was more than 25 percent higher, or 0.14, with significant variation in albedo present among the NEOs. The variation among albedos within the NEO population also contributes to the uncertainties in estimates of the expected hazardous NEO population. This difference implies that, on average, NEOs have diameters at least 10 percent smaller than previously thought, changing scientists’ understanding of the distribution of the NEO population by size. Ground-based telescopes have difficulty observing NEOs coming toward Earth from near the Sun’s direction because their close proximity to the Sun—as viewed from Earth—causes sunlight scattered by Earth’s atmosphere to be a problem and also poses risks to the telescopes when they point toward these directions. Objects remaining in those directions have orbits largely interior to Earth’s; the understanding of their number is as yet very uncertain. In addition, there are objects that remain too far from Earth to be detected almost all of the time. The latter include Earth-approaching comets (comets with orbits that approach the Sun at distances less than 1.3 astronomical units [AU] and have periods less than 200 years), of which 151 are currently known. These represent a class of objects probably doomed to be perpetually only partly known, as they are not likely to be detected in advance of a close Earth encounter. These objects, after the completion of exhaustive searches for NEOs, could dominate the impact threat to humanity. Thus, assessing the completeness of the NEO surveys is subject to uncertainties: Some groups of NEOs are particularly difficult to detect. Asteroids and comets are continually lost from the NEO population because they impact the Sun or a planet, or because they are ejected from the solar system. Some asteroids have collisions that change their sizes or orbits. New objects are introduced into the NEO population from more distant reservoirs over hundreds of thousands to millions of years. The undiscovered NEOs could include large objects like 2009 HC82 as well as objects that will be discovered only months or less before Earth impact (“imminent impactors”). Hence, even though 85 percent of NEOs larger than 1 kilometer in diameter might already have been discovered, and eventually more than 90 percent of NEOs larger than 140 meters in diameter will be discovered, NEO surveys should nevertheless continue, because objects not yet discovered pose a statistical risk: Humanity must be constantly vigilant. Finding: Despite progress toward or completion of any survey of near-Earth objects, it is impossible to identify all of these objects because objects’ orbits can change, for example due to collisions. Recommendation: Once a near-Earth object survey has reached its mandated goal, the search for NEOs should not stop. Searching should continue to identify as many of the remaining objects and objects newly injected into the NEO population as possible, especially imminent impactors.

And most recent studies show a high risk of an incoming asteroid

Easterbrook, 8

[Gregg, American writer, lecturer, and a senior editor of The New Republic June 2008, Atlantic Magazine, “ The Sky Is Falling,” <http://www.theatlantic.com/magazine/archive/2008/06/the-sky-is-falling/6807>]

Breakthrough ideas have a way of seeming obvious in retro­spect, and about a decade ago, a Columbia University geophysicist named Dallas Abbott had a breakthrough idea. She had been pondering the craters left by comets and asteroids that smashed into Earth. Geologists had counted them and concluded that space strikes are rare events and had occurred mainly during the era of primordial mists. But, Abbott realized, this deduction was based on the number of craters found on land—and because 70 percent of Earth’s surface is water, wouldn’t most space objects hit the sea? So she began searching for underwater craters caused by impacts rather than by other forces, such as volcanoes. What she has found is spine-chilling: evidence that several enormous asteroids or comets have slammed into our planet quite recently, in geologic terms. If Abbott is right, then you may be here today, reading this magazine, only because by sheer chance those objects struck the ocean rather than land. Abbott believes that a space object about 300 meters in diameter hit the Gulf of Carpentaria, north of Australia, in 536 A.D. An object that size, striking at up to 50,000 miles per hour, could release as much energy as 1,000 nuclear bombs. Debris, dust, and gases thrown into the atmosphere by the impact would have blocked sunlight, temporarily cooling the planet—and indeed, contemporaneous accounts describe dim skies, cold summers, and poor harvests in 536 and 537. “A most dread portent took place,” the Byzantine historian Procopius wrote of 536; the sun “gave forth its light without brightness.” Frost reportedly covered China in the summertime. Still, the harm was mitigated by the ocean impact. When a space object strikes land, it kicks up more dust and debris, increasing the global-cooling effect; at the same time, the combination of shock waves and extreme heating at the point of impact generates nitric and nitrous acids, producing rain as corrosive as battery acid. If the Gulf of Carpentaria object were to strike Miami today, most of the city would be leveled, and the atmospheric effects could trigger crop failures around the world. What’s more, the Gulf of Carpentaria object was a skipping stone compared with an object that Abbott thinks whammed into the Indian Ocean near Madagascar some 4,800 years ago, or about 2,800 B.C. Researchers generally assume that a space object a kilometer or more across would cause significant global harm: widespread destruction, severe acid rain, and dust storms that would darken the world’s skies for decades. The object that hit the Indian Ocean was three to five kilometers across, Abbott believes, and caused a tsunami in the Pacific 600 feet high—many times higher than the 2004 tsunami that struck Southeast Asia. Ancient texts such as Genesis and the Epic of Gilgamesh support her conjecture, describing an unspeakable planetary flood in roughly the same time period. If the Indian Ocean object were to hit the sea now, many of the world’s coastal cities could be flattened. If it were to hit land, much of a continent would be leveled; years of winter and mass starvation would ensue. At the start of her research, which has sparked much debate among specialists, Abbott reasoned that if colossal asteroids or comets strike the sea with about the same frequency as they strike land, then given the number of known land craters, perhaps 100 large impact craters might lie beneath the oceans. In less than a decade of searching, she and a few colleagues have already found what appear to be 14 large underwater impact sites. That they’ve found so many so rapidly is hardly reassuring. Other scientists are making equally unsettling discoveries. Only in the past few decades have astronomers begun to search the nearby skies for objects such as asteroids and comets (for convenience, let’s call them “space rocks”). What they are finding suggests that near-Earth space rocks are more numerous than was once thought, and that their orbits may not be as stable as has been assumed. There is also reason to think that space rocks may not even need to reach Earth’s surface to cause cataclysmic damage. Our solar system appears to be a far more dangerous place than was previously believed. The received wisdom about the origins of the solar system goes something like this: the sun and planets formed about 4.5 billion years ago from a swirling nebula containing huge amounts of gas and dust, as well as relatively small amounts of metals and other dense substances released by ancient supernova explosions. The sun is at the center; the denser planets, including Earth, formed in the middle region, along with many asteroids—the small rocky bodies made of material that failed to incorporate into a planet. Farther out are the gas-giant planets, such as Jupiter, plus vast amounts of light elements, which formed comets on the boundary of the solar system. Early on, asteroids existed by the millions; the planets and their satellites were bombarded by constant, furious strikes. The heat and shock waves generated by these impacts regularly sterilized the young Earth. Only after the rain of space objects ceased could life begin; by then, most asteroids had already either hit something or found stable orbits that do not lead toward planets or moons. Asteroids still exist, but most were assumed to be in the asteroid belt, which lies between Mars and Jupiter, far from our blue world. As for comets, conventional wisdom held that they also bombarded the planets during the early eons. Comets are mostly frozen water mixed with dirt. An ancient deluge of comets may have helped create our oceans; lots of comets hit the moon, too, but there the light elements they were composed of evaporated. As with asteroids, most comets were thought to have smashed into something long ago; and, because the solar system is largely void, researchers deemed it statistically improbable that those remaining would cross the paths of planets. These standard assumptions—that remaining space rocks are few, and that encounters with planets were mainly confined to the past—are being upended. On March 18, 2004, for instance, a 30-meter asteroid designated 2004 FH—a hunk potentially large enough to obliterate a city—shot past Earth, not far above the orbit occupied by telecommunications satellites. (Enter “2004 FH” in the search box at Wikipedia and you can watch film of that asteroid passing through the night sky.) Looking at the broader picture, in 1992 the astronomers David Jewitt, of the University of Hawaii, and Jane Luu, of the Massachusetts Institute of Technology, discovered the Kuiper Belt, a region of asteroids and comets that starts near the orbit of Neptune and extends for immense distances outward. At least 1,000 objects big enough to be seen from Earth have already been located there. These objects are 100 kilometers across or larger, much bigger than whatever dispatched the dinosaurs; space rocks this size are referred to as “planet killers” because their impact would likely end life on Earth. Investigation of the Kuiper Belt has just begun, but there appear to be substantially more asteroids in this region than in the asteroid belt, which may need a new name. Beyond the Kuiper Belt may lie the hypothesized Oort Cloud, thought to contain as many as trillions of comets. If the Oort Cloud does exist, the number of extant comets is far greater than was once believed. Some astronomers now think that short-period comets, which swing past the sun frequently, hail from the relatively nearby Kuiper Belt, whereas comets whose return periods are longer originate in the Oort Cloud. But if large numbers of comets and asteroids are still around, several billion years after the formation of the solar system, wouldn’t they by now be in stable orbits—ones that rarely intersect those of the planets? Maybe not. During the past few decades, some astronomers have theorized that the movement of the solar system within the Milky Way varies the gravitational stresses to which the sun, and everything that revolves around it, is exposed. The solar system may periodically pass close to stars or groups of stars whose gravitational pull affects the Oort Cloud, shaking comets and asteroids loose from their orbital moorings and sending them downward, toward the inner planets. Consider objects that are already near Earth, and the picture gets even bleaker. Astronomers traditionally spent little time looking for asteroids, regarding them as a lesser class of celestial bodies, lacking the beauty of comets or the significance of planets and stars. Plus, asteroids are hard to spot—they move rapidly, compared with the rest of the heavens, and even the nearby ones are fainter than other objects in space. Not until the 1980s did scientists begin systematically searching for asteroids near Earth. They have been finding them in disconcerting abundance. Click here to find out more! In 1980, only 86 near-Earth asteroids and comets were known to exist. By 1990, the figure had risen to 170; by 2000, it was 921; as of this writing, it is 5,388. The Jet Propulsion Laboratory, part of NASA, keeps a running tally at www.neo.jpl.nasa.gov/stats. Ten years ago, 244 near-Earth space rocks one kilometer across or more—the size that would cause global calamity—were known to exist; now 741 are. Of the recently discovered nearby space objects, NASA has classified 186 as “impact risks” (details about these rocks are at www.neo.jpl.nasa.gov/risk). And because most space-rock searches to date have been low-budget affairs, conducted with equipment designed to look deep into the heavens, not at nearby space, the actual number of impact risks is undoubtedly much higher. Extrapolating from recent discoveries, NASA estimates that there are perhaps 20,000 potentially hazardous asteroids and comets in the general vicinity of Earth. There’s still more bad news. Earth has experienced several mass extinctions—the dinosaurs died about 65 million years ago, and something killed off some 96 percent of the world’s marine species about 250 million years ago. Scientists have generally assumed that whatever caused those long-ago mass extinctions—comet impacts, extreme volcanic activity—arose from conditions that have changed and no longer pose much threat. It’s a comforting notion—but what about the mass extinction that occurred close to our era? About 12,000 years ago, many large animals of North America started disappearing—woolly mammoths, saber-toothed cats, mastodons, and others. Some scientists have speculated that Paleo-Indians may have hunted some of the creatures to extinction. A millennia-long mini–Ice Age also may have been a factor. But if that’s the case, what explains the disappearance of the Clovis People, the best-documented Paleo-Indian culture, at about the same time? Their population stretched as far south as Mexico, so the mini–Ice Age probably was not solely responsible for their extinction. A team of researchers led by Richard Firestone, of the Lawrence Berkeley National Laboratory, in California, recently announced the discovery of evidence that one or two huge space rocks, each perhaps several kilometers across, exploded high above Canada 12,900 years ago. The detonation, they believe, caused widespread fires and dust clouds, and disrupted climate patterns so severely that it triggered a prolonged period of global cooling. Mammoths and other species might have been killed either by the impact itself or by starvation after their food supply was disrupted. These conclusions, though hotly disputed by other researchers, were based on extensive examinations of soil samples from across the continent; in strata from that era, scientists found widely distributed soot and also magnetic grains of iridium, an element that is rare on Earth but common in space. Iridium is the meteor-hunter’s lodestar: the discovery of iridium dating back 65 million years is what started the geologist Walter Alvarez on his path-breaking theory about the dinosaurs’ demise. A more recent event gives further cause for concern. As buffs of the television show The X Files will recall, just a century ago, in 1908, a huge explosion occurred above Tunguska, Siberia. The cause was not a malfunctioning alien star-cruiser but a small asteroid or comet that detonated as it approached the ground. The blast had hundreds of times the force of the Hiroshima bomb and devastated an area of several hundred square miles. Had the explosion occurred above London or Paris, the city would no longer exist. Mark Boslough, a researcher at the Sandia National Laboratory, in New Mexico, recently concluded that the Tunguska object was surprisingly small, perhaps only 30 meters across. Right now, astronomers are nervously tracking 99942 Apophis, an asteroid with a slight chance of striking Earth in April 2036. Apophis is also small by asteroid standards, perhaps 300 meters across, but it could hit with about 60,000 times the force of the Hiroshima bomb—enough to destroy an area the size of France. In other words, small asteroids may be more dangerous than we used to think—and may do considerable damage even if they don’t reach Earth’s surface. Until recently, nearly all the thinking about the risks of space-rock strikes has focused on counting craters. But what if most impacts don’t leave craters? This is the prospect that troubles Boslough. Exploding in the air, the Tunguska rock did plenty of damage, but if people had not seen the flashes, heard the detonation, and traveled to the remote area to photograph the scorched, flattened wasteland, we’d never know the Tunguska event had happened. Perhaps a comet or two exploding above Canada 12,900 years ago spelled the end for saber-toothed cats and Clovis society. But no obvious crater resulted; clues to the calamity were subtle and hard to come by. Comets, asteroids, and the little meteors that form pleasant shooting stars approach Earth at great speeds—at least 25,000 miles per hour. As they enter the atmosphere they heat up, from friction, and compress, because they decelerate rapidly. Many space rocks explode under this stress, especially small ones; large objects are more likely to reach Earth’s surface. The angle at which objects enter the atmosphere also matters: an asteroid or comet approaching straight down has a better chance of hitting the surface than one entering the atmosphere at a shallow angle, as the latter would have to plow through more air, heating up and compressing as it descended. The object or objects that may have detonated above Canada 12,900 years ago would probably have approached at a shallow angle. If, as Boslough thinks, most asteroids and comets explode before reaching the ground, then this is another reason to fear that the conventional thinking seriously underestimates the frequency of space-rock strikes—the small number of craters may be lulling us into complacency. After all, if a space rock were hurtling toward a city, whether it would leave a crater would not be the issue—the explosion would be the issue. A generation ago, the standard assumption was that a dangerous object would strike Earth perhaps once in a million years. By the mid-1990s, researchers began to say that the threat was greater: perhaps a strike every 300,000 years. This winter, I asked William Ailor, an asteroid specialist at The Aerospace Corporation, a think tank for the Air Force, what he thought the risk was. Ailor’s answer: a one-in-10 chance per century of a dangerous space-object strike. Regardless of which estimate is correct, the likelihood of an event is, of course, no predictor. Even if space strikes are likely only once every million years, that doesn’t mean a million years will pass before the next impact—the sky could suddenly darken tomorrow. Equally important, improbable but cataclysmic dangers ought to command attention because of their scope. A tornado is far more likely than an asteroid strike, but humanity is sure to survive the former. The chances that any one person will die in an airline crash are minute, but this does not prevent us from caring about aviation safety. And as Nathan Myhrvold, the former chief technology officer of Microsoft, put it, “The odds of a space-object strike during your lifetime may be no more than the odds you will die in a plane crash—but with space rocks, it’s like the entire human race is riding on the plane.”

The impact is extinction – timeframe is fast and all their impact defense is wrong

**Brownfield ‘4**  (Roger – presented at the Planetary Defense Conference: Protecting Earth from Asteroids, Orange County, California, Feb. 23-26, 2004 -- “A Million Miles a Day…” – Brownsfield is part of the Gaiashiled project – available at: http://www.aiaa.org/content.cfm?pageid=406&gTable=Paper&gID=17092)

Once upon a time there was a Big Bang... Cause/Effect - Cause/Effect -Cause/Effect and fifteen billion years later we have this chunk of cosmos weighing in at a couple trillion tons, screaming around our solar system, somewhere, hair on fire at a million miles a day, on course to the subjective center of the universe. Left to its own fate -- on impact -- this Rock would release the kinetic energy equivalent of one Hiroshima bomb for every man, woman and child on the planet. Game Over... No Joy... Restart Darwin's clock… again. No happy ever after. There is simply no empirical logic or rational argument that this could not be the next asteroid to strike Earth or that the next impact event could not happen *tomorrow*. And as things stand we can only imagine a handful of dubious undeveloped and untested possibilities to defend ourselves with. There is nothing we have actually prepared to do in response to this event. From an empirical analysis of the dynamics and geometry of our solar system we have come to understand that the prospect of an Earth/asteroid collision is a primal and ongoing process: a solar systemic status quo that is unlikely to change in the lifetime of our species. And that the distribution of these impact events is completely aperiodic and random both their occasion and magnitude. From abstracted averaged relative frequency estimates we can project that over the course of the next 500 million years in the life of Earth we will be struck by approximately 100,000 asteroids that will warrant our consideration. Most will be relatively small, 100 to 1,000 meters in diameter, millions of tons: only major city to nation killers. 1,000 or so will be over 1,000 meters, billions of tons and large enough to do catastrophic and potentially irrecoverable damage to the entire planet: call them global civilization killers. Of those, 10 will be over 10,000 meters, trillions of tons and on impact massive enough to bring our species to extinction. All these asteroids are out there, orbiting the sun... now. Nothing more needs to happen for them to go on to eventually strike Earth. As individual and discrete impact events they are all, already, events in progress. By any definition this is an existential threat. Fortunately, our current technological potential has evolved to a point that if we choose to do so we can deflect all these impact events. Given a correspondingly evolved political will, we can effectively manage this threat to the survival of our species. But since these events are aperiodic and random we can not simply trust that any enlightened political consensus will someday develop spontaneously before we are faced with responding to this reality. If we would expect to deflect the next impact event a deliberate, rational punctuated equilibrium of our sociopolitical will is required now. The averaged relative frequency analysis described above or any derived random-chance statistical probabilistic assessment, in itself, would be strategically meaningless and irrelevant (just how many extinction level events can we afford?). However, they can be indirectly constructive in illuminating the existential and perpetual nature of the threat. Given that the most critically relevant strategic increment can be narrowly defined as the next “evergreen” 100 years, it would follow that the strategic expression of the existent risk of asteroid impact in its most likely rational postulate would be for one and only one large asteroid to be on course to strike Earth in the next 100 years... If we do eventually choose to respond to this threat, clearly there is no way we can address the dynamics or geometry of the Solar System so there is no systemic objective we can respond to here. We can not address 'The Threat of Asteroid Impact' as such. We can only respond to this threat as these objects present themselves as discrete impending impactors: one Rock at a time. This leaves us the only aspect of this threat we *can* respond to - a rationally manifest first-order and evergreen tactical definition of this threat Which unfortunately, as a product of random-chance, includes the prospect for our extinction. Asteroid impact is a randomly occurring existential condition. Therefore the next large asteroid impact event is inevitable and expectable, and that inevitable expectability begins... now. The Probability is Low: As a risk assessment: “The probability for large asteroid impact in the next century is low”... is irrelevant. Say the daily random-chance probability for large asteroid impact is one in a billion. And because in any given increment of time the chance that an impact will not happen is far greater than it will, the chance that it will happen can be characterized as low. However, if we look out the window and see a large asteroid 10 seconds away from impact the daily random-chance probability for large asteroid impact will still be one in a billion... and we must therefore still characterize the chance of impact as low... When the characterization of the probability can be seen to be tested to be in contradiction with the manifest empirical fact of the assessed event it then must also then be seen to be empirically false. Worse: true only in the abstract and as such, misleading. If we are going to *respond* to these events, when it counts the most, this method of assessment will not be relevant. If information can be seen to be irrelevant ex post it must also be seen to be irrelevant ex ante. This assessment is meaningless. Consider the current threat of the asteroid Apophis. With its discovery we abandon the average relative frequency derived annual random-chance probability for a rational conditional-empiric probabilistic threat assessment derived from observing its speed, vector and position relative to Earth. The collective result is expressed in probabilistic terms due only to our inability to meter these characteristics accurately enough to be precise to the point of potential impact. As Apophis approaches this point the observations and resulting metrics become increasingly accurate and the conditional-empiric probability will process to resolve into a certainty of either zero or one. Whereas the random-chance probability is unaffected by whether Apophis strikes Earth or not. These two probabilistic perceptions are inherently incompatible and unique, discrete and nonconstructive to each other. The only thing these two methodologies have in common is a nomenclature: probability/likelihood/chance, which has unfortunately served only to obfuscate their semantic value making one seem rational and relevant when it can never be so. However, merely because they are non rational does not make averaged relative frequency derived random-chance probabilities worthless. They do have some psychological merit and enable some intuitive 'old lady' wisdom. When we consider the occasion of some unpredictable event that may cause us harm and there is nothing tangible we can do to deflect or forestall or stop it from happening, we still want to know just how much we should worry about it. We need to quantify chance not only in in case we can prepare or safeguard or insure against potentially recoverable consequences after the fact, but to also meter how much hope we should invest against the occasion of such events. Hope mitigates fear. And when there is nothing else we can do about it only then is it wise to mitigate fear... “The probability for large asteroid impact in the next century is low” does serve that purpose. It is a metric for hope. Fifty years ago, before we began to master space and tangibly responding this threat of asteroid impact became a real course of action, hope was all we could do. Today we can do much more. Today we can hold our hope for when the time comes to successfully deflect. And then, after we have done everything we can possibly do to deflect it, there will still be of room for hope... and good luck. Until then, when anyone says that the probability for large asteroid impact or Extinction by NEO is low they are offering nothing more than a metric for hope -- not rational information constructive to metering a response or making a decision to do so or not. Here, the probability is in service to illusion... slight-of-mind... and is nothing more than comfort-food-for-thought. We still need such probabilistic comfort-food-for-thought for things like Rogue Black Holes and Gamma Bursts where we are still imaginably defenseless. But if we expect to punctuate the political equilibrium and develop the capability to effectively respond to the existential threat of asteroid impact, we must allow a rational and warranted fear of extinction by asteroid impact to drive a rational and warranted response to this threat forward. Forward into the hands and minds of those who have the aptitude and training and experience in *using* fear to handle fearful things. Fear focuses the mind... Fear reminds us that there are dire negative consequences if we fail. If we are going to concern ourselves with mounting a response and deflecting these objects and no longer tolerate and suffer this threat, would it not be far more relevant to know in which century the probability for large asteroid impact was *high* and far more effective to orient our thinking from when it *will not* to when it *will* occur? But this probabilistic perspective can not even pretend to approach providing us with that kind of information. As such, it can never be strategically relevant: contribute to the conduct of implementing a response. The same can be said when such abstract reasoning is used to forward the notion that the next asteroid to strike Earth will likely be small... This leads us to little more than a hope based Planetary Defense. If we are ever to respond to this threat well then we must begin thinking about this threat better. Large Asteroid Impacts Are Random Events. **Expect the next one to occur at any time**. Strategically speaking, this means being at DefCon 3: lock-cocked and ready to rock, prepared to defend the planet and mankind from the worst case scenario, 24/7/52... forever. Doing anything less by design, would be like planning to bring a knife to a gunfight. If we expect our technological abilities to develop and continue to shape our nascent and still politically tacit will to respond to this threat: if we are to build an effective Planetary Defense, we must abandon the debilitating sophistry of “The probability for large asteroid impact in the next century is low” in favor of rational random inevitable expectation... and its attendant fear.

Even a small impact triggers global panic and nuclear war

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[ Robert Arentz, Ball Aerospace & Technologies Corp. , Harold Reitsema, Ball Aerospace & Technologies Corp. , Jeffrey Van Cleve, NASA Ames Research Center SETI Institute and Roger Linfield, Ball Aerospace & Technologies Corp. “NEO Survey: An Efficient Search for Near-Earth Objects by an IR Observatory in a Venus-like Orbit,” Space, Propulsion & Energy Sciences International Forum, American Institute of Physics, http://www.astrosociology.org/Library/PDF/SPESIF2010\_Arentz-etal\_NEO-Survey.pdf]

Crucial to the politics of NEO searches is the size-frequency distribution, which until the past two or three years has statistically indicated that the next significant impact is not likely for maybe 1,000 years, enough time for the groundbased community to find most of the NEOs with diameters roughly larger than 100 meters. However, M. Boslough (2009), of Sandia National Labs, has recently changed this argument by applying supercomputing-based numerical codes, used to model nuclear detonations, to the enigma of the Libyan Desert Glass (LDG) event. Boslough concluded that a 100-meter-class NEO disintegrated in the air far above the Saharan desert, with all of its kinetic energy and momentum continuing downwards as something informally referred to as an “air hammer.” When this air hammer struck the Earth’s surface, the entrained fireball initially had core temperatures on the order of 5,000 kelvin. The fireball portion of this complex event then spread laterally to about 20 kilometers in diameter. The air hammer also produced a hypersonic blast wave that extended radially for perhaps 50 kilometers. The fireball portion of the interaction remained on the ground for about 40 seconds and melted a patch of sand some 15 kilometers in diameter and several centimeters thick to produce the Libyan Desert Glass. Occasional expeditions to the site collect 100s of kilograms of the glass and sell it on the internet for a few dollars a gram. Boslough (2009) also modeled the 1908 Tunguska event and rescaled the estimated size of the Tunguska body downwards from ~80 meters to ~30 meters. At this new size, the mean interval between impacts is 150 years. Here is where the astrosociology of this paper’s contents becomes pertinent— This newly recognized threat régime (diameter >30 meters) contains far more objects than the diameter >140 meter NEOs. This 140-meter threshold arose circa 2003 when the United States Congress set the goal of compiling a catalogue complete to 90% by 2020 of all NEOs larger than 140 meters in diameter. This 90%, 140 meter, 2020 set of goals was named in honor of George E. Brown (GEB). Merging the GEB goals to Boslough’s (2009) work gives two results. The first is that all the 1,000-year-interval arguments no longer work. Instead, the mean interval between serious impacts is roughly 150 to 200 years. This shortened mean-interval forcefully argues for an efficient and timely NEO survey being completed in the next few years. Next (and this point is both subtle and powerful), typical arguments against performing a spacebased survey usually begin by a person saying something like-- “Yes, an event similar to Tunguska might happen in the next 100 years, but so what? Roughly six percent of the Earth’s surface is populated, so the next event is likely to be a non-event in terms of fatalities.” However, even though ~6% of the Earth’s surface is populated, the world’s widely distributed infrastructure is vastly larger and extremely vulnerable to the physics of Boslough’s (2009) modeled airbursts. A typical LAA airburst could create a cascade of failures across many distributed and interconnected networks which would be extensive, unpredictable, and impossible to quantify. Additionally consider the following: Suppose a large-scale airburst occurred above the Indian Ocean and killed no one. The resulting psychological trauma around the world could create panic on an unprecedented scale, panic which would at least ripple though the global financial markets. And if such an airburst happened without warning in places like the Middle East, or the much larger, and nuclear armed areas of Asia or Russia, the resulting response could initiate a chain of human events resulting in severe military action. It’s this nonlinear psychological aspect that needs addressing in this conference because its message has been overlooked in the past. Most risk analyses done to date have only considered what can be quantified—the immediate body count and all the property damage arising from the initial impact. Perhaps this conference should place an added emphasis on the world’s vastly extended infrastructure and its interdependency, as well as the realities of large-scale human reaction to a sudden and catastrophic airburst event.

The time is now – any delay decreases mitigation success and increases the risk that we deflect with nuclear weapons

Arentz et. al, 10

[ Robert Arentz, Ball Aerospace & Technologies Corp. , Harold Reitsema, Ball Aerospace & Technologies Corp. , Jeffrey Van Cleve, NASA Ames Research Center SETI Institute and Roger Linfield, Ball Aerospace & Technologies Corp. “NEO Survey: An Efficient Search for Near-Earth Objects by an IR Observatory in a Venus-like Orbit,” Space, Propulsion & Energy Sciences International Forum, American Institute of Physics, http://www.astrosociology.org/Library/PDF/SPESIF2010\_Arentz-etal\_NEO-Survey.pdf]

Derating the Tunguska object from ~80 meters to today’s ~30 meters greatly decreases the mean impact interval from ~1,000 years to ~150 years. Given that Tunguska happened 101 years ago, the next impact is arguably 50 to 100 years away, so why the urgency? From contract start, it would take an experienced aerospace contractor about 3 years to build and launch NEO Survey, and then 7 more years (worst case) to complete the catalogue, or 10 years to completion. Assume for the moment that near the end of this period of 10 years, a 50-meter diameter NEO is discovered having an impact date in 50 years. What does this mean? Groundbased systems could easily miss such an object for an apparition or two, resulting in perhaps a few years, or perhaps a few months of warning time before impact. If, by remote chance, it was determined that the strike location was close to a high-density human population, it would force the evacuation of millions of people from a large geographic area and would produce a long-lasting, global sociological disruption that would eventually outweigh the immediate harm resulting from a large-scale loss of human life and damage to a distributed infrastructure. And since there is no predicting the reaction of populations or their governments to such a trauma, such an incident could possibly trigger a chain of events resulting in military action of unforeseeable severity. Clearly, the effect of such an event on the global economy could also be large compared to the cost of flying a sensitive and efficient NEO cataloguing mission. Consider also the value of finally having a deterministic answer to the question: “Are we safe for the next few hundred years?” as opposed to the present case of arguing from statistics. If NEO Survey found an incoming NEO with a warning time of only 50 years, what would it take to execute a successful mitigation effort, and how long would that effort last? To begin with, it would take a year or two for groundbased assets to do detailed follow-up orbital refinements. Then, a space mission to the object would be required for in-situ characterization because all conceivable mitigation techniques require detailed knowledge of the object’s composition, mechanical properties, spin state, whether it has a moonlet, and so on. Only then could the appropriate mitigation solution be chosen and negotiated in a global political setting. It would then take an additional 10 years, approximately, to design, build, fly, and complete the mitigation task. Additionally, the results of any mitigation action would have to be closely monitored, and perhaps a second mitigation mission would be required to produce the desired final result. These timelines are in series and mean that 50 years of lead-time is almost tomorrow. Reliance on groundbased assets to find these smaller NEOs over a period of decades ignores the threats LAAs represent to the modern world. Additionally, the longer the warning time becomes, the less delta-vee is needed to move an impact off the Earth, simplifying the mitigation effort. For example, the difference between 10 years and 20 years of warning time could enable a passive mitigation option compared to a nuclear option

**Nuclear deflection fails – guarantees a bigger asteroid impact**

O’Neill, 8

[Ian, PhD Solar Physics @ University of Wales - Space Producer for Discovery News, Nov. 27, 2008, “ Apollo Astronaut Highlights Threat of Asteroid Impact,” <http://www.astroengine.com/2008/11/apollo-astronaut-highlights-threat-of-asteroid-strike/>]

Unfortunately, the commonly held opinion is to dispense an incoming asteroid or comet with a few carefully placed atomic bombs (by a generic crew of Hollywood oil drillers). Alas, Armageddon this ain’t. Even if we were able to get a bomb onto the surface of an incoming object, there is little hope of it doing any good (whether we get Bruce Willis to drop it off or launch it ICBM style… or would that be IPBM, as in Interplanetary Ballistic Missile?). What if we are dealing with a near-Earth asteroid composed mainly of metal? A nuclear blast might just turn it into a hot radioactive lump of metal. What if the comet is simply a collection of loosely bound pieces of rock? The force of the blast will probably be absorbed as if nothing happened. In most cases, and if we are faced with an asteroid measuring 10 km across (i.e. a dinosaur killer), it would be like throwing an egg at a speeding train and expecting it to be derailed. There are of course a few situations where a nuclear missile might work too well; blowing the object up into thousands of chunks. But in this case it would be like making the choice between being shot by a single bullet or a shot gun; it’s bad if you have one impact with a single lump of rock, but it might be worse if thousands of smaller pieces make their own smaller impacts all over the planet. If you ever wondered what it might be like to be sandblasted from space, this might be the way to find out! There may be a few situations where nuclear missiles are successful, but their use would be limited.

We need a new approach to the oncoming asteroid – we must consider the economic, political, and socio-cultural ramifications by integrating all of social sciences to save humanity

**Pass 6** (Jim, 09-21, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “Applied Astrosociology: The New Imperative to Protect Earth and Human Societies”, STAIF, <http://www.astrosociology.com/Library/PDF/Protecting%20Societies.pdf>)

The proposal offered here will change societies around the world in ways unseen in the past. This new strategy represents an ideal type (i.e., the extreme form of implementation). The ideal type represents the best system humanity can produce to detect, defend, and survive any threat by any object regardless of reaction time or cost to implement. Meeting the requirements of ideal type would be impossibly expensive and require an outrageously large infrastructure, so we must decide as individual societies and as a species how close we wish to approximate this model of the “perfect” planetary defense system.

It is best to think of this type of policy decision as falling along a continuum. At one end, there is no implementation of any part of the system at all. At the other extreme, there is the full implementation of all parts of the system that perfectly matches the ideal type. In practice, humanity will select an approach the falls between the two extremes. The assumption, then, involves the great likelihood that societies will implement at least some aspects of the various components of the strategy. Two dimensions are important: (1) which features actually result in implementation and (2) the extent to which these features match those of the ideal type. Such decision-making involves a cost/benefit analysis that weighs considerations related to technical capabilities, costs, the willingness of publics around the world to participate, subjective assessments of the threat, and the potential reactions of populations to various scenarios associated with planetary defense. Thus, decisions involve technical, economic, political, social, and cultural considerations. Astrosociologists can assist in the study of the latter four categories.

Even if the tech fails, astrosociology is critical to the survival of humanity

**Pass 6** (Jim, 09-21, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “Applied Astrosociology: The New Imperative to Protect Earth and Human Societies”, STAIF, <http://www.astrosociology.com/Library/PDF/Protecting%20Societies.pdf>

Even though the study of social effects receives only passing mention, it does nevertheless create an opening for social scientists to work on the types of issues emphasized in this discussion. Here, it receives the greatest attention of the three parts of the planetary defense strategy. Burrows27 argues that protection of the Earth and our collective civilization represents a vital goal, and it is best TP PT accomplished in a variety of ways including moving a sizable number of humans off planet as well as greatly improving the other two elements of this overall strategy. Much of the money needed to accomplish this, he argues, is derivable through the elimination of waste and reallocation of funds at NASA as well as other institutions and agencies that comprise the social structures of societies. The expansion of an astrosociological approach would emphasize the protection of the human species; and more precisely, it would attempt to ensure the survivability of human societies in order to carry on from the point of impact should the defensive measures fail. Essentially, survival entails resisting the effects of a direct impact upon the Earth or any other effects that occur from a cosmic object such as the creation of tsunamis or even the equivalent of a nuclear winter. This phase of the strategy is no less challenging or less financially burdensome than the other two phases. Social scientist Albert Harrison 28 emphasizes the need to ensure the viability of “survival communities” by determining which criteria will ensure maximum protection. The need to take other measures also exists. Another set of considerations involve: ...finding secure locations, constructing and stocking shelters, ensuring that the people who are entitled to be at the shelter are present and accounted for, ejecting stowaways, and maintaining law, order and morale during the period of confinement.29 In addition, as Harrison also observes, social scientists have conducted extensive research on life in isolated circumstances that can assist us in preparing for the survival phase should it become necessary. The best approach is to protect as many people as possible in shelters scattered all around the world. Selection criteria should include the power elite while also including a proportional number of citizens that reflects the most important characteristics of the population distribution as a whole. For example, the surviving population would benefit the most from a great diversity of occupational statuses within its ranks because it could take advantage of the great variety of skills available to them. This would greatly assist the population to survive, especially in the calamitous of circumstances. TP TP Thus, survival partly involves a similar approach to the utilization of bomb shelters against nuclear attack commonplace during the Cold War. It would require the building of infrastructure on a much larger scale, however. Another difference, obviously, involves the inability to threaten a cosmic object heading for a collision course with the Earth through the use of policies such as Mutually Assured Destruction (MAD). An asteroid, for example, is not subject to negotiation like another government. This fact requires that governments around the world commit to the construction of underground and otherwise hardened facilities that can allow for the carrying on of social life in a more or less usual manner. As with the other components, the question arises: who will pay for such facilities in developing nations or those who refuse to devote any resources to the overall project? Unlike the other two components of the strategy, this component involves extensive construction of material culture within the borders of individual nations. Peter et al.30 suggest the need for at least two types of shelters. Short-term shelters would exist for impacts of TP TP small asteroids (less than one kilometer in size) since the devastation would not occur on a global scale. Different segments of a population could access both public and private shelters meaning that different sets of decision makers would decide how to populate them. In contrast, long-term shelter*s* would serve a different purpose. Long-term shelters should be designed to host people for 5 to 10 years. They would have the two main goals – to maintain a colony of humans to preserve humanity until they can repopulate the Earth and to preserve the key technologies, global knowledge, and culture until the Earth ecosystem returns to habitable conditions for humankind. These shelters will be underground colonies with all facilities mandatory to preserve life.31 This passage demonstrates again that the survival component advocated here is not a new idea. However, the intensity of research by social scientists needs to increase so that we may become better informed about the social and cultural complications that may arise. We must also become much more attentive to the needs of the populations and governments in different societies (which will differ from one another on a multitude of diverse measures). PT PT Survival exists on three distinctive yet interrelated dimensions, all of which must occur simultaneously and successfully. The three dimensions include (1) the cultural dimensi*on* (i.e., ideas including values, norms, and material culture); (2) the social dimension(i.e., social structures such as groups, organizations, and institutions); and (3) the personal dimension(i.e., the individuals in the population). The most common focus involving survival in the literature falls upon saving people without enough regard to cultural or social protection. This new focus comes from a social science perspective that fall beyond the scope of research normally carried out by most members of the space community. Do we have the willingness to build infrastructure that can ensure the survivability of societies in all three dimensions? This component of the strategy will likely receive the greatest amount of complacency and opposition due to a number of reasons including: (1) its cost; (2) our potentially unrealistic faith that we can defend ourselves from an object heading in our direction; and, perhaps most dangerous, (3) the mistaken assumption that the risk is too small to warrant a sizable or serious course of action. The most recent “scares” from asteroid Apophis and others only resulted in timid responses focusing on detection and defense improvement. The survival element of the proposed strategy received no or extremely little consideration. In the end, each society will need to make decisions about the whether or not to put this component into practice, and beyond that, how many resources to allocate to it as well as which tactical areas would receive funding. The nature of survival component implementation would also constitute important data valuable to other nations as guidelines for their decisions. It may be that particular nations will decide to take the ultimate risk of ignoring this survival element altogether. Given the current status of our technological capability to defend against NEOs, or probably worse long-duration comets unknown to us, their recovery if struck by a cosmic object would be difficult at best. Finally, each nation will need to decide how to implement this component of the strategy in a way that would allow them to protect their citizens, their material culture, and the body of knowledge characteristic of their culture and sciences. Options include construction of shelters for average citizens, underground libraries and art galleries, and shelters for societal elites such as government leaders and scientists. Escape plans for moving coastal residents to higher ground in the circumstance that an object strikes an ocean represents another survival tactic due to the potential of the impact creating a tsunami. Would some citizens adopt an underground lifestyle in order to operate and protect underground shelters, libraries, and art galleries? Given the fact that a large object can potentially destroy the human civilization, such considerations should receive serious consideration. The decision to implement a survival plan for developing nations will require assistance from developed nations, possibly through a program operated by the United Nations or new international body dedicated specifically to the task. We must approach this challenge on a large scale. We must take rational steps as societies to protect ourselves on all three dimensions rather than allowing nature to make such decisions for us.

Asteroid deflection requires astrosociology – we need to know how to react to the threat

**Pass 6** (Jim, 09-21, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “Applied Astrosociology: The New Imperative to Protect Earth and Human Societies”, STAIF, <http://www.astrosociology.com/Library/PDF/Protecting%20Societies.pdf>

A. Detection**:** Eventually, the detection element alone will likely involve satellites, facilities on the Earth and the Moon, and the dedication of a many governments, organizations, and individuals. There exists the possibility that the interest of politicians and even some space scientists may wane over time without the confirmation of a threatening object. This type of social effect is best studied by astrosociologists rather than space scientists; or even more productively, with the assistance of space scientists.

An important aspect of the astrosociological component to detection comes into play when detecting an object and indisputably calculating it to be on an impact course with the Earth. How will the scientific community react? How will governments react? Will they favor secrecy or openness to their publics? If openness prevails, how will publics and the subcultures within them (e.g., religious groups and political entities) react to such dire news?

Detection of a massive object heading for the Earth will equate to a death threat unless the other two parts exist. At minimum, a successful defensive reaction would be required. In the best of circumstances, of course, we would not require the survival component due to a fully successful implementation of a defense tactic. However, even a partial success, or mitigation of the original risk, may indeed require the implementation of survival tactics. Thus, while the detection element is vital and much of our effort and resource allocation should go to its ongoing operation, the second and third components are crucial as well. We should not wait until it is too late to realize that we need a defense against a confirmed threat or, even worse, the survival tactics to protect our societies, standards of living, and characteristic ways of life.

Reducing existential risk by even a tiny amount outweighs every other impact — the math is conclusively on our side.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2011** (“The Concept of Existential Risk,” Draft of a Paper published on ExistentialRisk.com, Available Online at <http://www.existentialrisk.com/concept.html>, Accessed 07-04-2011)

Holding probability constant, risks become more serious as we move toward the upper-right region of figure 2. For any fixed probability, **existential risks are** thus **more serious than other risk categories**. But just how much more serious might not be intuitively obvious. One might think we could get a grip on how bad an existential catastrophe would be by considering some of the worst historical disasters we can think of—such as the two world wars, the Spanish flu pandemic, or the Holocaust—and then imagining something just a bit worse. Yet if we look at global population statistics over time, we find that these horrible events of the past century **fail to register** (figure 3).

[Graphic Omitted]

Figure 3: World population over the last century. Calamities such as the Spanish flu pandemic, the two world wars, and the Holocaust scarcely register. (If one stares hard at the graph, one can perhaps just barely make out a slight temporary reduction in the rate of growth of the world population during these events.)

But even this reflection fails to bring out the seriousness of existential risk. What makes existential catastrophes **especially bad** is not that they would show up robustly on a plot like the one in figure 3, causing a precipitous drop in world population or average quality of life. Instead, their significance lies primarily in the fact that they would **destroy the future**. The philosopher Derek Parfit made a similar point with the following thought experiment:

I believe that if we destroy mankind, as we now can, this outcome will be much worse than most people think. Compare three outcomes:

(1) Peace.

(2) A nuclear war that kills 99% of the world’s existing population.

(3) A nuclear war that kills 100%.

(2) would be worse than (1), and (3) would be worse than (2). Which is the greater of these two differences? Most people believe that the greater difference is between (1) and (2). I believe that the difference between (2) and (3) is **very much greater**. … The Earth will remain habitable for at least another billion years. Civilization began only a few thousand years ago. If we do not destroy mankind, these few thousand years may be only **a tiny fraction of the whole of civilized human history**. The difference between (2) and (3) may thus be the difference between this tiny fraction and **all of the rest of this history**. If we compare this possible history to a day, what has occurred so far is only **a fraction of a second**. (10: 453-454)

To calculate the loss associated with an existential catastrophe, we must consider how much value would come to exist in its absence. It turns out that **the ultimate potential for Earth-originating intelligent life is literally astronomical**.

One gets a large number even if one confines one’s consideration to the potential for biological human beings living on Earth. If we suppose with Parfit that our planet will remain habitable for at least another billion years, and we assume that at least one billion people could live on it sustainably, then the potential exist for at least **1018 human lives**. These lives could also be **considerably better than the average contemporary human life**, which is so often marred by disease, poverty, injustice, and various biological limitations that could be partly overcome through continuing technological and moral progress.

However, the relevant figure is not how many people could live on Earth but how many descendants we could have in total. One lower bound of the number of biological human life-years in the future accessible universe (based on current cosmological estimates) is **1034 years**.[10] Another estimate, which assumes that future minds will be mainly implemented in computational hardware instead of biological neuronal wetware, produces a lower bound of 1054 human-brain-emulation subjective life-years (or 1071 basic computational operations).(4)[11] If we make the less conservative assumption that future civilizations could eventually press close to the absolute bounds of known physics (using some as yet unimagined technology), we get **radically higher estimates** of the amount of computation and memory storage that is achievable and thus of the number of years of subjective experience that could be realized.[12]

Even if we use **the most conservative of these estimates**, which entirely ignores the possibility of space colonization and software minds, we find that **the expected loss of an existential catastrophe is greater than the value of 1018 human lives**. This implies that **the expected value of reducing existential risk by a mere one millionth of one percentage point is at least ten times the value of a billion human lives**. The more technologically comprehensive estimate of 1054 human-brain-emulation subjective life-years (or 1052 lives of ordinary length) makes the same point even more starkly. Even if we give this allegedly lower bound on the cumulative output potential of a technologically mature civilization **a mere 1% chance of being correct**, we find that **the expected value of reducing existential risk by a mere one billionth of one billionth of one percentage point is worth a hundred billion times as much as a billion human lives**.

One might consequently argue that **even the tiniest reduction of existential risk has an expected value greater than that of the definite provision of any “ordinary” good, such as the direct benefit of saving 1 billion lives**. And, further, that the absolute value of the indirect effect of saving 1 billion lives on the total cumulative amount of existential risk—positive or negative—is almost certainly larger than the positive value of the direct benefit of such an action.[13]

Err Aff – uncertainty means you should default to worst-case predictions – precautionary principle – it’s try-or-die for the aff

Seamone, 4

[Evan, J.D., University of Iowa College of Law; M.P.P. and B.A., University of California, Los Angeles. Evan Seamone is an attorney and a Judge Advocate in the U.S. Army stationed at Fort Polk, Louisiana, “The Precautionary Principle as the Law of Planetary Defense: Achieving the Mandate to Defend the Earth Against Asteroid and Comet Impacts While There is Still Time,” Georgetown International Environmental Law Review. Washington: Fall 2004. Vol. 17, Iss. 1; pg. 1, 23 pgs]

Although the topic of asteroids and comets striking the earth (natural impact) has caused innumerable skeptics to roll their eyes condescendingly,1 the public came very close to knowing the horror of an impending asteroid disaster first-hand on January 13, 2004. On the very day before President George W. Bush was expected to deliver a speech on the new American space policy, asteroid threat detection experts contemplated issuing a warning that an asteroid named 2004 ASl could collide with the Earth within 36 hours.2 Unlike other recent "near misses," this one prompted agencies like the National Aeronautics and Space Administration (NASA) to consider their limitations in responding to a short-notice asteroid threat and their subsequent responsibility to notify more capable operational agencies.3 For the first time, scientists were forced to answer the difficult questions that they had previously entertained only as brainteasers: \* which agencies are responsible for planetary defense; \* what options do they have in mounting an effective defense; \* how do they determine unacceptable consequences in their selection of methods to prevent utter chaos; \* who has the final say; and \* what guarantees that nations will cooperate in defensive measures rather than taking a unilateral approach?4 For a brief time while decision-makers confirmed the nature of the threat posed by 2004 ASl, the total lack of answers to these questions indicated to the scientific community the importance of clarifying such "rules of the road" as quickly as possible. Fortunately, the threat posed by 2004 ASl never materialized. Even before the 2004 ASl incident, space policymakers were beginning to recognize the need for mitigation measures.5 While no living person has experienced the horror of a massive asteroid or comet strike, the inherent threats from space debris and deorbiting space stations have independently alerted governments of their need to plan for such dangers. While developing threat response programs to address the falls of Skylab in 1979 and the Mir Space Station in 2001, various agencies considered several different collision scenarios and concluded that no amount of planning fully contain all potential threats.6 Without question, asteroids and comets are distinct from falling space stations or space debris because they are far less predictable and pose much greater harm. First, the lack of a coordinated series of telescopes across the globe makes it impossible for astronomers to monitor all potential asteroid and comet threats.7 As a result, some policymakers have wagered that novice sky watchers will be just as likely as professional astronomers to spot the next significant asteroid or comet threat.8 In addition to inadequate monitoring capabilities, some threats, such as long period comets, may emerge so quickly that they will evade even the best telescopes altogether or until it is too late to respond.9 Second, unlike Skylab or the Mir Space Station, the collision of even a smaller range asteroid can cause damage similar to the detonation of a nuclear bomb.10 While scaremongers or filmmakers may dwell entirely on horrific predictions of significant damage, it is evident to even the most objective scientist that victims of an asteroid or comet impact face severe consequences. Impacts in the oceans will endanger coastal regions with tsunamis; direct impacts with land could result in a host of problems, like earthquakes in proximate regions, individuals losing their hearing from the sound of the strike, and poisoning of the atmosphere.11 Based on predicted harm to earth populations, statistical analyses of the likelihood of another significant impact, and continuing discovery of large asteroid craters across the globe, international policymakers have concluded that a real threat will require international cooperation, and that decisions made in the near-term may have consequences for many generations to come.12 Ultimately, governments can increase the chances of limiting or eliminating threats to an impact zone by detecting such threats long before the impact is due. With enough time to mount defensive measures from a space station or from earth, governments will be able to deflect or destroy the oncoming object. However, even if time is limited or affirmative defensive measures fail, agencies can secure life and property by effectively preparing local governments and their citizens to evacuate and survive under the difficult and undesirable conditions. In light of recent unexpected crises including the international outbreak of Sudden Acute Respiratory Syndrome (SARS), widespread blackouts affecting Canada and the United States, and continued terrorist activities across the globe, planners are beginning to recognize the public's increasing vulnerability to unpredictable threats. Perhaps the greatest stride in planning has been the Department of Homeland security's development of the National Response Plan, which is designed to consolidate various threat-specific policies into a single all-hazards plan to deal with sudden onset harm.13 Natural impact falls within this scope of unpredictable harm because planners suffer from a lack of experience deflecting and destroying threatening space objects.14 In the context of planetary defense, proclamations that nations and local governments must cooperate accomplish nothing of substance. Such gestures are, in fact, not much different from the concerns historically voiced by experts in relation to all space threats. In the 1960s, legal scholars attacked the vague principles regarding cooperation and concern for future generations on the basis that these policies contributed to a "legal vacuum" in space, devoid of practical guidance.15 The greatest problem then, and now, is that well-intentioned principles impair the ability of governments to address foreseeable danger because these vague principles create a false sense that important inroads have been forged.16 Despite the provisions of the existing Outer Space Treaty, and several United Nations policies and proclamations, none of these documents provided clear direction to the international community regarding responsibilities to deal with the fall of Skylab.17 The historical push for greater, more meaningful, regulation of space harm provides a working definition for true progress in planetary defense: "detailed administration," opposed to "the language of agreement,"18 coupled with "methods for reaching specific decisions in particular cases."19 This Article addresses four legal and policy aspects of planning for sizeable asteroid and comet threats. Part II explains specific measures required by the precautionary principle. The purpose of this Part is to provide the general theoretical basis underlying governmental obligations to take certain actions to prepare for, respond to, and recover from natural impact threats. Part III applies Homeland security Presidential Directive/HSPD-5 to the threat of asteroid and comet impact. HSPD-5 is crucial to planetary defense because it reveals that the U.S. Government recognizes an obligation to act preventively against all potentially serious, national-level threats. While the document is still being revised, it must inevitably deal with the problem of natural impact and, as a result, represents a significant stride in space disaster mitigation. Part IV considers the potential liability that governments face for inaction or accidents encountered during deployment of defensive measures. It emphasizes that the need to take preventive action is entirely separate from the issue of how governmental agencies should conduct themselves in an operational sense. While nations have an inherent right to self-defense under the United Nations Charter,20 they cannot defend themselves with any and all possible means. Operational considerations such as necessity and the use of proportional force provide guidance.21 Considerations of governmental liability will assist agencies responding to natural impact in a similar way by providing additional considerations while the agencies act on their obligation to mount defensive measures. Finally, Part V shares helpful lessons in organization and collaboration gleaned from public health, especially in the area of infectious disease law and policy at domestic and international levels. These final considerations emphasize that some problems are so common to all crises that their successful resolution in one context will assist governments in another context, even when, as in this case, it is difficult to appreciate even the possibility of natural impact devastation. All the considerations addressed by this Article apply equally to any asteroid or comet threat regardless of the amount of time existing before an impact is due, including threats that manifest with no notice at all. II. THE PRECAUTIONARY PRINCIPLE The precautionary principle governs responses to unknown types of harm. In many international agreements and other bodies of rules, the principle obligates governments to institute measures to prevent potential harm from a source, even if it is not certain if, when, or where, the harm will occur.22 The current policy of the United States requiring agencies to prevent terrorist attacks before they occur rests squarely within this principle. Mitigation measures contained in this policy depend on preventive and anticipatory action: "[t]he greater the threat, the greater the risk of inaction-and the more compelling the case for taking anticipatory action to defend ourselves, even if uncertainty remains as to time and place of the enemy's attack."23 In the context of planetary defense, the same principle applies because some natural impact threats can strike without notice (e.g., long-period comets). Likewise, in hypothesized situations where asteroids are spotted with some advance notice, response times may require so much preparation that delaying action will preclude effective intervention. In line with the precautionary principle, lawmakers and planners should be cautious of adopting different alternatives to deal with asteroid and comet threats that are projected to occur within different timeframes.24 While some priorities must change over time, such as evacuating people in impact zones closer to the time of impact, governments must be capable of responding to threats of the greatest magnitude at all times. Planning for a "worst case scenario" is common in disaster relief circles. Whether the harm is an earthquake, flood, or other natural disaster, the government's goal must be to withstand maximum harm; not only harm that is considered "normal."25 The logic underlying this practice recognizes that there may only be one chance to avert significant harm. Multiple plans for every imaginable scenario could lead to mass confusion.26

# Plan

Thus [partner’s name] and I advocate that the United States federal government should develop and deploy asteroid detection and planetary defense technologies beyond the Earth’s mesosphere with an astrosociological perspective.

# Contention 2: Beyond Hard Science

Our speech act is uniquely key – nonscientists are ultimately the ones who will deal with the threat

**Pass 6** (Jim, 09-21, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “Applied Astrosociology: The New Imperative to Protect Earth and Human Societies”, STAIF, <http://www.astrosociology.com/Library/PDF/Protecting%20Societies.pdf>)

Despite the widely accepted assessment of cosmic objects as real and potentially devastating threats to humankind and human societies (chiefly among space scientists and engineers), politicians and publics of various societies may indeed downplay the likelihood of being struck by a comet or asteroid. Assessment of the threat by nonscientists within societies falls under the purview of the social sciences, and the final decision concerning financing and implementation ultimately becomes the responsibility of politicians rather than scientists. The importance of bringing in social scientists should be clear as their training focuses on these exact types of issues; issues beyond the scope of the natural sciences.

Our demand and action is key to sparking a new world consciousness – our speech act challenges defense and technocratic discourse institutions

**Pass 6** (Jim, 09-21, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “Applied Astrosociology: The New Imperative to Protect Earth and Human Societies”, STAIF, <http://www.astrosociology.com/Library/PDF/Protecting%20Societies.pdf>

These components exist roughly in sequential order as to their application. Practically speaking, detection of a possible threat should set into motion a logical determination of the best defensive countermeasure to implement. If components one and two occur successfully, then the third one becomes unnecessary. As a practical matter, however, we should move forward with component three as an insurance policy in the event that failures in the first two steps catch us by surprise and we have no time to implement step three from scratch. In fact, societal survival may well depend upon infrastructures currently undreamed about by space scientists and engineers, or anyone else for that matter.

The construction of infrastructure to achieve these components involves the creation of material culture. In this case, the construction of such infrastructure would demonstrate a particular society’s prioritization of protecting itself from asteroids and comets. Moreover, the stylistic elements and emphasized functional elements of facilities would inevitably reflect the society’s cultural ideas and beliefs in a number of different ways. These types of considerations are important if we intend to construct a global system because it will become important to put the individual pieces together to create the whole. A particular society’s government could refuse to participate or favor one type of facility (e.g., detection) or another (e.g., survival). It may be possible to make up for the missing pieces in one society by building those pieces in another that may accept them, although accomplishing this will require an understanding of the cultural priorities of various societies around the world.

The detection component of the strategy currently receives the most funding followed by the defense component (especially in the form of surveys). Very little serious discussion in the literature currently emphasizes the third component of survival. This is where astrosociology and the social sciences in general can add insights normally outside the interests and expertise of those within the space community. Through collaboration, however, we can easily add this new element to the traditional list of priorities favored by space scientists and engineers. The study of the various social ramifications of all components and their outcomes, as well as political and economic phenomena that relates to the level of willingness to implement this new strategy, also fall under the purview of astrosociology.

The interdisciplinary approach we advocate sparks discussion of cosmic impacts – this is critical to evaluating and planning for the future of humankind

**Pass 6** (Jim, 09-21, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “Applied Astrosociology: The New Imperative to Protect Earth and Human Societies”, STAIF, <http://www.astrosociology.com/Library/PDF/Protecting%20Societies.pdf>)

Astrosociology is defined as the scientific study of astrosocial phenomena (i.e., the social and cultural

phenomena that connect space and society).19, 20 Each of the components of any planetary defense project represents astrosocial phenomena because they involve space phenomena, and even more saliently human beings and their societies. The social and cultural implications associated with the implementation and operation of proactive defensive measures against cosmic objects involves social organization that establishes patterns of social interaction that deal with the threat before, during, and following a real life-threatening incident. Astrosocial phenomena related to planetary defense represent serious issues that threaten the very existence of human beings and the societies to which they belong. In many ways, if our current assessment of the threat represents even a close approximation of its objective nature, then these types of astrosocial phenomena mandate a significant elevation of significance as threats to the future of humankind and thus the involvement of astrosociologists.

Our demand for a change in societal consciousness would be like the Overview Effect – binding societies and Earth together in human unity. Our position as the USFG is key and the threat of an asteroid solves – no K’s

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**Positive benefits may result from potential disaster. Much like the overview effect defined by Frank White, 23 the realization that humanity’s future may come to abrupt end can potentially serve to bind societies together.** We are all in the same “boat,” so to speak. All of us live on a single planet, and we now know that our planet is under serious threat. The politically strong-minded governments, along with the assistance of the United Nations and other international bodies, should take advantage of our new perspective in a way that leads to the construction of both a planetary defense strategy and the infrastructure to carry it out. With the threat of cosmic disaster now strongly creeping into the cultures of societies around the world, the new imperative to protect Earth and human societies will likely receive the greatest degree of support it has ever enjoyed at all levels of societal and international organization. Still, its justification will be subject to debate and controversy. The most advantageous approach is to consider the worst-case scenario and construct a system that can counter it to the best of our ability, to build the most capable system that we believe we can afford. In the end, we will have to live with our choices should a killer asteroid or comet head our way.

Our project is key to reinvigorating the public sphere and reenergizing thought and societal consciousness

Gangale and Dudley-Flores, 7

[Thomas, Executive Director, OPS-Alaska ; and Marilyn, CEO/Chief Research Scientist, OPS-Alaska; “The Globalization of Space – The Astrosociological Approach”, Presented at the AIAA SPACE 2007 Conference & Exposition 18 - 20 September 2007, Long Beach, Californi]

**The citizen space community is small, fractured, and appears to lack a cohesive core of expertise. The pool of expertise that it possesses is diffused among a general population of enthusiasts, which makes it difficult to focus that expertise to a productive purpose**. In a positive development, the American Institute of Aeronautics and Astronautics, a professional organization that draws its membership from industry, government, and academia, has begun to increase its efforts in the policy arena, both through its annual Congressional Visit Day and through greater visibility of its Public Policy Committee. **The citizen group ProSpace’s annual “March Storm” on Capitol Hill is a noble effort; however, an informed voice that speaks both to civil society and in the corridors of power is sorely needed. The general public is ignorant of space to a large degree. As a society, we have a poor understanding of our place in the solar system**: the relative distances between Earth, the Moon, the sun, and the various planets and their moons; the relative sizes of these celestial bodies; the environmental conditions on them. In 2003, author Gangale observed firsthand how bogus satellite imagery of the 1 February destruction of Columbia and the 14 August electrical blackout of the northeastern US and eastern Canada passed uncritically through the email system among engineers at one of the nation’s largest utility companies. **One would have thought that such technically-trained people would not have been so easily duped. Jim Pass’ (2004) distinction is apt; we have yet to become a true spacefaring civilization, we are merely a space-capable civilization.**

Socio-cultural considerations come first – the neg’s purely body count based logic is flawed

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The ideal type involves a three-prong strategy that is required in order to cope with the inevitability of a large space-born object on a collision course with the Earth. This proposed strategy involves many of the issues raised in the literature with an added emphasis rarely brought into the discussion. The new approach consists of three major, though interrelated, components. Emphasis on the protection of societies and their cultures shifts the common treatment of asteroid and comet defense to a higher level of protection. While protection of the Earth’s biosphere remains vital to ensure human survival, the survival of social systems at their current level of development should become the new standard.

Any strategy to defend the Earth, the human species, and human societies and their cultures at this current stage of scientific and technological development cannot logically rely on a successful outcome. Other aspects of our societies and cultures such as the arts, literature, religious sites, and government buildings face potential destruction at some point in the future. Humanity must work on all three components of the strategy simultaneously in order to protect the all of these entities over the long term. Perhaps the most important thing we need to protect, in a general sense, is the characteristic details that define social life in various societies. Many elements of culture such as values, customs, and subcultural idiosyncrasies could easily disappear following an impact; yet they demand protection.

Our framework is essential to theirs – social science informs policy analysis

**Pass 6** (Jim, 09-21, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “Applied Astrosociology: The New Imperative to Protect Earth and Human Societies”, STAIF, <http://www.astrosociology.com/Library/PDF/Protecting%20Societies.pdf>)

The contribution of social scientists lies in the analysis of how social systems and individuals operate/act during three phases of the cosmic threat: (1) before an object is known to be heading for a collision with the Earth; (2) following confirmation that an object will impact the Earth; and (3) following the aftermath of the successful defense or actual impact (partial or unsuccessful defense). Never before has a species on the Earth possessed enough intelligence to understand the ramifications of a cosmic impact. The dinosaurs certainly did not, yet the next great impact could be just as devastating or even more intense. The behaviors of human beings and societies enter into the equation in a very real and significant way. Now that we realize that the threat is both real and serious, we must do something about it. Doing so will prove to be difficult in a multitude of different areas including the scientific and technological aspects of making the system work on a technical level, but also including areas related to cultural and social/societal considerations. The latter two related areas will exist in all phases of the construction and operation of the planetary defense system. We should appreciate this fact from the very beginning.

A continuation with the status quo in which the space community works to solve the issues related to the cosmic threat without the input of social scientists will leave us all more vulnerable. Planners of any large-scale system must take into account the various cultures to be involved which will affect each of their subjective assessments of the threat and thus the level of willingness of various governments to participate at all and, if so, how extensively. Each society will chose to protect different elements of their social and cultural systems, so planners must be sensitive to these differences even if they fail to correspond to expectations. The need to negotiate with governments who possess different sets of priorities will exist, so planners must be prepared to interact with them in ways that maintain a healthy respect for the differences.

\*\*\*Existental Risk

# Maxipok Principle – 1AC Worthy

Policymakers should adopt the Maxipok principle and prioritize the reduction of existential risk.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human bAdvancement, holds a Ph.D. in Philosophy from the London School of Economics, **2011** (“The Concept of Existential Risk,” Draft of a Paper published on ExistentialRisk.com, Available Online at <http://www.existentialrisk.com/concept.html>, Accessed 07-04-2011)

These considerations suggest that **the loss in expected value resulting from an existential catastrophe is so enormous that the objective of reducing existential risks should be a dominant consideration whenever we act out of concern for humankind as a whole**. It may be useful to adopt the following rule of thumb for such impersonal moral action:

Maxipok

Maximize the probability of an “OK outcome,” where an OK outcome is any outcome that avoids existential catastrophe.

At best, maxipok is a rule of thumb or a prima facie suggestion. It is not a principle of absolute validity, since there clearly are moral ends other than the prevention of existential catastrophe. The principle’s usefulness is as an aid to prioritization. Unrestricted altruism is not so common that we can afford to fritter it away on a plethora of feel-good projects of suboptimal efficacy. If benefiting humanity by increasing existential safety achieves expected good on a scale **many orders of magnitude greater** than that of alternative contributions, we would do well to **focus on this most efficient philanthropy**.

Note that maxipok is **different from the popular maximin principle** (“Choose the action that has the best worst-case outcome”).[14] Since we cannot completely eliminate existential risk—at any moment, we might be tossed into the dustbin of cosmic history by the advancing front of a vacuum phase transition triggered in some remote galaxy a billion years ago—the use of maximin in the present context would entail choosing the action that has the greatest benefit under the assumption of impending extinction. Maximin thus implies that we ought all to start partying as if there were no tomorrow. While perhaps tempting, that implication is **implausible**.

\*\*Dear Neg: Please read the unhighlighted portions!!!

# Impact Calc – FWK – 1AC Worthy

Reducing existential risk is desirable in every framework—our argument doesn’t require extreme utilitarianism.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2011** (“The Concept of Existential Risk,” Draft of a Paper published on ExistentialRisk.com, Available Online at <http://www.existentialrisk.com/concept.html>, Accessed 07-04-2011)

We have thus far considered existential risk from the perspective of utilitarianism (combined with several simplifying assumptions). We may briefly consider how the issue might appear when viewed through the lenses of some other ethical outlooks.

For example, the philosopher Robert Adams outlines a different view on these matters:

I believe a better basis for ethical theory in this area can be found in quite a different direction—in a commitment to the future of humanity as a vast project, or network of overlapping projects, that is generally shared by the human race. The aspiration for a better society—more just, more rewarding, and more peaceful—is a part of this project. So are the potentially endless quests for scientific knowledge and philosophical understanding, and the development of artistic and other cultural traditions. This includes the particular cultural traditions to which we belong, in all their accidental historic and ethnic diversity. It also includes our interest in the lives of our children and grandchildren, and the hope that they will be able, in turn, to have the lives of their children and grandchildren as projects. To the extent that a policy or practice seems likely to be favorable or unfavorable to the carrying out of this complex of projects in the nearer or further future, we have reason to pursue or avoid it. … Continuity is as important to our commitment to the project of the future of humanity as it is to our commitment to the projects of our own personal futures. Just as the shape of my whole life, and its connection with my present and past, have an interest that goes beyond that of any isolated experience, so too the shape of human history over an extended period of the future, and its connection with the human present and past, have an interest that goes beyond that of the (total or average) quality of life of a population-at-a-time, considered in isolation from how it got that way.

We owe, I think, some loyalty to this project of the human future. We also owe it a respect that we would owe it even if we were not of the human race ourselves, but beings from another planet who had some understanding of it. (28: 472-473)

Since an existential catastrophe would either put an end to the project of the future of humanity or drastically curtail its scope for development, we would seem to have **a strong prima facie reason to avoid it**, in Adams’ view.

We also note that an existential catastrophe would entail the frustration of many strong preferences, suggesting that from a preference-satisfactionist perspective it would be a bad thing. In a similar vein, an ethical view emphasizing that public policy should be determined through informed democratic deliberation by all stakeholders would favor existential-risk mitigation if we suppose, as is plausible, that a majority of the world’s population would come to favor such policies upon reasonable deliberation (even if hypothetical future people are not included as stakeholders). We might also have custodial duties to preserve the inheritance of humanity passed on to us by our ancestors and convey it safely to our descendants.[24] We do not want to be the failing link in the chain of generations, and we ought not to delete or abandon the great epic of human civilization that humankind has been working on for thousands of years, when it is clear that the narrative is far from having reached a natural terminus. Further, many theological perspectives deplore naturalistic existential catastrophes, especially ones induced by human activities: If God created the world and the human species, one would imagine that He might be displeased if we took it upon ourselves to smash His masterpiece (or if, through our negligence or hubris, we allowed it to come to irreparable harm).[25]

We might also consider the issue from a less theoretical standpoint and try to form an evaluation instead by considering analogous cases about which we have definite moral intuitions. Thus, for example, if we feel confident that committing a small genocide is wrong, and that committing a large genocide is no less wrong, we might conjecture that committing omnicide is also wrong.[26] And if we believe we have some moral reason to prevent natural catastrophes that would kill a small number of people, and a stronger moral reason to prevent natural catastrophes that would kill a larger number of people, we might conjecture that we have an even stronger moral reason to prevent catastrophes that would kill the entire human population.

# Plan Reduces Existential Risk

The plan reduces the existential risk from asteroids.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2011** (“Existential Risks FAQ,” Version 1.0, ExistentialRisk.com, Available Online at http://www.existentialrisk.com/faq.html, Accessed 07-04-2011)

There are some obvious actions that would probably reduce existential risk by a tiny amount. For example, **increasing funding for ongoing efforts to map large asteroids in order to check if any of them is on collision course with our planet** (in which case countermeasures could be devised) **would probably reduce the asteroid risk by a modest fraction**. Since asteroids pose only a small existential risk to begin with (on a time scale of, say, a century) this is unlikely to be the most cost-effective way to reduce existential risk. Nevertheless, it might dominate conventional philanthropic causes in terms of **expected amount of good achieved**. (This is not obvious because conventional philanthropy likely has some indirect effects on the level of existential risk—for instance by changing the probability of future war and oppression, promoting international collaboration, or affecting the rate of technological advance.)

# Preventative Action Key – 1AC Worthy

Preventative action is necessary—we don’t get a second chance.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2002** (“Existential Risks: Analyzing Human Extinction Scenarios and Related Hazards,” *Journal of Evolution and Technology*, Volume 9, Number 1, Available Online at http://www.nickbostrom.com/existential/risks.html, Accessed 07-04-2011)

Our approach to existential risks **cannot be one of trial-and-error**. There is **no opportunity to learn from errors**. The reactive approach – see what happens, limit damages, and learn from experience – is **unworkable**. Rather, **we must take a proactive approach**. This requires **foresight to anticipate new types of threats** and a **willingness to take decisive preventive action** and to bear the costs (moral and economic) of such actions.

# Limited Nuclear War Not An Existential Risk

A small nuclear exchange is not an existential risk.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2002** (“Existential Risks: Analyzing Human Extinction Scenarios and Related Hazards,” *Journal of Evolution and Technology*, Volume 9, Number 1, Available Online at http://www.nickbostrom.com/existential/risks.html, Accessed 07-04-2011)

A much greater existential risk emerged with the build-up of nuclear arsenals in the US and the USSR. An all-out nuclear war was a possibility with both a substantial probability and with consequences that might have been persistent enough to qualify as global and terminal. There was a real worry among those best acquainted with the information available at the time that a nuclear Armageddon would occur and that it might annihilate our species or permanently destroy human civilization.[4] Russia and the US retain large nuclear arsenals that could be used in a future confrontation, either accidentally or deliberately. There is also a risk that other states may one day build up large nuclear arsenals. Note however that a smaller nuclear exchange, between India and Pakistan for instance, **is not an existential risk**, since it would not destroy or thwart humankind’s potential permanently. Such a war might however be a local terminal risk for the cities most likely to be targeted. Unfortunately, we shall see that nuclear Armageddon and comet or asteroid strikes are mere preludes to the existential risks that we will encounter in the 21st century.

# We Can Only Die Once

Existential risks aren’t cumulative — we can only die once.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2011** (“The Concept of Existential Risk,” Draft of a Paper published on ExistentialRisk.com, Available Online at <http://www.existentialrisk.com/concept.html>, Accessed 07-04-2011)

Finally, when considering existential-risk probabilities, we must recognize that **one existential catastrophe can preempt another**. If a meteor wipes us out next year, the existential risk from future machine superintelligence **drops to zero**. The sum of all-things-considered probabilities of disjoint (mutually exclusive) existential risks **cannot exceed 100%.** Yet conditional probabilities of disjoint existential risks (conditional, that is to say, on no other existential disaster occurring preemptively) could well add up to more than 100%. For example, some pessimist might coherently assign an 80% probability to humanity being destroyed by machine superintelligence, and a 70% conditional probability to humanity being destroyed by nanotechnological warfare given that humanity is not destroyed by machine superintelligence. However, if the unconditional (all-things-considered) probability of our being eradicated by superintelligence is 80%, then the unconditional probability of our being eradicated by nanotech war must be no greater than 20%, since **we can only be eradicated once**.[9]

# They Say: “Risk Of Extinction Low/Exaggerated”

Wrong—their takeouts are a product of the availability heuristic and “good-story bias”.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2011** (“The Concept of Existential Risk,” Draft of a Paper published on ExistentialRisk.com, Available Online at <http://www.existentialrisk.com/concept.html>, Accessed 07-04-2011)

Many kinds of cognitive bias and other psychological phenomena impede efforts at thinking clearly and dealing effectively with existential risk.[32]

For example, use of the availability heuristic may create a “good-story bias” whereby people evaluate the plausibility of existential-risk scenarios on the basis of experience, or on how easily the various possibilities spring to mind. Since nobody has any real experience with existential catastrophe, expectations may be formed instead on the basis of fictional evidence derived from movies and novels. Such fictional exposures are systematically biased in favor of scenarios that make for entertaining stories. Plotlines may feature a small band of human protagonists successfully repelling an alien invasion or a robot army. A story in which humankind goes extinct suddenly—without warning and without being replaced by some other interesting beings—is **less likely to succeed at the box office** (although **more likely to happen in reality**).

# They Say: “Probability Outweighs Magnitude”

Even if the probability is low, the risk is high.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2011** (“The Concept of Existential Risk,” Draft of a Paper published on ExistentialRisk.com, Available Online at <http://www.existentialrisk.com/concept.html>, Accessed 07-04-2011)

We can explicate the seriousness of a risk as the expected loss associated with it. That is,

[equation omitted — without using graphics, closest version is this: Seriousness(R) = E[Loss(R)] = P(R)Loss(R)]

If some particular risk is defined in terms of how much value is lost as a consequence of an untoward event—e.g., the risk “lightning kills one person”—then Loss(R) can be straightforwardly read off from the definition (in this case, the value of the loss of one life).[4] Often, however, risks are defined without explicit reference to the value of the loss they would cause. For example, the risk “there is a smallpox outbreak” materializes if and only if there is a smallpox outbreak; but the value lost as a result of such an event ranges over a wide interval: The outbreak might kill nobody or it might produce hundreds of millions of casualties. In such a case, Loss(R) is itself an expectation value:

[equation omitted — without using graphics, closest version is this: Loss(R)=E Loss (R, hi)P(h1)]

The sum here is over a partition of specific hypotheses, H = {hi}, about the specific ways in which the unfavorable event might unfold. **A risk of some event X occurring can** therefore **be serious even if** (a) **X is unlikely to occur and** (b) **it is unlikely that much harm would result if X does occur. Such a risk can still be serious if the potential harm is sufficiently great**. Thus, for example, the risk of theft of a nuclear weapon from a military installation is fairly serious, even though it may be unlikely that any such weapon will be stolen or, if stolen, successfully detonated. The worst-case scenario is sufficiently bad that it is worth taking precautions even against this double unlikelihood. For this reason, nuclear weapons are not only kept under lock and key, protected by armed guards, but are also equipped with specialized security features such as permissive action links.

Their first-order probability assessment is inaccurate because it ignores uncertainty and error-proneness—even if our scenario is not probable, the risk is high.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2011** (“The Concept of Existential Risk,” Draft of a Paper published on ExistentialRisk.com, Available Online at <http://www.existentialrisk.com/concept.html>, Accessed 07-04-2011)

Probability can be understood in different senses, but most relevant here is the epistemic sense in which probability is construed as (something like) **the credence that an ideally reasonable observer should assign to the risk’s materializing based on currently available evidence**.[5] If something is not known to be objectively safe, it is risky at least in the subjective sense relevant to decision making. Consider the hypothetical risk from particle collider experiments. It is very likely that these experiments have no potential whatsoever for causing global disaster; and that therefore the objective risk is zero, as most experts believe. **But just how confident can we be that there is no objective risk?** An empty cave is likewise unsafe in the relevant sense if you cannot tell whether or not it is home to a hungry bear. It would be **rational** for you to avoid the cave if you reasonably judge that the expected harm of entry outweighs the expected benefit.

Assessing risk probabilities is often difficult. The **uncertainty** and **error-proneness** of our first-order assessments of risk is **itself something we must factor into our all-things-considered probability assignments**. This factor often **dominates** in low-probability, high-consequence risks—especially those involving poorly understood natural phenomena, complex social dynamics, or new technology, or those that are difficult to assess for other reasons. Suppose that some scientific analysis A indicates that some catastrophe X has an extremely small probability P(X) of occurring. Then the probability that A has some hidden crucial flaw **may easily be much greater** than P(X).[6] Furthermore, the conditional probability of X given that A is crucially flawed, P(X |¬A), may be **fairly high**. We may then find that **most of the risk of X resides in the uncertainty of our scientific assessment that P(X) was small** (figure 1).(9)

# They Say: “Plan Doesn’t ‘Solve’ Extinction”

That’s not our argument—

The plan *reduces* existential risk, it doesn’t eliminate it.

And, that’s important—the difference in conditional probabilities is key to assessing the desirability of the plan.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2011** (“The Concept of Existential Risk,” Draft of a Paper published on ExistentialRisk.com, Available Online at <http://www.existentialrisk.com/concept.html>, Accessed 07-04-2011)

We should also distinguish between the all-things-considered probability of an adverse outcome and various conditional probabilities, such as the conditional probability of an adverse outcome given that some proposed avertive action is (or is not) taken. Each kind of probability term is relevant, but to different purposes. When deciding whether some precaution is worth taking, we need to know **the difference in conditional probabilities**—that is, **how much the precaution will lower the risk**.

# They Say: “Prioritizing Existential Risk Hurts Currently-Existing People”

We should do both—there’s no forced choice.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2011** (“Existential Risks FAQ,” Version 1.0, ExistentialRisk.com, Available Online at http://www.existentialrisk.com/faq.html, Accessed 07-04-2011)

*Shouldn’t we focus on helping the people who exist now and who are in need, rather than on reducing existential risk?*

**The easy answer would be to say that we should do both**. Perhaps the easy answer is the correct answer.

The underlying question hinges on deep and difficult issues in moral philosophy and population ethics—issues on which there is no consensus, even among smart and decent people who have thought long and hard about them. We should recognize that we are, for the time being, laboring under moral uncertainty on this point.

It is important to note, however, that given certain moral assumptions—assumptions that are fairly widely, though by no means universally, accepted—existential risk mitigation comes up as **a dominant moral priority** (see the answer to the previous questions).

Emphasizing existential risks doesn’t mean ignoring current problems—their argument is a *reduction ad absurdum*.

Jason G. **Matheny**, Research Associate at the Future of Human Institute at Oxford University, Ph.D. Candidate in Applied Economics at Johns Hopkins University, holds a Master’s in Public Health from the Bloomberg School of Public Health at Johns Hopkins University and an M.B.A. from the Fuqua School of Business at Duke University, **2007** (“Reducing the Risk of Human Extinction,” *Risk Analysis*, Volume 27, Issue 5, October, Available Online at http://jgmatheny.org/matheny\_extinction\_risk.htm, Accessed 07-04-2011)

It might be feared that consideration of extinction risks would lead to a reductio ad absurdum: we ought to invest all our resources in asteroid defense or nuclear disarmament, instead of AIDS, pollution, world hunger, or other problems we face today. On the contrary, programs that create a healthy and content global population are likely to reduce the probability of global war or catastrophic terrorism. They should thus be seen as an essential part of a portfolio of risk-reducing projects.

# They Say: “Extinction Unlikely / Empirically Denied”

The fact that we haven’t gone extinct yet isn’t a reason that we won’t in the future.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2002** (“Existential Risks: Analyzing Human Extinction Scenarios and Related Hazards,” *Journal of Evolution and Technology*, Volume 9, Number 1, Available Online at http://www.nickbostrom.com/existential/risks.html, Accessed 07-04-2011)

Other anthropic arguments may be more successful: the argument based on the Fermi-paradox is one example and the next section provides another. In general, one lesson is that we should be careful not to use the fact that life on Earth has survived up to this day and that our humanoid ancestors didn’t go extinct in some sudden disaster to infer that that Earth-bound life and humanoid ancestors are highly resilient. Even if on the vast majority of Earth-like planets life goes extinct before intelligent life forms evolve, we should still expect to find ourselves on one of the exceptional planets that were lucky enough to escape devastation.[15] In this case, **our past success provides no ground for expecting success in the future**.

# They Say: “Current Lives Outweigh – General”

No justification for valuing current lives over future lives when it comes to human extinction.

Jason G. **Matheny**, Research Associate at the Future of Human Institute at Oxford University, Ph.D. Candidate in Applied Economics at Johns Hopkins University, holds a Master’s in Public Health from the Bloomberg School of Public Health at Johns Hopkins University and an M.B.A. from the Fuqua School of Business at Duke University, **2007** (“Reducing the Risk of Human Extinction,” *Risk Analysis*, Volume 27, Issue 5, October, Available Online at http://jgmatheny.org/matheny\_extinction\_risk.htm, Accessed 07-04-2011)

An extinction event today could cause the loss of thousands of generations. This matters to the extent we value future lives. Society places some value on future lives when it accepts the costs of long-term environmental policies or hazardous waste storage. Individuals place some value on future lives when they adopt measures, such as screening for genetic diseases, to ensure the health of children who do not yet exist. **Disagreement**, then, **does not center on whether future lives matter**, but on **how much they matter**.6 Valuing future lives less than current ones ("intergenerational discounting") has been justified by arguments about time preference, growth in consumption, uncertainty about future existence, and opportunity costs. I will argue that **none of these justifications applies to the benefits of delaying human extinction**.

No basis of devaluing future lives.

Jason G. **Matheny**, Research Associate at the Future of Human Institute at Oxford University, Ph.D. Candidate in Applied Economics at Johns Hopkins University, holds a Master’s in Public Health from the Bloomberg School of Public Health at Johns Hopkins University and an M.B.A. from the Fuqua School of Business at Duke University, **2007** (“Reducing the Risk of Human Extinction,” *Risk Analysis*, Volume 27, Issue 5, October, Available Online at http://jgmatheny.org/matheny\_extinction\_risk.htm, Accessed 07-04-2011)

In summary, there are good reasons not to discount the benefits of extinction countermeasures. Time preference is not justifiable in intergenerational problems, there is no diminishing marginal utility from having ever existed, and uncertainties about human existence should be represented by expected values. I thus assume that **the value of future lives cannot be discounted**. Since this position is controversial, I later show how acceptance of discounting would affect our conclusions.

Even if they’re right about discounting, the plan’s still cost-effective.

Jason G. **Matheny**, Research Associate at the Future of Human Institute at Oxford University, Ph.D. Candidate in Applied Economics at Johns Hopkins University, holds a Master’s in Public Health from the Bloomberg School of Public Health at Johns Hopkins University and an M.B.A. from the Fuqua School of Business at Duke University, **2007** (“Reducing the Risk of Human Extinction,” *Risk Analysis*, Volume 27, Issue 5, October, Available Online at http://jgmatheny.org/matheny\_extinction\_risk.htm, Accessed 07-04-2011)

Although the usual justifications for discounting do not apply to extinction, we might accept discounting and still conclude that delaying human extinction is cost effective. In the tabular display below I estimate the cost effectiveness of asteroid defense under different discounting schemes. As above, these estimates assume asteroid defense will save an expected 8 billion life-years. However, now the value of future life-years is discounted, relative to the value of a life-year lived now. The cost of asteroid detection and deflection is still assumed to be $20 billion, paid in the present.

Discount Rate (Form) Present Value of Life-Years Saved Cost per(Present Value) Life-Year Saved

No discounting 8.0 × 109 $2.50

Gamma (Weitzman, 2001 ) 1.4 × 108 $140

1% constant geometric 5.0 × 105 $40,000

3% constant geometric 1.7 × 105 $120,000

5% constant geometric 1.0 × 105 $200,000

The cost per life-year saved is $2.50 in the undiscounted case and $140 in the declining discounted case. Under constant discounting, the cost per life-year saved ranges from $40,000 to $200,000. Because the value of future life-years declines rapidly under constant discounting, these costs change by less than $1 if one pessimistically assumes a human duration of 1,000 years. Thus, even with discounting, and even assuming a 1,000-year human duration, asteroid defense could be more cost effective than much existing health spending.

Even if we expected humanity to become extinct within a generation, traditional statistical life valuations would warrant a $16 billion to $32 billion annual investment in asteroid defense (Gerrard & Barber, 1997 ). Yet the United States spends only $4 million per year on asteroid detection and there is no direct spending on mitigation.17

# They Say: “Current Lives Outweigh – Temporal Preference”

No ethical basis for temporal preference.

Jason G. **Matheny**, Research Associate at the Future of Human Institute at Oxford University, Ph.D. Candidate in Applied Economics at Johns Hopkins University, holds a Master’s in Public Health from the Bloomberg School of Public Health at Johns Hopkins University and an M.B.A. from the Fuqua School of Business at Duke University, **2007** (“Reducing the Risk of Human Extinction,” *Risk Analysis*, Volume 27, Issue 5, October, Available Online at http://jgmatheny.org/matheny\_extinction\_risk.htm, Accessed 07-04-2011)

Under time preference, a good enjoyed in the future is worth less, intrinsically, than a good enjoyed now. The typical justification for time preference is descriptive—most people make decisions that suggest that they value current goods more than future ones. However, it may be that people's time preference **applies only to instrumental goods**, like money, whose value predictably decreases in time. In fact, it would be difficult to design an experiment in which time preference for an intrinsic good (like happiness), rather than an instrumental good (like money), is separated from the other forms of discounting discussed below. But even supposing individuals exhibit time preference within their own lives, **it is not clear how this would ethically justify discounting across different lives and generations** (Frederick, 2006 ; Schelling, 2000 ).

In practice, discounting the value of future lives would lead to results few of us would accept as being ethical. For instance, if we discounted lives at a 5% annual rate, a life today would have greater intrinsic value than **a billion lives 400 years hence** (Cowen & Parfit, 1992 ). Broome (1994) suggests most economists and philosophers recognize that **this preference for ourselves over our descendents is unjustifiable** and agree that ethical impartiality requires setting the intergenerational discount rate to zero. After all, if we reject spatial discounting and assign equal value to contemporary human lives, whatever their physical distance from us, we have similar reasons to **reject temporal discounting**, and assign equal value to human lives, **whatever their temporal distance from us**. I Parfit (1984) , Cowen (1992) , and Blackorby et al. (1995) have similarly argued that **time preference across generations is not ethically defensible**.7

# They Say: “Current Lives Outweigh – Diminishing Marginal Utility”

There’s no diminishing marginal utility to existence—no basis for discounting future generations.

Jason G. **Matheny**, Research Associate at the Future of Human Institute at Oxford University, Ph.D. Candidate in Applied Economics at Johns Hopkins University, holds a Master’s in Public Health from the Bloomberg School of Public Health at Johns Hopkins University and an M.B.A. from the Fuqua School of Business at Duke University, **2007** (“Reducing the Risk of Human Extinction,” *Risk Analysis*, Volume 27, Issue 5, October, Available Online at http://jgmatheny.org/matheny\_extinction\_risk.htm, Accessed 07-04-2011)

There could still be other reasons to discount future generations. A common justification for discounting economic goods is that their abundance generally increases with time. Because there is diminishing marginal utility from consumption, future generations may gain less satisfaction from a dollar than we will (Schelling, 2000 ). This principle makes sense for intergenerational transfers of most economic goods **but not for intergenerational transfers of existence**. There is **no diminishing marginal utility** from having ever existed. There is **no reason** to believe existence matters less to a person 1,000 years hence than it does to a person 10 years hence.

# They Say: “Current Lives Outweigh – Uncertainty”

Uncertainty about future generations doesn’t warrant discounting their interests.

Jason G. **Matheny**, Research Associate at the Future of Human Institute at Oxford University, Ph.D. Candidate in Applied Economics at Johns Hopkins University, holds a Master’s in Public Health from the Bloomberg School of Public Health at Johns Hopkins University and an M.B.A. from the Fuqua School of Business at Duke University, **2007** (“Reducing the Risk of Human Extinction,” *Risk Analysis*, Volume 27, Issue 5, October, Available Online at http://jgmatheny.org/matheny\_extinction\_risk.htm, Accessed 07-04-2011)

Discounting could be justified by our uncertainty about future generations' existence. If we knew for certain that we would all die in 10 years, it would not make sense for us to spend money on asteroid defense. It would make more sense to live it up, until we become extinct. A discount scheme would be justified that devalued (to zero) anything beyond 10 years.

Dasgupta and Heal (1979, pp. 261–262) defend discounting on these grounds—we are uncertain about humanity's long-term survival, so planning too far ahead is imprudent.8 Discounting is an approximate way to account for our uncertainty about survival (Ponthiere, 2003). But it is **unnecessary**—an analysis of extinction risk should equate the value of averting extinction at any given time with the expected value of humanity's future from that moment forward, which includes the probabilities of extinction in all subsequent periods (Ng, 2005). If we discounted the expected value of humanity's future, **we would count future extinction risks twice**—once in the discount rate and once in the undiscounted expected value—and **underestimate the value of reducing current risks**.

In any case, Dasgupta and Heal's argument does not justify traditional discounting at a constant rate, as the probability of human extinction is unlikely to be uniform in time.9 Because of nuclear and biological weapons, the probability of human extinction could be higher today than it was a century ago; and if humanity colonizes other planets, the probability of human extinction could be lower then than it is today.

Even Rees's (2003) pessimistic 50-50 odds on human extinction by 2100 would be equivalent to an annual discount rate under 1% for this century. (If we are 100% certain of a good's existence in 2007 but only 50% certain of a good's existence in 2100, then the expected value of the good decreases by 50% over 94 years, which corresponds to an annual discount rate of 0.75%.) As Ng (1989) has pointed out, a constant annual discount rate of 1% implies that we are more than 99.99% certain of not surviving the next 1,000 years. Such pessimism seems unwarranted.

# They Say: “Current Lives Outweigh – Opportunity Costs”

Opportunity costs aren’t a reason to discount future generations.

Jason G. **Matheny**, Research Associate at the Future of Human Institute at Oxford University, Ph.D. Candidate in Applied Economics at Johns Hopkins University, holds a Master’s in Public Health from the Bloomberg School of Public Health at Johns Hopkins University and an M.B.A. from the Fuqua School of Business at Duke University, **2007** (“Reducing the Risk of Human Extinction,” *Risk Analysis*, Volume 27, Issue 5, October, Available Online at http://jgmatheny.org/matheny\_extinction\_risk.htm, Accessed 07-04-2011)

A last argument for intergenerational discounting is from opportunity costs: without discounting, we would always invest our money rather than spend it now on important projects (Broome, 1994 ). For instance, if we invest our money now in a stock market with an average 5% real annual return, in a century we will have 130 times more money to spend on extinction countermeasures (assuming we survive the century). This reasoning could be extended indefinitely (as long as we survive). This could be an argument for investing in stocks rather than extinction countermeasures if: the rate of return on capital is exogenous to the rate of social savings, the average rate of return on capital is higher than the rate of technological change in extinction countermeasures, and the marginal cost effectiveness of extinction countermeasures does not decrease at a rate equal to or greater than the return on capital.

First, the assumption of exogeneity can be rejected. Funding extinction countermeasures would require spending large sums; if, instead, we invested those sums in the stock market, they would affect the average market rate of return (Cowen & Parfit, 1992 ). Second, some spending on countermeasures, such as research on biodefense, has its own rate of return, since learning tends to accelerate as a knowledge base expands. This rate could be higher than the average rate of return on capital. Third, if the probability of human extinction significantly decreases after space colonization, there may be a small window of reducible risk: the period of maximum marginal cost effectiveness may be limited to the next few centuries.

Discounting would be a crude way of accounting for opportunity costs, as cost effectiveness is probably not constant. A more precise approach would identify the optimal invest-and-spend path based on estimates of current and future extinction risks, the cost effectiveness of countermeasures, and market returns.

# They Say: “Free Market Solves”

Policy interventions are uniquely warranted in the context of existential risk mitigation—multiple reasons.

Jason G. **Matheny**, Research Associate at the Future of Human Institute at Oxford University, Ph.D. Candidate in Applied Economics at Johns Hopkins University, holds a Master’s in Public Health from the Bloomberg School of Public Health at Johns Hopkins University and an M.B.A. from the Fuqua School of Business at Duke University, **2007** (“Reducing the Risk of Human Extinction,” *Risk Analysis*, Volume 27, Issue 5, October, Available Online at http://jgmatheny.org/matheny\_extinction\_risk.htm, Accessed 07-04-2011)

We may be poorly equipped to recognize or plan for extinction risks (Yudkowsky, 2007). We may not be good at grasping the significance of very large numbers (catastrophic outcomes) or very small numbers (probabilities) over large timeframes. We struggle with estimating the probabilities of rare or unprecedented events (Kunreuther et al., 2001). Policymakers may not plan far beyond current political administrations and rarely do risk assessments value the existence of future generations.18 We may unjustifiably discount the value of future lives. Finally, extinction risks are market failures where an individual enjoys no perceptible benefit from his or her investment in risk reduction. **Human survival may thus be a good requiring deliberate policies to protect**.

Existential threats are a market failure.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2002** (“Existential Risks: Analyzing Human Extinction Scenarios and Related Hazards,” *Journal of Evolution and Technology*, Volume 9, Number 1, Available Online at http://www.nickbostrom.com/existential/risks.html, Accessed 07-04-2011)

Reductions in existential risks are **global public goods** [13] and may therefore be **undersupplied by the market** [14]. Existential risks are **a menace for everybody** and may require acting on the international plane. Respect for national sovereignty is **not a legitimate excuse** for failing to take countermeasures against a major existential risk.

# They Say: “Fear of Existential Risk Bad”

Their criticism doesn’t apply to existential risks—the problem is not too much fear but too little.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2002** (“Existential Risks: Analyzing Human Extinction Scenarios and Related Hazards,” *Journal of Evolution and Technology*, Volume 9, Number 1, Available Online at http://www.nickbostrom.com/existential/risks.html, Accessed 07-04-2011)

We cannot necessarily rely on the institutions, moral norms, social attitudes or national security policies that developed from our experience with managing other sorts of risks. **Existential risks are a different kind of beast**. We might find it hard to take them as seriously as we should simply because we have never yet witnessed such disasters.[5] **Our collective fear-response is likely ill calibrated to the magnitude of threat**.

# They Say: “Technology Bad”

Only technology can reduce existential risk—benefits outweigh the costs.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2002** (“Existential Risks: Analyzing Human Extinction Scenarios and Related Hazards,” *Journal of Evolution and Technology*, Volume 9, Number 1, Available Online at http://www.nickbostrom.com/existential/risks.html, Accessed 07-04-2011)

We should not blame civilization or technology for imposing big existential risks. Because of the way we have defined existential risks, a failure to develop technological civilization would imply that we had fallen victims of an existential disaster (namely a crunch, “technological arrest”). **Without technology, our chances of avoiding existential risks would** therefore **be nil. With technology, we have some chance**, although the greatest risks now turn out to be those generated by technology itself.

\*\*\*Case/CPs

# AT: Ground CP

**Extend the solvency deficits from the 1ac**

**Perm do both**

Doesn’t solve – atmosphere and sunlight block the scopes

National Academies, 10

[ Over many decades, the National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council have earned a solid reputation as the nation's premier source of independent, expert advice on scientific, engineering, and medical issues, “Defending Planet Earth: Near-Earth Object Surveys and Hazard Mitigation Strategies” http://books.nap.edu/openbook.php?record\_id=12842&page=41]

The 2003 NASA NEO Science Definition Team Study concluded that an infrared space telescope is a powerful and efficient means of obtaining valuable and unique detection and characterization data on NEOs (Stokes et al., 2003). The thermal infrared, which denotes wavelengths of light from about 5 to 10 microns, is the most efficient color regime for an NEO search. An orbiting infrared telescope that detects these wavelengths and has a mirror between 0.5 and 1 meter in diameter is sufficient to satisfy the goal of detecting 90 percent of potentially hazardous NEOs 140 meters in diameter or greater. Also, locating an NEO-finding observatory internal to Earth’s orbit is preferable for identifying NEOs with orbits mostly or entirely inside Earth’s orbit. Specific advantages to space-based observations include the following: A space-based telescope can search for NEOs whose orbits are largely inside Earth’s orbit. These objects are difficult to find using a ground-based telescope, as observations risk interference from the Sun when pointing to the areas of the sky being searched; Thermal-infrared observations are immune to the bias affecting the detection of low-albedo objects in visible or near-infrared light, by observing the thermal signal from the full image of the NEO, providing more accurate albedo measurements (see the discussion above); Space-based searches can be conducted above Earth’s atmosphere, eliminating the need to calibrate the effects introduced by the atmosphere on the light from an NEO; and Observations can be made 24 hours a day.

Doesn’t solve – inner-earth objects

ESA, 3

[European Space Agency, Jan 2003, “ EARTHGUARD-I A Space-Based NEO Detection System,” http://www.esa.int/gsp/completed/neo/earthguard1\_execsum.pdf]

There is good theoretical evidence, however, to suggest there may be a population of asteroids in orbits that lie entirely within the Earth’s orbit, the so-called “inner-Earth objects” (IEOs) or Apohele asteroids. As a result of perturbation of their orbits by the inner planets they may become Earth crossers but remain virtually undetectable from the Earth. Only with the help of a space-based search telescope observing at small angular distances from the Sun can we hope to close the gap left by the groundbased surveys and facilitate a complete and reliable assessment of the terrestrial impact hazard

# AT: Private CP

Perm: Do both – Government and Private industry is needed

Gangale and Rowley, 7

[Thomas and Marilyn, San Francisco State U, "To Build Bifrost:

Developing Space Property Rights and Infrastructure"

<http://www.astrosociology.com/Library/PDF/Submissions/To%20Build%20Bifrost.pdf>]

**The real barrier to commercializing space is the huge capital investment that is required**

**to develop a transplanetary infrastructure. Some authors imagine that private enterprise**

**can pull itself up to the Moon and Mars by its own bootstraps. This position ignores the**

**history of opening frontiers**. The libertarian mantra that “government is the problem” is

nonsensical. **Neither is government the entire solution, but it is a necessary partner in the**

**solution--on land and on sea, in the air and in space. Building a transplanetary**

**infrastructure is not something that private enterprise is going to accomplish... ever. First**

**must come the political vision to build rainbow bridges to the heavens, then will come the**

**economic incentive to travel them.**

# AT: Refuge CP

**1. Perm: Do Both**

**IF THEY READ PTX/$ NB:**

**2. Their Matheny evidence says $20 billion – still triggers the link.**

**2/3. [Read the Space Colonization Add-on]**

**3/4. Solvency deficit – doesn’t solve the integration of astrosociology (extend astrosociology key to surviving, living after near-extinction)**

# AT: Existential Risk Trade-off DA

Bostrom supports the plan – he’s a solvency advocate for the plan

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2002** (“Existential Risks: Analyzing Human Extinction Scenarios and Related Hazards,” *Journal of Evolution and Technology*, Volume 9, Number 1, Available Online at http://www.nickbostrom.com/existential/risks.html, Accessed 07-04-2011)

Some of the lesser existential risks can be countered fairly cheaply. For example, there are organizations devoted to mapping potentially threatening near-Earth objects (e.g. NASA’s Near Earth Asteroid Tracking Program, and the Space Guard Foundation). These could be given additional funding. To reduce the probability of a “physics disaster”, a public watchdog could be appointed with authority to commission advance peer-review of potentially hazardous experiments. This is currently done on an ad hoc basis and often in a way that relies on the integrity of researchers who have a personal stake in the experiments going forth.

# AT: Get Off The Rock CP

Getting off the rock is not a sustainable alternative – if there’s any risk of anyone staying on the Earth post-CP, we win

**Pass 6** (Jim, 09-21, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “Applied Astrosociology: The New Imperative to Protect Earth and Human Societies”, STAIF, <http://www.astrosociology.com/Library/PDF/Protecting%20Societies.pdf>)

One way to ensure humanity’s survival, and the survival of social institutions and cultures, involves sending part of the population off planet. This reality will exist, but not for a considerable period. The problem with this solution relates to the fact that the bulk of our species will remain firmly planted on the Earth. One plan may involve establishing one of the first lunar settlements populated by individuals who construct and operate components of the planetary defense system there. Realistically, we must prepare ourselves by constructing the alternatives and the necessary infrastructure to protect our planet and beyond that, our societies. Other partial solutions could involve sending partial populations, presumably volunteers, to live in underground communities and others to communities under the surface of the oceans on Earth. We cannot begin early enough for an unknown cosmic body may already have us targeted.

**Perm: Do both.**

**Astrosociology is a prerequisite to getting off the rock**

**K the NB OR Read the Space Colonization Add-on**

# AT: PIC out of Astrosociology

Astrosociology is critical to effective planetary defense – CP doesn’t solve the case

**Pass 6** (Jim, 09-21, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “Applied Astrosociology: The New Imperative to Protect Earth and Human Societies”, STAIF, <http://www.astrosociology.com/Library/PDF/Protecting%20Societies.pdf>)

Historically, a great divide existed between the social sciences and aerospace in which the social sciences were rarely involved in the space community and those in the natural sciences saw no reason to change this social pattern.2 As will become clear, however, the need for planetary defense surpasses the usual ideas of simply avoiding a collision with the Earth. Instead, it involves saving the diversity and achievements of societies, and human civilization itself. Such a goal must involve the social sciences, behavioral sciences, and the humanities (hereafter referred to as the social sciences for brevity) due to their focus on issues related to society and human behavior. Although its subject matter was largely absent in the past,3 astrosociology in particular now exists in order to bring in social scientists to work with space scientists and engineers. First, let us assess the cosmic threats to the existence of our social systems as well as to our lives as individuals. Most members of the public failed to recognize any threats to our existence coming from space until quite recently.4 Many knew about the mass extinction of the dinosaurs that was most likely due to an asteroid impact, yet they tended to dismiss it as an improbable event that killed off a bunch of dumb animals. Surely, it was commonly believed, humans would be able to counter such a threat should the unlikely possibility prove itself a real hazard once again. Therefore, until recently, even experts dismissed the threat as an improbable event and thus not worth pursuing, including many space scientists specializing in the field. As a result, the nations around the world possess nearly no capacity to protect themselves at the current time, with very little coordination among them for this purpose. If we detected a large space object on a collision course with the Earth, only a disorganized response could result as various societies attempt to coordinate some type of hasty defense. The actual seriousness of the threat received little notice, and remained underestimated for decades despite the fact that history has shown the Earth is far from immune from cosmic impacts. For one thing, small meteorites bombard the Earth every day. One of the more famous examples is the Tunguska incident in 1908, which probably involved a meteor that exploded in the Earth’s atmosphere over central Siberia sending a shockwave that flattened trees over a vast area. The tremendous devastation resulted in very little effect on the policies of societies around the world. The object hit a desolate area, so it had no great impact upon any population. Had it struck a populated area, the reaction would have brought attention to the true nature of the threat.5 Even so, humanity lacked the capability to mitigate the threat at the beginning of the twentieth century. In part, the remoteness of past episodes in terms of both distance and time relegated the subjective threat to a gamble worth taking. Traditionally, most scientists took a similar attitude. That is, until recently. Over the last ten years or so, scientists have become increasingly certain that a huge catastrophe is inevitable from a space-born source at some point in the future, even if they disagree about the probability of such an event.6 Identification of a true threat to our planet could occur in a century, a decade, or tomorrow. The watershed event that put this reality into the forefront of scientists’ minds, and ultimately the minds of publics around the world, occurred after Jupiter’s gravitational field ripped apart Comet Shoemaker-Levy 9 after it passed too closely. Between July 16 and July 22, 1994, 21 distinct fragments of this comet struck Jupiter. It represents the only time in human history that a space object or fragments of it collided with a planet in our solar system under the scrutiny of human observers. The resulting impacts from pieces as large as approximately two kilometers traveling at sixty kilometers per second left visible scars in Jupiter’s atmosphere that lasted for several weeks. Just one of the larger pieces could have ended human civilization had it struck the Earth. The impacts of these cometary fragments served to drive home the fact that while the Earth was not targeted by this particular comet, humanity may not be so fortunate the next time around. Assessment of the threat changed overnight into a realization that our solar system is still inherently chaotic and dangerous.7 Assessment changed from very little concern to a “new” reality in which the Earth suddenly seemed vulnerable and unprotected. Protection from comet nucleus and asteroid impacts suddenly became mainstream science rather than a “backwater” concern of sorts. Near Earth Objects (NEOs) and specifically Near Earth Asteroids (NEAs) probably pose the most immediate threats. Most of these objects circle the Sun between Mars and Jupiter. If left alone, the vast majority of these objects would pose little or no threat to the Earth. Others may have already the Earth in their sights. Additionally, objects can interact with one another gravitationally and thereby change their orbital trajectories as with Comet Shoemaker-Levy 9. While scientists can track asteroids for at least a short time, comets and asteroids from the Kuiper belt beyond Pluto and the Oort cloud even farther away from the orbit of the Earth can arrive seemingly from nowhere due to their large orbits around the Sun. If on a collision course with our planet, they would present Earthlings little or no time to react. Comets can also originate in other solar systems and later captured by our Sun. We can devise protection strategies against NEAs though other types of space objects present different problems altogether. For example, the inclusion of comet protection requires a defensive system with elements capable of reacting immediately to a newly discovered threat from near Earth observation. Elements stationed far from our planet could provide us with a greater warning period. We need to determine whether to first construct a system capable of only a considerable reaction time or strive for comet protection from the beginning. The latter would necessitate components of the system in space as well as a much more thorough survey of our solar system. Most of us know that an impact of a cosmic object resulted in the extinction of nearly all life on the Earth approximately sixty-five million years ago. The impact resulted in a global rather than local catastrophe that changed the course of life’s evolutionary path subsequent to its occurrence in the distant past. We can trace our emergence as the dominant species to this monumental event. How could the impact of a 10-km asteroid or comet kill such a large fraction of the Earth’s creature, including the dinosaurs? No one is sure about the details, but a number of suggestions have been put forth. To start with, there is the global cloud of impact-generated dust, sufficient to produce a layer an inch or more think over the whole planet when it settled back to the ground. Calculations show that such a quantity of dust, when suspended in the atmosphere, could block all sunlight from reaching the surface. Temperatures would have dropped, photosynthesis ceased, and perhaps 99% of the individual organisms on our planet perished within a few weeks.8 While not all life became extinct, the dominant species of the time certainly did. The lesson from this event informs us that we are at risk and should take some concerted actions to increase the probability of our survival. No one can predict the time of impact or degree of devastation of the next big event, but we can take rational steps in the attempt to increase the odds of our survival. Yet small objects that disintegrate in our atmosphere constantly bombard the Earth, and witnesses have documented their sightings of larger objects throughout recorded history.9, 10 Most surviving witnesses failed to record their observations for sociological reasons. “...[O]ne need not subscribe to conspiracy theories to see that various forms of censorship and discrimination must have profoundly deterred the publication and preservation of these reports” by peasants and lower-class witnesses.11 In contrast to the past, the events that occur today are subject to immediate dissemination to the public by the electronic and printed media. Agreement about the size of an object capable of ending human civilization, and those of other categories of threats, has slowly increased over time. The threshold for global killers is usually taken to be 1 to 2 km in diameter. The definition is a bit arbitrary, because the lethality of the impact depends on where and when it lands, and to a smaller degree on its composition (density). There are conceivable circumstances in which a slightly smaller body might be equally damaging.12 Others such as Morrison et al. (2004)13 estimate the size of the civilization destroyer at 2-3 kilometers. In contrast, space bodies of about 100 meters represent regional hazards and those of 10 meters represent local threats.14 Each of these categories requires a different response. What is the likelihood of an impact? Objective estimates of the potential damage due to asteroid impacts (consequences multiplied by risk) are within the range of other risks that governments often take very seriously...Moreover, public interest is high, fueled by increasing discovery rates and the continuing interests of the international news media.15 The likelihood of dying by an asteroid impact is approximately one in 20,000, a probability comparable to dying in a plane crash and more likely than dying in a tornado, bite, or sting (though less likely than a car crash or electrocution).16 A large impact is not something we expect to happen in our lifetime, in our children’s lifetime, or even our grandchildren’s lifetime. It would be very bad luck if it did happen. But it could happen at any time (David Morrison as quoted by Britt 2002).17 Further technical details about the characteristics of the strikes of these objects fall outside the scope of the present discussion. Suffice it to state that the likelihood of an impact of a large object (greater than one kilometer) is well above zero, inevitable over large time scales, so the threat demands measured attention. Smaller impacts by smaller objects are even more likely and can cause widespread devastation depending on their size. The planetary defense system discussed later does not represent something we necessarily have to construct immediately but rather a model that demands consideration and debate; one that adds new astrosociological issues to the current discussion currently dominated by space scientists, science and technology authors, and engineers. The contributions of social scientists should join the dialogue. A cultural/social threat that often goes unconsidered involves the unwillingness to do anything about the threat, a possibility that some within the space community have considered. I think that what matters is how we react to this knowledge. That, in the long run, is what will make a difference to our planet and its inhabitants. It is not the impact itself that may be immediately relevant; it is how we react to the idea of an impact that may change the course of human history. I am afraid that we will deal with this potentially mind-expanding discovery in the way we deal with most issues that relate to matters of great consequence: we will ignore it until the crisis is upon us.18 Despite the widely accepted assessment of cosmic objects as real and potentially devastating threats to humankind and human societies (chiefly among space scientists and engineers), politicians and publics of various societies may indeed downplay the likelihood of being struck by a comet or asteroid. Assessment of the threat by nonscientists within societies falls under the purview of the social sciences, and the final decision concerning financing and implementation ultimately becomes the responsibility of politicians rather than scientists. The importance of bringing in social scientists should be clear as their training focuses on these exact types of issues; issues beyond the scope of the natural sciences.

# AT: UN CP

Massive timeframe solvency deficit – no other country has the infrastructure for survey

National Academies, 09

[Over many decades, the National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council have earned a solid reputation as the nation's premier source of independent, expert advice on scientific, engineering, and medical issues. “Near-Earth Object Surveys and Hazard Mitigation Strategies:

Interim Report” http://www.nap.edu/catalog.php?record\_id=12738]

Despite expressions of interest in various countries around the globe, the majority of search efforts and funding for discovering NEOs comes from the United States. Several smaller projects, such as the Beijing Schmidt CCD Asteroid Program (no longer operational) and the Asiago DLR Asteroid Survey (an ongoing joint venture between the German Aerospace Agency’s [DLR’s] Institute of Space Sensor Technology and Planetary Exploration, the University of Asiago, and the Astronomical Observatory of Padua in Italy), have made so me inroads on detecting NEOs, but not on the scale of the U.S. projects. In addition, with the notable exception of Canada, through its Near-Earth Object Surveillance Satellite (NEOSSat) mission, and Germany, via its AsteroidFinder mission, which are both relatively limited in scope, no other countries have committed funding for a “next generation” NEO-discovery program. AsteroidFinder The German Aerospace Agency has selected AsteroidFinder as the first pay load to be launched under its new national compact satellite program. Currently the spacecraft is planned to launch sometime in 2012 with a 1-year baseline-mission duration and the possibility of an extension; this mission is funded through the development stage. It will be equipped with a 30-centimeter telescope mirror. Its primary science goals are to estimate the population of NEOs interior to Earth orbit, their size-frequency distribution, and their orbital properties. AsteroidFinder will also aid in the assessment of the imp act hazard due to NEOs and provide a space-based platform detecting space debris from artificial satellites. Near-Earth Object Surveillance Satellite NEOSSat is currently in development and is being constructed in Canada as a joint venture between the Canadian Space Agency (CSA) and Defense Research and Development Canada, an agency of the Canadian Department of National Defence. NEOSSat is based on a previous satellite, MOST, launched in 2003, that remains operational long after completion of its initial mission. Set to launch in mid 2010, NEOSSat is scheduled to operate continuously for at least one year and should operate considerably longer. NEOSSat will conduct two simultaneous projects during its operational lifetime—High-Earth Orbit Surveillance System (HEOSS), which will monitor and track human-made satellites and orbital debris, and Near-Earth Space Surveillance (NESS), which will discover and track NEOs. NEOSSat will be the first satellite to be built on Canada’s Multi-Mission Microsatellite Bus and will be roughly the size of a large suitcase with a mass of approximately 75 kilograms. It will have a 15-centimeter mirror. This microsatellite will operate in a Sun-synchronous orbit at an altitude of ~700 kilometers. NEOSSat will be the first dedicated space platform designed to obtain observations on both human-made and natural objects in near-Earth space. The NESS project will focus primarily on discovering NEOs whose orbits are partially or fully inside Earth’s. NEOSSat will expand overall knowledge of NEOs, monitor them for cometary activity, perform follow-up tracking of newly discovered targets, aid in the development of asteroid search and tracking algorithms for space-based sensors, and explore the synergies between ground- and space-based facilities involved in NEO discovery and characterization. Finding: The United States is the only country that currently has an operating survey/detection program for discovering near-Earth objects; Canada and Germany are both building spacecraft that may contribute to the discovery of near-Earth objects. However, neither mission will detect fainter or smaller objects than ground-based telescopes.

Only U.S. leadership ensures effective response

Dinerman, 9

[Taylor, author and journalist based in New York City, “ The new politics of planetary defense,” July 20, 2009, http://www.thespacereview.com/article/1418/1]

While the US is obviously going to have to take the lead in any effort to detect and possibly deflect any celestial object that might do our planet harm, it will have to consult with others, both to keep other nations informed and to help make the choices needed to deal with the threat. Yet in the end, it is likely that the decision, if there is one, will rest with the President of the United States. He or she is the only world leader today with the wherewithal to deal with such a threat. This is why any planning effort that leans to heavily on international institutions may endanger the whole planet. The process inside an organization like the UN would simply get bogged down in procedural and political questions. US leaders may find that the system would be paralyzed while, for example, nations argued over deflection or destructions methods or who would control and pay for them. Precious time would be lost while nations would consider their own best interests in supporting one approach or another. If the US is have any claim to global leadership in the 21st century it will have to unambiguously take the lead in planetary defense. It should do so in an open way and be ready to listen to everyone’s concerns and ideas. But if the Earth is to be effectively protected, the ultimate decisions will have to be American. In this case “global governance” could end up setting the stage for a disaster.

# Heg Add-on

Doesn’t solve for leadership – U.S. has to lead the asteroid defense effort

Garretson and Kaupa, 8

[ Lieutenant Colonel Garretson is chief, Future Science and Technology Exploration Branch, Headquarters USAF Future Concepts and Transformation, Washington, DC. Major Kaupa, stationed at Edwards AFB, California, is an operational test pilot and test director for the chief of staff of the Air Force’s top-priority acquisition program—the KC-45A, Air & Space Power Journal - Fall 2008, “ Planetary Defense Potential Mitigation Roles of the Department of Defense,” http://www.airpower.maxwell.af.mil/airchronicles/apj/apj08/fal08/garretson.html]

The United States reaps significant economic benefits by providing international security. We have the most to gain by maintaining security and the most to lose if it fails. By visibly pursuing the capability to defend the planet, we make ourselves increasingly essential to international security. Furthermore, we will likely have to pay the bill anyway. The humanitarian crisis that could ensue from an impact with a 300-meter asteroid could easily dwarf the Asian tsunami of 2004. The humanitarian supply, airlift, sealift, and rebuilding costs would be staggering. Economic losses to US investors, huge costs to US insurers, and a possible recession or depression resulting from the loss of a city or nation would likely occur. Despite concerns about the expense of developing such a planetary-defense system, it would translate into a competitive advantage for the United States. Solving difficult problems would create US intellectual capital, industrial capacity, and new technical areas of leadership critical to maintaining our lead in space.

Global nuclear war

**KHALILZAD, 95**

[Zalmay, fmr. Ambassador to Afghanistan, RAND Corporation analyst, “Losing the moment? The United States and the World After the Cold War". The Washington Quarterly 18:2: 03012.]

Under the third option, the United States would seek to retain global leadership and to preclude the rise of a global rival or a return to multipolarity for the indefinite future. On balance, this is the best long-term guiding principle and vision. Such a vision is desirable not as an end in itself, but because a world in which the United States exercises leadership would have tremendous advantages. First, the global environment would be more open and more receptive to American values -- democracy, free markets, and the rule of law. Second, such a world would have a better chance of dealing cooperatively with the world's major problems, such as nuclear proliferation, threats of regional hegemony by renegade states, and low-level conflicts. Finally, U.S. leadership would help preclude the rise of another hostile global rival, enabling the United States and the world to avoid another global cold or hot war and all the attendant dangers, including a global nuclear exchange. U.S. leadership would therefore be more conducive to global stability than a bipolar or a multipolar balance of power system.

# Soft Power Add-on

U.S. space science key to soft power

Dinerman, 8

[Taylor, author and journalist based in New York City, “ The next battlestar,” March 31, 2008, <http://www.thespacereview.com/article/1094/1>]

Most of NASA’s programs can be seen as an expression of America’s “soft power”. By leading a program that expands our knowledge of the solar system and the universe, the space agency contributes to a global sense that America is the world’s leader in science and technology. Others have reached the same conclusion: ESA’s Rosetta mission to the comet Churymov-Gerasimenko can be seen as an attempt to grab some of that soft power for the EU.

Soft power necessary to prevent disease, terrorism, and WMD

Nye, 4

Joseph **Nye**, Harvard, US MILITARY PRIMACY IS FACT - SO, NOW, WORK ON 'SOFT POWER' OF PERSUASION, April 29, 20**04**, p, http://www.ksg.harvard.edu/news/opeds/2004/nye\_soft\_power\_csm\_042904.htm

Soft power co-opts people rather than coerces them. It rests on the ability to set the agenda or shape the preferences of others. It is a mistake to discount soft power as just a question of image, public relations, and ephemeral popularity. It is a form of power - a means of pursuing national interests. When America discounts the importance of its attractiveness to other countries, it pays a price. When US policies lose their legitimacy and credibility in the eyes of others, attitudes of distrust tend to fester and further reduce its leverage. The manner with which the US went into Iraq undercut American soft power. That did not prevent the success of the four-week military campaign, but it made others less willing to help in the reconstruction of Iraq and made the American occupation more costly in the hard-power resources of blood and treasure. Because of its leading edge in the information revolution and its past investment in military power, the US probably will remain the world's single most powerful country well into the 21st century. But not all the important types of power come from the barrel of a gun. Hard power is relevant to getting desired outcomes, but transnational issues such as climate change, infectious diseases, international crime, and terrorism cannot be resolved by military force alone. Soft power is particularly important in dealing with these issues, where military power alone simply cannot produce success, and can even be counterproductive. America's success in coping with the new transnational threats of terrorism and weapons of mass destruction will depend on a deeper understanding of the role of soft power and developing a better balance of hard and soft power in foreign policy.

# AT: STEM CP

Perm: Do both.

[Insert CP links to PTX – be specific to the scenario]

Can’t solve – the CP doesn’t expand or enhance college education – this is key

**Pass 7** (Jim, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant, AIAA Space 2007 Conference and Exposition, “Enhancing Space Exploration by Adding Astrosociology to the STEM model,” <http://astrosociology.com/Library/PDF/Contributions/Space%202007%20Articles/Adding%20Astrosociology%20to%20STEM%20Model.pdf>, 18-20 September)WZ

Ultimately, the only way to develop astrosociology in a legitimate manner involves the creation of programs in existing departments of colleges and universities. The body of knowledge slowly accumulating since 2003 provides prospective astrosociology majors with a sound grounding in the new field.\*\* Unfortunately, they cannot pursue it at the present time due to its absence in the schools they attend. A few students have taken it upon themselves to instill change by beginning to pressure their professors and advisors to accept an astrosociology topic for theses and dissertations, though their success rate still remains inconclusive. Writing research papers about astrosociological topics in introduction and other courses may prove a more accessible way of seeding academia with astrosociology.

In order for astrosociology to truly become an academic field, the efforts of supporters must cross a threshold in which the preexisting (current) condition, an absence of astrosociology, is replaced by its formal presence in the academic world. It would take the form of either a substantial number of students demanding astrosociology courses or professors and other academicians doing the same. An even more effective strategy for astrosociology’s development would consist of a “perfect storm” comprised of the simultaneous demand for this new field by both students and educators across the United States. In fact, the storm would be more “perfect” to the extent that all interested parties advocate it development. It would place enough pressures on departments around the country to begin considering astrosociology courses – perhaps starting with making available an *Introduction to Astrosociology* course on a trial basis. This would serve as a critical initial step. Once astrosociology’s acceptance is demonstrated in academe, then the development of astrosociology will accelerate to new levels otherwise impossible. Similar gains at the high school level and below would also benefit its development immensely.

Once a particular department becomes bold enough to offer the first major in the field, it will herald the beginning of a new era in which the average sociologist/social scientist finally begins to regard the study of astrosocial phenomena as a much more serious matter. Since we cannot afford to presume such an outcome, it behooves supporters from all quarters to pursue the development of astrosociology. It is plausible that the combination of student and faculty pressures will result in the crossing of the threshold that finally results in the initial manifestations of formal astrosociology courses, followed later by the formation of astrosociology programs and departments. Space scientists, engineers, architects, and others in the space community who come to recognize how astrosociology can benefit their efforts serve as another source of support for the developing field and add to the effort further astrosociology’s development as an academic field. Formal collaboration between the social science and space communities has always represented a vital goal from the outset of the author’s efforts to develop this newly emerging field. This represents just another dimension of that mutual need to bring in the social-scientific perspective to the study of space exploration issues in both the non-academic and academic worlds.

# STEM Links to PTX – Inertia

Reforms are unpopular – Congress prefers inertia on NCLB

Hoff, 8 - Education Week (David J., "Darling-Hammond report calls for moving away from K-12 tests and sanctions" <http://ed.stanford.edu/suse/news-bureau/displayRecord.php?tablename=susenews&id=436>)

Federal policymakers almost certainly will be ready to do a thorough review of the NCLB law and other K-12 legislation, according to Washington observers. But Congress and the new president—Democrat or Republican—would be **unlikely to be interested** in making the dramatic changes recommended in the forum's report, one experienced policy hand said. "The tendency of policy is toward inertia, to maintain the same policy or add on to it incrementally," said Jack Jennings, the president of the Center on Education Policy, a Washington group that has tracked implementation of the NCLB law. In K-12 education, for example, Congress has changed direction only twice in the past 50 years, according to Mr. Jennings, who worked as an aide to House Democrats on education issues from 1967 through 1994. The first was when it passed the Elementary and Secondary Education Act in 1965, during the administration of President Lyndon B. Johnson. The ESEA created the Title I program for disadvantaged students—the largest federal K-12 program. The next time was when Congress required states to adopt standards for student performance in the 1994 version of the ESEA, Mr. Jennings said. In passing the latest version of the ESEA, the No Child Left Behind law—championed by President Bush—in 2001, Congress put more teeth into the law by requiring states to hold schools accountable for meeting goals for student performance in reading and mathematics. Mr. Jennings' organization has convened a group of researchers to evaluate federal efforts to improve schools and recommend whether the federal law should be just tinkered with or totally overhauled. One staunch supporter of the NCLB law said **major changes are unlikely.** Congress may be ready to amend the accountability rules and add efforts to improve states’ curricula, but it is unlikely to rewrite the law or add major new provisions, said Kati Haycock, the director of the Education Trust, a Washington nonprofit that lobbies for improving the educational opportunities of disadvantaged children

# STEM Links to PTX – Partisanhip

NCLB debates create partisan fights

Kafer, 4 – Senior Education Policy Analyst @ Heritage

(Krista, “No Child Left Behind: Where Do We Go From Here?” Heritage Foundation Report 7/6/04,

<http://www.heritage.org/research/education/bg1775.cfm>)

Will Rogers once said, "If you ever injected truth into politics, you would have no politics." This is especially true when it comes to education and the federal law known as the No Child Left Behind Act (NCLB). But truth--always a rare commodity--is growing rarer still as the nation approaches November, and discussion about this complex and bipartisan law is deteriorating into a partisan mud fight.

# STEM Links to PTX – PC

Drains political capital – election proves

Lemann, 8 (Nicholas, “What No Child Left Behind Left Behind,” Writer @The Washington Monthly,

<http://www.washingtonmonthly.com/features/2008/0808.lemann.html>)

Both presidential candidates have left themselves some room to maneuver on No Child Left Behind, partly just by **not talking about it** very much. John McCain could conceivably have come all out for vouchers, and abandoned No Child Left Behind as an unwarranted exercise of federal power. He didn’t. Barack Obama could have called for eliminating No Child Left Behind, as Hillary Clinton did (although she voted for it in 2001), for liberal reasons: too much testing and teaching to the test; too little funding and teacher autonomy. He didn’t. It’s safe to assume that no matter who wins the election, **No Child Left Behind will not be going away.**

But to fix it—really fix it—will require dramatic changes and considerable investment of political capital. Neither candidate has indicated that he has that in mind. There isn’t any good way to ensure that students have basic skills, which they desperately need in order not to be left behind in the twenty-first-century economy, without testing. But to start with tests is to go at the problem backward. What schools need is, first, a national standard of what proficiency in reading and math means; second, a curriculum that gets students to that level; and finally, tests tailored specifically to that curriculum. That way teaching the class and "teaching to the test" are the same thing. And the schools with students farthest from proficiency are going to need a lot of extra resources to get them there.

# STEM Links to PTX – PC

Obama has tons of pol cap, but the plan drains it

Stickings, 9 – Assistant Editor, The Moderate Voice

(Michael, “Don't Ask, Don't Tell, Here We Are Back in Culture War Hell,” The Moderate Voice, 1/16/09, lexis)

First, how is it œstartling. The œpronouncement was blunt, to be sure, but, as Fox admits, Obama has long been opposed to the policy. Second, its not like the policy is extremely popular, whereas Obama is. He’ll need to spend much of his political capital on the stimulus package, of course, and then on health care, energy, and education reform, among other initiatives, but the good thing is, he has a lot of capital to spend. There would certainly be opposition both from within the military and from without, and it could become a minor distraction, but Obama would no doubt be able to handle it while making a strong case for doing away with the policy. Third, it is the right that wants to, and intends to, reopen the culture wars, as Palin and others tried to do during the presidential campaign, and it will go there regardless. Yes, this would give them an opening, but standing up for the rights of gays and lesbians to serve their country against bigots who want them to keep quiet about who they are or, better, to get the hell out of the military altogether is a fight Obama and the opponents of the policy should be willing to have.(more¦) Newstex ID: MODV-0001-31100840

# STEM Links to PTX – AT: It Doesn’t

Plan can’t be popular – no constituency for reform

Saba, 8 - president of the American Board for Certification of Teacher Excellence

(Dave, “Student Success Strategy,” American Board for Certification of Teacher Excellence blog, December 3rd, <http://www.abcte.org/blog/2008/12/student-success-strategy>)

It has been **incredibly difficult** to gain momentum for the systemic change necessary for success in all of America’s schools. True change requires a comprehensive strategy that focuses on the many variables that affect student performance. While many individual programs are working toward this goal, those organizations working alone will not produce the education our students deserve and require in order to be competitive in the world market.

The politics of education overshadows the merits of education change in America. The two camps have become so entrenched that many politicians determine which side they need to be on by who supports or fights against any given program. While conservatives usually focus on working toward education reform, that reform is perceived as principally revolving around school choice. As Andy Rotherham opined in a recent blog, conservatives are seen as “reflexively hostile to public schools.”

On the other side, there are powerful groups that want to maintain the status quo. They have been **very effective** in positioning themselves as the student advocate through a comprehensive strategy to push for smaller class sizes, universal pre-k, more spending on education in general, higher salaries for teachers and reduced testing for students. These have the appearance of advocating for students when they really benefit the adults. A state group will work at the state level toward these goals, often with the advice and additional resources of a national group.

Meanwhile, education reform groups operate in a single silo with national leadership and maybe a state group that is advocating for a single item in the reform agenda. Each state represents a win or lose scenario for each group. But each silo really only impacts a small number of students so it is too easy to marginalize that group when compared to the entire system. Reaching a small number of students has not, and will not, induce systemic change to provide better opportunities for all students. The position from the defenders of the status quo is that each education reform does not address the larger need of all students so we should continue to stay with the current and implement their strategy.

# Space Colonization Add-on

Astrosociology key to effective and sustainable space colonization

**Pass 5** (Jim, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “Astrosociology and the space community”, http://www.thespacereview.com/article/424/1)WZ

Highlighting four astrosociological considerations Decisions associated with space operations consist of social components that many continue to overlook. Consider the four examples below that strengthen the case that the social sciences offer significant contributions to the professional space community. Elites in space characterize the initial constituency of space travelers. The first people in space are the government elites and the wealthy. The average citizens of even developed nations are subject to denials of the privilege of space travel. Currently, of course, one can argue that space travel is just too dangerous. As technology develops, societies must decide how important it is to open space up to the average person. Considerations of risk exist, but so does the question of public support for something for which they cannot partake. Inclusion of non-elites as part of future space expeditions represents an ethical/justice matter, traditionally the realm of sociology. These sorts of ethical and justice matters require consideration before our technology allows for greater capabilities. Space communities, whether they consist of elites or include average citizens, will require careful consideration as to how they are constructed. In this context, space community refers to space settlements rather than the social network of space professionals described earlier. While the space habitat’s architecture (i.e., physical environment) remains vitally important for the survival of inhabitants, construction of the social environment is no less important for their survival. And, in fact, the two types of environments must be considered together, especially when we contemplate space communities with characteristics including long duration, extreme isolation, and vast distances from Earth. Meanwhile, we must consider these realities as we construct the first space communities in closer proximity to our planet so we may learn more about what to expect subsequently in more extreme situations. SETI and other astrobiological research remains an important consideration. The relationship between astrosociology and astrobiology is strong due to cultural values that favor determining if Earthlings represent the only species in the universe. Why do we pursue the search for extraterrestrial life with an uncertain likelihood of success? Values that support the search for microbial life possess consequences for actions. The question “Are we alone?” is probably nearly as old as human language itself. The answer to such a question belongs to all of humanity and not only governmental and scientific elites. Full disclosure represents an ethical concern: does anyone have the right to conceal such a discovery from the masses? Moreover, the discovery of life of any variety would produce social change among societies’ institutions and social groups. After all, social institutions, including religion, politics, and science, would need to adapt to such a development. Cultural adaptations reflect inevitable developments. We should be in position to study such potential scenarios should they unfold. Applied astrosociology has direct application to the public space program as well as to private ventures due to its direct approach in adding sociological and social scientific insights to space missions. Applied astrosociology is defined as using sociological knowledge to solve social problems related to astrosocial phenomena; that is, direct application of astrosociological research to improve astrosocial conditions. Currently, this contribution remains largely absent even as it becomes more significant to the success of ever-more complex missions planned into the future. The time to integrate astrosociology into the organizational patterns of social groups within the space community is now in order to meet greater challenges that arise. In fact, sociologists and other social/behavioral scientists should be directly involved in planning for space missions involving human and robotic spaceflight, as both comprise complementary aspects of the same program. The current concept of human factors requires expansion to include well-established traditional sociological and social science conceptualizations and research findings. Isolated space communities will need to be self-sustaining in all of their dimensions. Social problems that will inevitably occur comprise a critical concern even while the physical environment continues to operate properly. As we move forward, we must maximize our understanding of practical astrosociological issues in order to help maximize success.

Solves inevitable, guaranteed human extinction

Objective Observer ‘03

(“The Case for Colonizing Mars”, July, http://www.theobjectiveobserver.com/articles/space01.shtml)

Homo sapiens, human beings, have to be one of the least intelligent species on the planet. I realize that this statement flies in the face of most scientific evidence given the large brain capacity of homo sapiens, the use of tools by homo sapiens and the fact that homo sapiens can engage in abstract thought. However, all of these traits make it that much more unlikely and fantastic that homo sapiens as a species continue to largely ignore the colonization of Mars. One simple fact screams out for human beings to **colonize Mars with all due haste**. That fact makes it crystal clear that the Earth has a deplorable track record when it comes to its ability to support life. Consider that 99.9% of all species that have ever existed on planet Earth are extinct. Now, when you look at that fact, please also consider that this does not mean that .1% of species have survived since the dawn of time. The .1% figure simply represents species that have yet to go extinct. In other words, we happen to have some species alive and thriving on the Earth today. Those species by and large evolved relatively recently. Thus, the .1% figure is not really a survival rate but rather a percentage of all species that have ever existed on the Earth that currently happen to be alive. Another way of viewing this is in terms of survival rate as a function of time instead of as a function of species. If we were to look at all species that have existed during the last 10 years, the survival rate would be close to or at 100%. In other words, of all the species that have existed on planet Earth for the last 10 years, no extinctions have occurred. If we were to look at species that have existed for the last 1,000 years that 100% figure would drop slightly due to extinctions such as the dodo and the passenger pigeon. Looking at the survival rate species that have existed for the last 10,000 years, that 100% figure would be even less and as we go further and further back in time, the survival rate would approach or become zero. Therefore, we can state as a certainty that the longer a species exists on the Earth, the more likely it becomes that that species will become extinct and this continues until that **species’ extinction is a certainty**. What causes these extinctions? Irrelevant. I am not here to debate the cause of animal extinctions. There are many theories regarding why extinctions occur. The most popular today being that **asteroids** and/or comets **randomly strike the Earth** every millennia or so and serve as a first strike that initiates extinction. Asteroids and comets are currently blamed for many of Earth’s mass extinctions throughout its history. However, regardless of whether extinctions occur by asteroid, by comet or by some other as yet unknown device, the fact that 99.9% of species that have ever existed on the Earth are extinct remains the same. Consider also that human beings are on the top of the food chain, quite similar to dinosaurs in their day. Why is this relevant? Well, for one simple fact. Land extinctions tend to kill off the large, dominate animals at the top of the food chain while some of the smaller animals near the bottom of the food chain survive. Oddly enough, mass extinctions seem to happen in reverse in the ocean, the smaller animals at the bottom of food chain become extinct and the ones at the top of food chain tend to survive. This may actually explain why intelligence evolved first on land instead of in the oceans, but that is the subject of a different essay. Of course, one might argue that there has never been a species of animal on the Earth that was so intelligent, so diverse and so well adapted to its environment as are homo sapiens. Thus, the argument is that if there is going to be a species that survives a mass extinction, homo sapiens have the best chance. However, this argument is rather full of logical errors in reasoning. First, in terms of diversity and adaptation, homo sapiens rather pale in comparison to other successful organisms such as all of the species of dinosaurs. Second, there is absolutely no evidence that intelligence has anything to do with surviving a mass extinction. Thus, we have a few simple scientific facts that human beings have been quite aware of for several decades that make it perfectly clear to any reasonable mind that **human beings WILL become extinct if they remain solely on** planet **Earth**. **And yet, human beings** by and large **are doing very little to colonize Mars**. And by very little, I do not mean to denigrate those individuals that have written on this subject or those at NASA and other agencies around the world that are working right now on all of the problems associated with colonizing Mars. However, what I am proposing is to make the colonization of Mars a priority of the United States and world governments second only to national defense. This last argument is sure to spark protests and outrage from many different sectors I am sure. I can hear the arguments now. “We have enough problems to solve here on Earth first before we start trying to colonize other planets.” “Why not put resources into deflecting or destroying asteroids and comets instead of colonizing Mars?” “We do not have the technology to colonize Mars.” “Why not colonize the oceans?” Why not colonize the Moon?” “We have no evidence that colonizing Mars will avoid human extinction.” I will address each of the arguments in turn. “We have enough problems to solve here on Earth first before we start trying to colonize other planets.” This statement is very true, human society is fraught with all kinds of problems. However, **all other problems pale in comparison to the extinction of the species**. The reason is simple. If homo sapiens as a species becomes extinct, **all other problems are irrelevant**. “Why not put resources into deflecting or destroying asteroids and comets instead of colonizing Mars?” This one is quite simple. First, one should know that we probably only know of about 5% of the asteroids and/or comets that pose a severe threat to the Earth. If one of those asteroids within that 5% was going to hit the Earth, we would have some warning; maybe enough to come up with and successfully execute a plan to deflect it. However, for the other 95%, we would have little or no warning. Second, we do not know for a certainty that asteroids or comets cause mass extinctions. We have some pretty good evidence that points to this, but nothing certain. Mass extinctions might be caused by viruses or some as yet unknown device. The only certainty in preserving the human species is to expand beyond the bounds of planet Earth. “We do not have the technology to colonize Mars”. Yes we do. We are 100 or perhaps a 1,000 times more prepared today to tackle the problem of Mars colonization than we were to tackle the problem of landing on the moon. Our society is perhaps the best prepared it has ever been throughout its entire history to tackle such an exploration and colonization. Quite simply, we have the technology today to begin terraforming and permanently colonizing Mars. In addition, it has already been proven that when nations make certain well-defined goals and objectives top priority, the problem is solved with surprising rapidity. This can be seen with the development of the atomic bomb as well as the Apollo program to land on the moon. “Why not colonize the oceans?” This argument stems from the fact that ocean extinctions tend to occur in reverse of land extinctions. That is, the big, dominant animals at the top of the food chain tend to survive ocean mass extinctions. First, human beings are not native to the oceans and therefore, the normal “rules” would not apply. Second, big, dominant animals do go extinct in the oceans. Third, 99.9% of all species that have ever inhabited the earth, on land and on water have gone extinct. Expanding to an ocean environment does not change that fact. “Why not colonize the Moon?” Indeed, this seems reasonable. It gets our species off of planet Earth and the Moon is a lot closer than Mars. However, the Moon lacks the ability to support a self-sustaining human colony. A Moon colony would be much too dependent on Earth for its very existence. This does not mean that we should not pursue a permanent Moon colony. Indeed, a permanent Moon colony may be a crucial step in colonizing Mars. However, a Moon colony cannot serve as a replacement for Mars colonization. “We have no evidence that colonizing Mars will avoid human extinction.” This is absolutely true. However, we know for a fact that **it is a certainty that if we remain solely on planet Earth we will go extinct**. We also know that creating a self-sustaining colony on another planet is the best and perhaps **only way to avoid extinction**. And Mars is the **most likely candidate** within our solar system for colonization.

# Plan key to Space Colonization

Construction of a social environment is equally important to a physical environment when we get off the rock

**Pass 6** (Jim, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “The Astrosociology of Space Colonies: Or the Social Construction of Societies in Space”, STAIF, http://www.astrosociology.com/Library/PDF/submissions/STAIF\_Astrosociology%20of%20Space%20ColoniesPDF.pdf)WZ

If we truly intend to develop a space colony, we should remember one fundamental rule: construction of the social environment is just as important for survival as construction of the physical environment. The social construction of a space colony refers to the idea that settlements in space involve the creation of a social environment in addition to the physical environment. Consequently, the major concerns of this essay focus upon the consideration of the social environment created with the establishment of the space society. This additional focus will be healthy for the entire project. As becomes evident, planning by all types of scientists for the issues and problems that inevitably follow ensures the greatest likelihood of success.

# Plan key to Space Colonization

A successful space colony requires astrosociological considerations

**Pass 6** (Jim, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “The Astrosociology of Space Colonies: Or the Social Construction of Societies in Space”, STAIF, http://www.astrosociology.com/Library/PDF/submissions/STAIF\_Astrosociology%20of%20Space%20ColoniesPDF.pdf)WZ

An initial realization from a sociological perspective is that space societies represent isolated social groups dependent upon life support systems beyond the confines of the Earth’s biosphere. There is no doubt that the physical environment must be capable of reliably maintaining life support as well as protection from space-bound threats to human life such as radiation. Two camps of people exist which are necessary for the successful operation of a space society: (1) the engineering/physical science camp (i.e., the space community) and (2) the social science camp. The former is traditionally involved with the study of space colonies. The social sciences, with the exception of sociology, participate far less frequently and with much less organizational prowess than the former. Consequently, a major focus on the social environment requires bringing sociology and the other social sciences into the mix in addition to developing astrosociology as a banner under which sociologists and all interested scientists can collaborate in an organized manner in order to build a coherent body of knowledge and related literature. Formal collaboration between astrosociologists and space scientists/engineers can serve to provide all those involved with a well- rounded understanding of all the issues involved with constructing a space society. Sociology and the other social sciences must gain access to that element of the space community focusing on space colonies. A multidisciplinary approach is vital to successful establishment and functioning of any space colony. As Harrison (1997) pointed out in the concluding chapter of his book entitled After Contact: The Human Response to Extraterrestrial Life, while traditionally separated and suspicious of one another, scientists from the “hard” sciences and “soft” sciences must work together in order to achieve the most comprehensive and well-rounded perspective. Since proposing astrosociology and founding Astrosociology.com in July 2003, I have always advocated it as a multidisciplinary approach in which the social science and space communities could come together for collaboration under a single banner (Pass, 2005a, 2005b). Perhaps no greater area of space exploration requires sociological input than that of space colonies due to its very nature: placing an isolated society in space that must ensure its own ongoing survival without reliance on Earth. Presently, this appeal for formal collaboration faces a difficulty, as described earlier. To some extent, astrosociology requires acceptance from within the discipline of sociology as a mainstream subdiscipline. Efforts in this direction already continue to show progress. Furthermore, collaboration with other scientists outside of sociology will undoubtedly force the sociological community to view astrosociology as more legitimate. This multidisciplinary approach may prove in the end to catapult astrosociology into acceptability among all involved in the study and planning of space exploration. This is the goal.

# Plan key to Space Colonization

Developing a space community is key to colonial success

**Pass 6** (Jim, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “The Astrosociology of Space Colonies: Or the Social Construction of Societies in Space”, STAIF, http://www.astrosociology.com/Library/PDF/submissions/STAIF\_Astrosociology%20of%20Space%20ColoniesPDF.pdf)WZ

The concept of “space society” represents a vital expansion of the current tendency to focus on engineering and the physical sciences to solve problems associated with the planning for a successful space colony. Again, the social environment must not be left to chance or else failure is the most likely outcome. Sociologists define a society as something similar to a population situated in a particular territory that shares a common culture and serves to carry out the major functions of life. In contrast, a community relates to the collection of primary and secondary groups within which an individual actually carries out these important functions of life. In part, whether a colony characterizes a community or a society depends upon its population size as well as the makeup of the members of the population.

On another level, “space community” represents a good concept because it speaks to the idea that community life is vital even within a large population in space. That is, community must exist at some level within the overall social structure to ensure the survival of colony citizens. In fact, we must seek to establish viable communities within the colony if its population is too large. It remains vital to put into place the social relationships characteristic of communities, as part of an organized social life, and not just focus on the well being of individuals, so that we allow for the possibility of a successful colony. For this reason, the concept of community must be considered throughout the planning process lest we become complacent about the possibility of constructing an impersonal social environment unable to carry out important life functions.

# Plan key to Space Colonization

Colonists have to break down social norms on earth before relocating to space – failure guarantees current of norms

**Pass 6** (Jim, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “The Astrosociology of Space Colonies: Or the Social Construction of Societies in Space”, STAIF, http://www.astrosociology.com/Library/PDF/submissions/STAIF\_Astrosociology%20of%20Space%20CooniesPDF.pdf)WZ

Consequently, then, one area of planning uniquely requires the input of sociologists and other social scientists. We must think in terms of constructing initial social conditions for the colony as deemed preferable based on specific criteria determined as part of the very beginning of the planning process. This process includes establishment of a dominant culture as well. Sociologist Robert Bierstedt (1970) identified three dimensions of culture as consisting of ideas (including values), norms, and material culture. Initial conditions must include formulation of these elements. Values, norms, and role expectations supportive of the space settlement will be extremely important upon reaching the destination. Initial ideas and priorities for the initial cultural environment will largely shape the colony early on, and we should also consider community needs and subcultural priorities before well before the launch.

Our sense of social reality, or worldview, is learned from our culture. Social structure provides us with recurring social patterns that make a stable society possible. Without social structure, our social reality tomorrow would be substantially different than the social reality today. These social patterns allow for a sustainable social reality for a long-term basis, and they are guided by cultural values and protected by social norms.

Social conditions and social change affect cultural and social development, and even the psychological health of the members of society. Colonists must be educated to expect social problems to emerge and cope with them as they do so. Furthermore, negative social conditions may force individuals and social groups to adapt in ways considered “criminal” or otherwise deviant according to the standards of the larger culture while others simply take advantage of the social disorganization by employing approved, though harmful, means. Social institutions may break down under severely challenging social conditions. We have all seen the possibilities of negative social conditions in space in the numerous depictions from science fiction. Such scenarios actually represent literary adaptations of conditions familiar to the inhabitants of Earth. A system of formal in informal social control must therefore exist to protective the normative climate of the colony.

Proper anticipation of social needs ahead of time allows for incorporation of social and cultural patterns into the fabric of these communities from the beginning. Any new society must be built upon a solid foundation. Its organization and functioning must be guided by ideas and a sense of purpose (provided by culture). Colonists must learn the values and norms of their new society before they depart. A new colony in space, or anywhere else, cannot sustain itself as intended without detailed planning of its overall social structure and the social institutions that are part of that structure.

A final consideration covered here regards the development of the culture. Based on experiences on Earth, it is probable that the space society will become more and more ethnocentric over time. Its members will come to view their own society as superior to others on Earth and elsewhere. This should be anticipated and plans must be made for the development of “interplanetary relations” (Pass, 2004b, 2004c). Research from scholars now focusing on international relations, political science, and political sociology can provide valuable insights.

# Plan key to Space Colonization

Astrosociology is critical to achieving a utopian society in space

**Pass 6** (Jim, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “The Astrosociology of Space Colonies: Or the Social Construction of Societies in Space”, STAIF, http://www.astrosociology.com/Library/PDF/submissions/STAIF\_Astrosociology%20of%20Space%20ColoniesPDF.pdf)WZ

Regarding the second theme, astrosociology should be adopted by both sociology (and the other social sciences) and the physical sciences (especially by scientists working within the space community). Astrosociology, due to it very focus, is the perfect field to allow for the forging of this multidisciplinary approach. It should be accepted as a fundamental area of study within space and engineering conferences, NASA and all national agencies, and by the sociological discipline and all those within the social sciences, behavioral sciences, and humanities. This bold call for the acceptance of astrosociology is necessary due to the fact that, even now, we begin plans for a Moon base without adequate attention to the social environment. The foregoing discussion and recommendations below demonstrate the seriousness of this shortsighted approach.

The social construction of a society in space involves the purposeful creation of initial social conditions that planners deem to be appropriate and desirable based on Earth history and the philosophies, teachings, and lessons learned on this planet. In a sense, when we aim to create a new society in space that is isolated from direct influences of Earth, we are attempting to formulate a social system based on some type of utopian model. The newly emerging subfield within sociology known as futures studies seeks to apply the sociological perspective to the scientific study of possible alternative futures. (See Bell (2003a) and Bell, (2003b) for an excellent treatise on this new subfield). Utopian models are clearly one type of alternative future, and one which we strive for under the best of circumstances. The social construction of a space society provides us with the perfect opportunity to set initial conditions to utopian standards as defined by the planners of the mission. We should get started right now, and seek the assistance of futurists from sociology and the other social sciences.

A warning bell must be sounded, however: We should hope and plan for utopia, but remain prepared to deal with dystopian conditions. With proper consideration, the initial utopian conditions are unlikely to devolve into chaos or anarchy, though we can expect value conflict, social groups with different agendas, as well as deviance at all levels of social reality (i.e., micro, middle, and macro levels). To minimize social conflict and cope with it, we must take certain precautions. As discussed earlier, we must put into place the social institutions necessary to provide the life functions for the colony as well as to cope with social change and social disorganization.

The preliminary list of recommendations below deserve great deliberation and collaboration among scientists from all of the sciences in order to achieve the greatest likelihood of success for project related to space settlements, simple and complex, and all along this continuum.

# Plan key to Space Colonization

Astrosociology is key to establishing colonies in space

Pass, J., “Astrosociology and Space Exploration: Taking Advantage of the Other Branch of Science,” Space Technology and Applications International Forum (STAIF) Conference Proceedings, Volume 969(1), pp. 879-887, reproduced by permission by the American Institute of Physics at the Astrosociology Research Institute (ARI) Virtual Library [online archive], http://www.astrosociology.org/Library/PDF/STAIF2008\_OtherBranch.pdf, 2008 apanday

With the Great Divide finally bridged, even if that structure is still a bit rickety, we can now move forward. The foregoing discussion clearly describes how the social and behavioral sciences, the humanities, and the arts were only minimally involved with the space exploration. Yet, as also demonstrated above, the addition of a social science perspective such as astrosociology allows humanity to explore the stars by considering the human dimension in addition to the inanimate world. The other branch of science already possesses a great wealth of theoretical constructs and observational data regarding human behavior on Earth that (1) will prove directly or indirectly applicable to space and (2) focuses precisely on the study of space analogs on Earth. In the form of astrosociology, this knowledge could become both available to the social scientists who pursue this new field and the space community members through collaboration with them. In fact, natural scientists already pursue the study of space analogs from a natural science perspective. Astrosociologists should join them. An example of existing knowledge applicable to space involves society's institutions in the context of replicating a society in space (i.e., a space society) (Pass, 2007a; Pass, 2006a). In order to place a population of human beings in an isolated and dangerous space environment, planners must construct these institutions (e.g., government, family, economy, and criminal justice) to regulate social life just as they function to do so on Earth. Though social groups will adapt to space the best they can manage, the basic organizational patterns have been tested over thousands of years. They are unlikely to change on a fundamental level. Thus, data available from the study of space analogs is especially relevant to early settlements as well as the early history of all new ones. In space, the impact of astrosocial phenomena on human beings and their social systems seems rather obvious. Early space settlers will experience great hardship on physical, social, and emotional levels. On the Earth, in contrast, it is easy to overlook the fact that most humans involved with space today, and throughout the space age, live on our species' home planet. Only elite astronauts and wealthy individuals have traveled into space thus far. Yet everyone is affected by astrosocial phenomena. Astrosociologists must remember to investigate astrosocial phenomena wherever they impact on human beings, including in terrestrial societies. It makes no sense to send humans into outer space without input from the fields and disciplines that developed to understand human behavior - and the connections between social constructs and other elements of the physical world; or psychological reactions to social, cultural, and physical manifestations. In the area of space medicine, for example, *medical astrosociology* focuses on the social, cultural, psychological, and ethical dimensions of risk to exposure and other dangers along with elements associated with treating patients in space. Economic concerns will also play a role as "medical decisions may well hinge on weighing treatment options against costs and the availability of resources.

# Econ Add-on

Asteroid surveys solves the economy

**Pass 6** (Jim, 09-21, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “Applied Astrosociology: The New Imperative to Protect Earth and Human Societies”, STAIF, <http://www.astrosociology.com/Library/PDF/Protecting%20Societies.pdf>)WZ

Planetary defense initiatives contribute to economic security due to the extensive problems that would occur if a massive object struck the Earth. A well-functioning economic system in fact serves as a major component of overall security for a particular society. The overall attempt to ensure economic survival in all of its manifestations serves as an insurance policy for societal survival. The aftermath of an unsuccessful defense against a massive space object could easily result in dystopias around the world. Disruptions to social life including a well-functioning economic system would hinder the ability of victimized societies to recover and rebuild. Economic security partly involves our ability to protect this vital institution. We must begin to discuss our options for doing so. By diverting funds from a variety of different budgetary categories into planetary defense, including from the military, the economies of the world could avoid the upheaval that would occur due to inaction. In fact, it is arguable that spending to build the infrastructure needed to deploy the various system components would actually pay for itself when the threat of impact becomes real at some point in the future. Disruption of economic activity represents a real potential problem, but so does reconstruction of various societal and physical components. Who will pay for the reconstruction necessary in poor developing societies should they face such circumstances? It will probably come from international sources such relief agency of the United Nations and aid from developed nations. The availability of a planetary system can even bolster the economic systems if handled correctly. Companies that build the components of the system will profit, as will shareholders. An entire industry will probably develop not only to build the planetary protection system, but also to operate it and service it over the course of time. If we determine that we need such a system, then we should make it benefit society as best we can.

Great power war

**Mead, 9**

[2/4, Walter Russell, Henry A. Kissinger Senior Fellow in U.S. Foreign Policy at the Council on Foreign Relations, Only Makes You Stronger: Why the recession bolstered America, The New Republic]

None of which means that we can just sit back and enjoy the recession. History may suggest that financial crises actually help capitalist great powers maintain their leads--but it has other, less reassuring messages as well. If financial crises have been a normal part of life during the 300-year rise of the liberal capitalist system under the Anglophone powers, so has war. The wars of the League of Augsburg and the Spanish Succession; the Seven Years War; the American Revolution; the Napoleonic Wars; the two World Wars; the cold war: The list of wars is almost as long as the list of financial crises. Bad economic times can breed wars. Europe was a pretty peaceful place in 1928, but the Depression poisoned German public opinion and helped bring Adolf Hitler to power. If the current crisis turns into a depression, what rough beasts might start slouching toward Moscow, Karachi, Beijing, or New Delhi to be born? The United States may not, yet, decline, but, if we can't get the world economy back on track, we may still have to fight.

# Kuiper-Belt Add-on

Survey leads to more Kuiper Belt discoveries

NASA, 7

[“ Near-Earth Object Survey and Deflection Analysis of Alternatives, Report to Congress,” March 200 http://www.nasa.gov/pdf/171331main\_NEO\_report\_march07.pdf]

A wide area search, such as that being proposed for NEOs, will also substantially increase the identification of Kuiper Belt Objects (KBOs). For example, if 10 percent of 24the observing time on the proposed Dedicated LSST was spent in a KBO search mode, roughly 100,000 faint KBOs should be discovered. An expanded KBO database will allow the study of dynamical distributions, further resonances, the existence of a KBO demarcation beyond 50 AU, high-eccentricity/high-inclination orbits, size distributions, frequency of binary objects and collision rates, chemical compositions and the relationship of objects to dust disks around other stars. The survey will also provide a rich database of targets for future space missions. Detection surveys such as the proposed Pan-STARRS and LSST provide unique solarsystem science because they are designed to detect and perform follow-up studies of moving objects. Centaurs, Jupiter Family Comets, and certain extinct comets may be related through a common origin in the Kuiper Belt. Dedicated assets will assure that appropriate follow-up is carried out over the annual timeframes that are required to produce orbits for the slower-moving objects found in the outer solar system. Thus, a collateral result of the NEO survey program could be both the delineation of the structure of the Kuiper Belt and the discovery of many new minor planet

Kuiper belt research is essential to discovering the origins of life and the universe

Frueh, 2

[Sara, staff writer – National Academies of Science, “ Missions to Pluto-Kuiper Belt and Europa Should Top NASA's Agenda,” inFocus, Summer/Fall 2002 Vol. 2 No. 2 <http://www.infocusmagazine.org/2.2/eng_space_exploration.html>]

"Data collected on the Kuiper Belt over the last decade suggest that it's made up of innumerable objects, and that they have a bizarre variety of properties," said Michael Belton, president, Belton Space Exploration Initiatives, Tucson, Ariz., and chair of the committee that wrote the report. "A mission would let us study some of those properties more closely." This examination may help scientists understand how the solar system began, because the giant planets are believed to have been created from objects like those in the Kuiper Belt. A mission might also provide clues to the origin of life on Earth, the report says, which may have started with organic material delivered by a comet from the region billions of years ago. A mission to Pluto and the Kuiper Belt has been on and off NASA's agenda for several years. The Bush administration eliminated funding for the mission in NASA's 2003 budget, citing the high cost involved. But the report says that a trip to the Kuiper Belt could gather enough data -- possibly paradigm-shifting information -- to justify its price tag, which is midsize by space-exploration standards. Another reason not to delay the mission is that the time window for studying Pluto is closing. The planet is beginning the leg of its 248-year solar orbit that is farthest from the sun; more of the surface will be shadowed and the atmosphere will freeze, making study impossible. A thaw -- and another chance to survey the brightest object in the murky Kuiper Belt -- won't happen again for more than a century. The report makes several recommendations for NASA's space exploration agenda over the next decade, prioritizing missions within different size classes -- including large missions, which NASA has shied away from in recent years. But giving up larger missions would be a mistake, the committee believes. "For the scientific health of the space program you need a major mission from time to time," said Belton. "They're costly, but they can help us achieve a breadth of knowledge that smaller missions can't." The next large mission should be sent to Jupiter's moon Europa, the report says. The satellite is thought to have an ocean under its icy crust -- which makes it, with Mars, the best place beyond Earth to search for life. The mission would confirm the presence of the ocean, study its qualities, and try to determine whether it does in fact harbor living organisms. Important research can be done from the ground as well, the report notes, urging NASA to partner with the National Science Foundation to build a large-aperture survey telescope, which could survey the faintest objects in the entire northern sky every week. In addition to aiding the study of distant Kuiper Belt objects, the telescope would offer a very concrete benefit: the ability to better detect and assess the risk posed by small asteroids and comets that most frequently collide with Earth.

That’s key to preserving earth’s biodiversity – impact is extinction

Chung et. al, 10

[ S.Y. Chung P. Ehrenfreund, Space Policy Institute, Elliott School of International Affairs, The George Washington University, J.D. Rummel, Institute for Coastal Science and Policy, East Carolina University and N. Peter, European Space Policy Institute, “ Synergies of Earth science and space exploration,” Advances in Space Research

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Planet Earth is currently the only habitable world we know. Although life may have existed as early as 3.5 billion years ago, humans have lived for only a rather short time on Earth—about 2 million years. Nonetheless, we are (unfortunately) making up for lost time as a factor affecting the habitability of the planet. In the last 200 years humans have changed the Earth dramatically, calling into question how long the Earth and its natural systems can balance its limited energy and material resources against the effects of human-caused pollution. Keeping Earth’s natural “life support” processes operating, and the planet habitable by humans, has become a critical challenge. Space activities, particularly environmental satellites that monitor the biosphere, are becoming essential tools to help us to manage and sustain our very lives (Sadeh et al., 1996). Space observations can tell us about our current biosphere, but the Earth as a system has not always been hospitable to human life. For approximately half of its existence, there was virtually no free oxygen in the Earth’s atmosphere, and a completely different set of biogeochemical cycles operated to keep the Earth relatively stable in that state. Fundamental knowledge of the Earth is of more than casual interest—it is essential that we understand how to keep it from changing back to a stable state with conditions that would not support human life. Astrobiology, the study of life in the universe, seeks answers to fundamental questions on the origin, evolution, distribution and future of life, wherever it may exist. As an interdisciplinary science field that unites astronomers, biologists, physicists, chemists, geologists and many of their subdisciplines it addresses many questions that are relevant for sustaining life on planet Earth—and in particular, the relationships between a planet (especially the Earth) and life, and how each affects the other. Astrobiology provides both the knowledge and perspective to inform us about how to maintain the Earth as a long-term habitable home for humanity. Originally a creation of NASA (under the titles, “exobiology” and “planetary biology”), astrobiology has grown worldwide as a multi- and interdisciplinary endeavor. Together, astrobiologists have collaborated in writing down a “NASA Astrobiology Roadmap” (Des Marais et al., 2008) now in its third iteration that covers seven main goals, given in temporal, and not priority, order. Of particular interest here in joining Earth sciences and space studies is roadmap goal number 6, which states that astrobiology, as a field, should work to, Understand the principles that will shape the future of life, both on Earth and beyond. Elucidate the drivers and effects of microbial ecosystem change as a basis for forecasting future changes on time scales ranging from decades to millions of years, and explore the potential for microbial life to survive and evolve in environments beyond Earth, especially regarding aspects relevant to US Space Policy. Here “US Space Policy” is a reference to the specific US interest in returning to the Moon and going on to Mars, as mentioned above. Astrobiology, and particularly the desire to understand the origin, evolution, and distribution of life in the universe, is one of the chief motivators for expanded human capabilities to conduct science on other worlds (Fig. 1). 3.1. Lessons from astrobiology: conservation of biodiversity and life in extreme environments Over the course of the last 4.5 billion years, Earth has created an ideal environment to sustain life of an astonishing variety. Dynamic processes in the Earth’s interior have established a magnetosphere that protects the Earth from harmful cosmic ray particles. The Earth’s atmosphere, in turn, shields life from harmful ultraviolet radiation and allows for a stable climate and temperature cycle by providing a “greenhouse effect” that retains some of the infrared radiation that is emitted from the Earth’s surface. A brief look at our planetary neighbors shows that Venus, with an average surface temperature of 500 °C (as a result of a “runaway” greenhouse effect), and Mars, with a surface temperature from −60 °C to +10 °C and a thin atmosphere (with an insufficient greenhouse effect), are both unable to sustain life as we know it at the surface. The combination of Earth’s physical and chemical processes (e.g. ocean circulation, atmospheric flows, plate tectonic recycling of the crust, etc.) and living processes, together, form biogeochemical cycles that transform the elements and compounds related to life (the bio-elements such as H, C, O, S, N, P). While humans originally were part of these natural cycles, the discovery and proliferation of human-discovered technology have caused major disruptions to these bio-cycles in many, if not most, parts of the globe. As a consequence, and with the orders-of-magnitude rise in human population over the last 200 years, humans are coming to dominate and destroy the natural cycling of the elements with unpredictable consequences. While it is well known that natural processes have led to extinction of species, other life forms arose over time. Regrettably, the effects of modern human activities are rapid on the evolutionary timescale, and consequently are impacting climate, ecosystems, and other species at a rate that does not allow for natural replacement of ecosystems in the same time-span. Consequently, the loss of ecosystems on which we depend is affecting human habitats adversely, all over the planet. Biodiversity is a measure of the variety and numbers of life found at all levels of biological organization. As a concept, biodiversity can embrace all forms of diversity in biological systems: in genetics, species, and ecosystems. The conservation of biodiversity has become a global concern because different species contribute in essential (and often uncharacterized) ways to the functioning of the Earth’s life support systems, on which we all depend. Effectively, the loss of biodiversity results in the loss of valuable ecosystem services that we take for granted, and which we (if we care to continue to inhabit the Earth) can ill-afford to lose. The ongoing loss of biodiversity is of concern to astrobiologists, in particular, they realize that the Earth, as a system, is quite capable of operating without it—but that it can operate as a system that does not provide essential support (e.g. oxygen in the atmosphere) for human life. In fact, the most critical difference between today’s Earth, and that of 2.5 billion years ago, is biodiversity. The effects of other living systems have made the Earth the extremely habitable planet that it is today, and it would be ironic if humanity’s influence were to destroy those systems on which we all very much depend. Scholes et al. (2008) note that unlike climate change there are no widely accepted and globally available set of measures to assess biodiversity and critical information that can aid in the preservation of biodiversity. Thus, challenges lie in integrating biodiversity data that are diverse, physically dispersed, and in many cases, not organized in a way that makes them accessible to modern researchers. The threat to biological diversity was among the topics discussed at the UN World Summit for Sustainable Development in 2002. At the Summit, the governments adopted the “Convention on Biological Diversity” to conserve biological diversity. “Biodiversity” is one of the nine ‘societal benefit areas’ identified by GEOSS. The Biodiversity Observation Network (BON) (Scholes et al., 2008) is an initiative within GEOSS which establishes a framework for data collection, standardization, and information exchange in biodiversity studies (BON, 2009). NASA and DIVERSITAS, an international program of biodiversity science, is leading the planning phase of GEO-BON, in collaboration with the GEO secretariat. Nine other organizations and programs are participating in this initiative. In a sense, the astrobiological interest of life in extreme environments is complementary to the study and appreciation of biodiversity. Life on Earth is extremely adaptable, and has been shown to overcome extremes in temperature, pH, and pressure in abundance (see Table 1). Equally interesting is the fact that some microbes depend exclusively on abiotic processes for their existence, including organisms in deep mines that survive on the products of radioactivity and organisms at deep sea vents. While it is encouraging that life is so tenacious, it is also humbling in a sense. While these microbes live in “extreme” environments quite successfully (and thus would not be hurt if the Earth, itself, were to become “extreme”) the word “extreme” is used because it connotes an environment where humans could not live, at all. The study of extreme life is important in determining both where life may be found elsewhere, and in understanding the functioning and adaptability of life that we have here on Earth. Both NASA and the US National Science Foundation have had or currently have programs to study “extremophiles” and recently, the European Commission has initiated within its “Framework 7” a program called CAREX (Coordination Action for Research Activities on life in Extreme Environments), that coordinates and sets scientific priorities for research of life in extreme environment (ESF, 2007). CAREX endorses cross-sector interests in microbes, plants, and animals evolving in diverse marine, polar, and terrestrial extreme environment as well as outer space (CAREX, 2008). By relating information on both biodiversity and extreme life, this synergy of Earth and space science can help to provide concepts (based on recent scientific data) on how ecosystems respond to rapid rates of change and determine possible directions by which the Earth and its biosphere (including humans) will survive and co-evolve in the future. This approach requires applying the principles and perspectives of astrobiology to identify options that might allow humanity to halt the destruction of its own habitat as well as the decline of biodiversity on Earth, while addressing a variety of related economic and energy-related scenarios associated with those options.

# Case Solves DA

Even if they win a catastrophe is not imminent we should address asteroids now – the aff is a prerequisite to solving their harms

**Pass 6** (Jim, 09-21, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “Applied Astrosociology: The New Imperative to Protect Earth and Human Societies”, STAIF, <http://www.astrosociology.com/Library/PDF/Protecting%20Societies.pdf>]WZ

**The sky is not falling. On the other hand, the threat of a serious impact is real and therefore deserves attention**. The imperative to protect the Earth and human societies exists because we now know of the threat. Without panicking, we must thoughtfully develop a reasonable set of strategies to protect life, as we know it. Even the survival component requires consideration and debate before its implementation. The shelters discussed earlier may seem like going too far by many. However, we should look at the problem on a more general **basis. Steps taken to protect us from asteroids and comets can also prove useful against other calamities such as terrorism, global warming, nuclear fallout, and other atmospheric calamities.**

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\*\*\*AT: Ks

# AT: K of Science

Critiques of science are false – the scientific method questions authority

Bronner, 4

Stephen Eric, Professor of Political Science and Comparative Literature at Rutgers University, “Reclaiming the Enlightenment” Columbia University Press p. 29-30

The idea of progress was always—anthropologically as well as historically— less about the eradication of subjectivity and the domination of nature than the possibility of personal liberation, popular empowerment, and overcoming the spell of myth and nature. Progress is an inherently rational idea. But it does not call for belief in the omnipotence of reason, the superfluous character of passion, or the existence of an objective solution to every problem. 35 Neither Condorcet nor Kant provided an ontological foundation for progress and even the most rabid believer in progress, an adamant atheist and technological enthusiast, like Holbach could write in his System de la nature that “it is not given man to know everything; it is not given him to know his origins; it is not given him to penetrate to the essence of things or to go back to first principles.” The issue for the philosophes was not the discovery of absolute truth but the establishment of conditions in which truth might be pursued. Or, to frame the matter in terms of a new critical theory with some sense of the concrete, the extent to which progress manifested itself was the extent to which claims could be treated as provisional. Reason and knowledge were never the enemies of progress. But their enemies were also the enemies of progress. David Hume, in this vein, liked to say that “ignorance is the mother of devotion.” Unreflective passion offers far better support than scientific inquiry for the claims of religion or the injunctions of totalitarian regimes. The scientific method projects not merely the “open society,” but also the need to question authority. This was already evidenced in the Meno when Socrates showed that he could teach mathematics to a slave and in The Republic when, exhibiting the frustration of the anti-intellectual, Thrasymachus insisted that justice is the right of the stronger. On one point, however, the most famous adversary of Socrates was right: his position suggested that whether the moral possibilities of progress are realized is not the province of philosophy but of politics. This would have radical implications. Upsetting the divine structure of things marked the Enlightenment notion of progress. Its advocates privileged over liberty rather than order and the communicable power of discourse over the incommunicable experience of grace. These new values would serve as the points of reference for all other values: order would no longer be employed as an excuse to smother liberty, but rather be understood as the precondition for its pursuit.36 Order always preceded liberty for the philosophes: it was seen as providing the rules and procedures for “constituting” the liberty enjoyed by citizens through the protection of the state.37

# Enlightenment Good

Even if continuing bias exists, the basis for reform is in Enlightenment ideals – we can’t abandon them

Bronner, 4

Stephen Eric, Professor of Political Science and Comparative Literature at Rutgers University, “Reclaiming the Enlightenment” Columbia University Press p. 64-67

Fighting against a world dominated by monsters and saints, witches and gods, myths and prejudices, misery and privilege, custom and laziness, demanded a mixture of courage and clarity. The assault on metaphysics intro- duced by the authors of The Spectator, Joseph Addison and Richard Steele, prepared the way for the new egalitarian emphasis upon “common sense” offered by Thomas Paine. Utilitarianism, so boring in its shopkeeper mentality, nonetheless gave the individual a measure of respect by making clear that each was capable of discerning his or her interest and that social welfare was the primary aim of government. Lessing, Montesquieu, and Goethe challenged the church injunction against suicide. Most partisans of the Enlightenment were repulsed by slavery and the subordination of women plays a role in many of their works. Their privileging of persuasion over coercion, their vision of the fully formed personality, their interest in matters outside their immediate expertise and experience, their emphasis upon tolerance, all project an eradication of what is brutal and unjust in the name of a better society with a new set of human relations. Resistance undertaken in the name of progressive, liberal, and ultimately socialist ideals served to separate critical from affirmative intellectuals and place some thinkers often associated with the Enlightenment, such as Samuel Johnson and Edmund Burke, outside the tradition that they might otherwise seem to espouse. The result was what might be termed a great divide that separated intellectuals of the Enlightenment from those of the Counter-Enlightenment. Enlightenment intellectuals were not pillars of political correctness. Organizations condemning slavery were formed. Salons may have accorded women a new public presence,9 and the grosser expressions of anti-Semitism and even anti-Muslim attitudes were generally looked down upon. But the Enlightenment was still primarily a male, white, straight, and Christian world. In the United States, moreover, slavery was embedded in the national legislative process: Jefferson supported the idea that a slave is three-fifths of a person for purposes of representation, which won him the election of 1800, and Washington placed the national capital in slave territory. Admittedly, for such individuals, support for measures of this sort probably had less to do with their personal approval of slavery than with its political use to protect the economic base of the South: it remained the case into the twentieth century that no serious political career was open to Southerners opposed to slavery or supportive of civil rights.10 But that doesn’t change the reality: it was what it was. Still, it would be misleading to lump the philosophes together with their adversaries. The principles underpinning the critique of slavery, sexism, and exclusion of the other derived from the Enlightenment. Then, too, the political stance of its advocates on such issues was generally qualitatively different from those of the Counter-Enlightenment. It is instructive, for example, to consider the views on women and divorce expressed by archreactionaries like Justus Moeser or Bonald; the views on prejudice offered by Burke; the irrationalism of Hamann; the unyielding Christianity of De Maistre; the brutal anti-Semitism of the Abbé Bruelle; and the alternatives offered to cosmopolitanism, constitutionalism, and social equality by the rest of the reaction. It is also easy to forget the witch trials that cost thousands upon thousands of women their lives;11 the slaughters attendant upon the Crusades;12 the Inquisition, and the constant pogroms. Michel Foucault may be correct in his assertions that the Enlightenment in its time had little sympathy for the “unreasonable”: the beggars, the petty criminals, and the insane.13 In practical terms, however, the more progressive programs for improving the conditions of these groups were again inspired by Enlightenment principles and intellectuals of the Counter-Enlightenment would historically show even less interest in these groups and the reforms capable of bettering their lot. Above all, however, it wrong to suggest that the prejudices of the philosophes somehow invalidate the ideals associated with their republic of letters. The logic of the Enlightenment suggested that citizenship should be open to everyone with a pen and an argument to make in the name of freedom. Sex, race, religion, property, and class, should—in principle—play no role in determining the ability of individuals to participate in the public realm and they should be able to pursue their private interests as they see fit. Kant’s notion concerning the formal equality of all subjects, in fact, made possible a criticism of any such barriers to the public exercise of reason while the principles underpinning the liberal rule of law enabled suffragettes and civil libertarians as well as advocates of the excluded and insane to contest the existence of positive laws tainted by discrimination and regressive attitudes. It is only fair to note that: The Enlightenment public sphere assigned new importance to women as producers and consumers of culture, but often on the basis of values that served to justify their subordination. Its norms of openness and inclusion created new kinds of association, but also new forms of exclusion. For all this ambiguity, however, we continue to invoke the norms of openness and transparency preached by the Enlightenment public sphere even as we criticize its failure to live up to them. For that reason its legacy is more enduring than it seems, whatever its vicissitudes from the Enlightenment to our own day.14 “Enlightenment” was initially seen as depending upon the “courage” of the individual to exercise his or her intellect, question rather than obey and, according to the famous formulation, “leave behind his self-imposed immaturity.” Contrary to popular opinion, however, Kant did not leave the individual subject hovering in the metaphysical stratosphere. It was clear to him no less than to the rest of the philosophes that summoning such courage becomes easier with the existence of liberal institutions and a “public” animated by civic interests.15 That is why liberating the “public” not merely from dogma, but from the institutions and conditions that promote it, became the primary goal of Enlightenment intellectuals. The philosophes understood that the right to criticism is the precondition for the exercise of autonomy and, if not the pursuit of absolute truth, then the rectification of error. Thus, in contrast to thinkers of the Counter-Enlightenment like Burke and De Maistre, Kant and Paine would insist that no age can commit the future to a condition in which it would be impossible to extend knowledge or correct errors. 16

# K Impacts Wrong

**Their impact claims are flawed – they create a flawed vision of liberalism and ignore physical conditions**

**Bronner 4**

Stephen Eric, Professor of Political Science and Comparative Literature at Rutgers University, “Reclaiming the Enlightenment” Columbia University Press p. 108-110

With respect to understanding totalitarianism of the left and the right, Dialectic of Enlightenment began with the wrong premises and drew the wrong conclusions. Crucial was its claim that the attack on metaphysics by Enlightenment notions of science undermined the exercise of conscience thereby unleashing a savage egoism. In contrast to bourgeois liberalism, however, fascist thinking is marked by the demand for irrational sacrifice for the race or the nation or the class. Thus, it would necessary to make the purely abstract assertion that “in the innermost recesses of humanism, as its very soul, there rages a frantic prisoner who, as a Fascist, turns the world into a prison.”36 The same connection between humanism and the prison would later find expression in the writings of Michel Foucault37 which, also in keeping with the Frankfurt School, noted the exclusion of the mentally ill and children from universalistic worldviews like humanism and liberalism: the terms in which these groups should be treated, of course, are never discussed. There is also no reference to the reflexive element within humanism, its intrinsic belief in the dignity of the individual first raised by Pico della Mirandola, or the relevance of “rights” in addressing the claims of the weak and exploited.38 Enough to claim that what the Enlightenment sought to destroy will reappear as its own product and that the “turn from the liberal to the total authoritarian state occurs on the basis of one and the same economic order and with regard to the unity of this economic base, we can say that it is liberalism that ‘produces’ the total-authoritarian state out of itself, as its own consummation at a more advanced stage of development.”39 Capitalism cannot be blamed for Stalinism. But, then, the real issue for critical theory was always less the inequalities, imperatives, or conflicts produced by capitalism than the metaphysical critique of the “instrumental values underlying its production process and how the logic of the commodity form undermines all normative concerns.. This shifts the discussion from “capitalism” to “advanced industrial society” or “modernity.” The anthropological merges with the historical critique of Enlightenment. Qualitative differences between regimes vanish and diverse regimes fall under the same rubric. The resulting standpoint is both fatalistic and didactic. What only became apparent at the end is now projected back to the beginning. The issue is no longer how totalitarianism might have been resisted, but how it emerged as the telos, the logical projection, of what preceded it. Philosophy comes too late: the Owl of Minerva yawns at dusk. Enlightenment sets the stage for Weimar and Weimar for Hitler. Everything else is a combination of naïve hopes, ideology, and nostalgia. The image emerges of a society blithely and unwittingly walking into the abyss. The way opens for a library of mid-level novels and films produced by the culture industry that use fascism or Nazism as the backdrop, and that provide the audience with a frisson regarding the horrible result without offering any sense of how it was actually achieved. Political ethics becomes the province of the resigned prophet or simply the scold. Thus it only made sense for Dialectic of Enlightenment to claim that humans will “pay for the increase of their power with alienation from that over which they exercise their power. Enlightenment behaves towards things as a dictator toward men. He knows them insofar as he can manipulate them.”40 The meta-political and anthropological “dialectic” becomes a replacement for the analysis of political and historical conflicts. Progress will thus generate regression and modernity will inspire barbarism. If the alienation embedded within liberalism and the logic of science reaffirm illiberal forms of authority and the power of myth then fascism can be seen as an expression of what it opposed: the Enlightenment. This indeed makes it possible to interpret totalitarianism in terms of “the conditions that prevailed before its coming to power, not in a negative sense, but rather in terms of their positive continuation.”41 The point for Horkheimer and Adorno no less than their postmodern followers is not simply that fascism grows in liberal societies, but that totalitarianism is both the culmination of the anthropological enlightenment and the—albeit unintentional—product of the historical Enlightenment. In this way, though its lessons were actually quite limited, the Weimar Republic became a “parable” for the fragile character of liberal democracy in general.

# K Impacts Wrong

**Their ev’s inability to differentiate between the Enlightenment thinkers and fascism collapses any chance of effective action or historical backing for their impact claims**

**Bronner 4**

Stephen Eric, Professor of Political Science and Comparative Literature at Rutgers University, “Reclaiming the Enlightenment” Columbia University Press p. 110-113

This prejudice is sometimes seen as hindering the Frankfurt School from making differentiated political judgments in the aftermath of World War II. 42 There is also something to this claim. Members of the Frankfurt School, however, were often capable of discerning differences within the “totally administered society” in terms of everyday politics: Herbert Marcuse, for example, called upon American students to support George McGovern against Richard Nixon in the presidential elections of 1972. Horkheimer and Adorno were also aware that, in spite of their previous equation of “mass enlightenment” with “mass deception,” education might mitigate threats to liberal norms.43 The question is whether such pronouncements logically derive from the theory or rather are insights whose determinations were essentially ad hoc. They certainly never received sustained political, philosophical, or anthropological justification. This would indeed have been difficult to provide: for, while it might still have been possible to claim that the “the whole is false,” parts of the whole would now apparently need to be considered more or less “false” than others and in the same vein, if “wrong life cannot be lived rightly,”44 the question arises whether in drawing such distinctions the fundamental principle of “negative dialectics” is being betrayed. These are crucial matters since only upon the assumption that the Enlightenment and totalitarianism are integrally related elements of “modernity” is it possible to speak about a “totally administered society” in which the metaphysical— or, better, philosophical-aesthetic—assertion of subjectivity must supplant explicitly political forms of resistance. Totalitarianism did free the instincts from what is commonly called conscience and Horkheimer and Adorno are correct in their claim that “anti- Semitic behavior is generated in situations where blinded men robbed of their subjectivity are set loose as subjects and action becomes an autonomous end in itself and disguises its own purposelessness.”45 Linking this philosophical perspective with the Enlightenment, however, is possible only by broadening it to include its greatest and most self-conscious critics: Sade, Schopenhauer, Bergson, and Nietzsche.46 With any of them it can be said— though not for any of the major philosophes—that action becomes its own end and disguises its lack of purpose. It was again less either rationalism or positivism than voluntarism, though admittedly of a vitalist sort, which influenced the thinking of right-wing totalitarians, Henry Pachter was surely correct when he wrote that: The common denominator of all these undercurrents of European civilization was the new feeling that “life” had been slighted. It expressed itself in a vitalistic philosophy, which the Nazis bowdlerized into a murderous racism, the Fascists into a swaggering nationalism. Transposed onto the political scene—where it did not belong—this pseudo-rebellion appeared as sadism, clothed in the glitter of heroism.47 Not Sade, Schopenhauer, Bergson, or Nietzsche had the least identification with the principles of enlightenment political theory or the practice associated with it. They were anti-liberal, anti-socialist, anti-democratic and anti-egalitarian, anti-rationalist and anti-historical: enough of them and their followers, moreover, prized the very exercise of arbitrary power that enlightenment political theory sought to curb. There is something provocative about the later insistence of Adorno that “not least among the tasks now confronting thought is that of placing all the reactionary arguments against Western culture in the service of progressive enlightenment.”48 But the “progressive” character of this imperative was left hanging in the abstract. Thus, while important insights can obviously be gained from conservative thinkers, the potential contradictions generated by the attempt to merge right-wing ideology with left-wing practice were never taken into account. Whatever the theoretical sweep of the argument advanced by Dialectic of Enlightenment, from the standpoint of history and politics, it was predicated on false concreteness and misplaced causality. Instrumental reason did not bring about Nazism or destroy the ability of individuals to make normative judgments: it is indeed time to move beyond this abstract and indeterminate perspective.. Instrumental reason and bureaucracy may have been the necessary, but they were not even the remotely sufficient condition for totalitarianism: all twentieth-century western movements have been bureaucratic and, by definition, modern.49 The question is why fascism emerged victorious in some instances and failed in others and why totalitarianism arose in some dictatorial circumstances and not in others. Demands for historical specification explode metaphysical and anthropological forms of argumentation. The Nazi victory was the historical product of a political clash between real movements inspired by divergent intellectual traditions whose members were quite capable of making diverse judgments concerning both their interests and their values. Is it really that difficult to discern the debt to the Enlightenment of those democrats and socialists like Heinrich Mann or Harry Kessler or Rudolf Hilferding who defended the Weimar Republic as against the debt to the Counter-Enlightenment of those who sought to bring it down like Ernst Junger, Oswald Spengler, and the gang surrounding Hitler?

# AT: K of Enlightenment – Progress Turn

**Critiques of enlightenment values are anti-progress**

**Bronner 4**

Stephen Eric, Professor of Political Science and Comparative Literature at Rutgers University, “Reclaiming the Enlightenment” Columbia University Press p. 17

Max Weber already envisioned the spirit of enlightenment “irretrievably fading” and a world comprised of “specialists without spirit, sensualists without heart.”1 But he was bitter about this development, which places him in marked contrast to much of contemporary opinion. The Enlightenment always had its critics. Beginning with the Restoration of 1815 and the new philosophical reaction to the French Revolution, however, they were almost exclusively political—if not necessarily cultural—adherents of the right: intelligent conservatives committed to organic notions of development like Edmund Burke, elitists seeking a return to the sword and the robe like Joseph de Maistre, racists intent on viewing world history as a battle between Aryans and Jews like Houston Stewart Chamberlain, and apocalyptics prophesying doom like Oswald Spengler. Today, however, many on the left forward a critique of the Enlightenment. The criticisms come in various guises: postmodernists consider the enlightenment as “essentialist,” radical feminists view it as “male,” and postcolonial thinkers disparage it as “Eurocentric.” Communitarians condemn its individualism, religious radicals bemoan its skepticism, populists castigate its intellectualism, and the politicians of identity criticize its rejection of experience as the criterion of truth. Dogmatic Marxists dismiss the Enlightenment as “bourgeois,” anarchists are repelled by its reliance on the state, and ecologists by its belief in science and technology. Followers of the Frankfurt School still view it as the unwitting source of modern totalitarianism. Left critics of the Enlightenment form a motley crew and, perhaps, this reflects the current disarray of progressive forces. Still **there is something that**, ultimately, **binds all of them: a basic discomfort with the notion of progress.**

**Turns the K – progress key to positive change of the world and uncovering bad institutions**

**Bronner 4**

Stephen Eric, Professor of Political Science and Comparative Literature at Rutgers University, “Reclaiming the Enlightenment” Columbia University Press p. 18-20

Forged amid the scientific revolution, the birth of modern idealism, and the struggle for political liberty, the term “progress” is usually seen as having been coined by Fontenelle. But it is unnecessary to employ the word to believe in its feasibility. Progress is the crucial category for talking about change, autonomy, and even making sense of reality. The current understanding of progress, however, has become impoverished. The category has been flattened out. It is a travesty to reduce “progress” to the disenchantment of the world, the dissolution of myths, and the substitution of “knowledge for fancy.”2 Progress is, above all, an attack on “the illusion of finality”:3 closure, certainty, and utopia. Enlightenment thinkers believed that they were changing the world by formalizing empirical data under the abstract laws of nature that were open to testing and observation. But these thinkers also knew that normative concerns were intertwined with the quantitative extension of knowledge.4 They recognized that religion rested on revealed claims and that the aristocracy justified its privileges by invoking a mythical past. Acceptance of such beliefs no less than social evils now became understood less as the result of original sin than ignorance and prejudice or those assumptions and opinions, customs and traditions, preserved from critical reflection.5 With this change in the causation of misery and the new emphasis on reason came, quite logically, the desire to better the condition of humanity. In the first instance, this meant throwing off the veils of ignorance imposed by centuries of ideological oppression. The Magic Flute indeed expressed this fundamental assumption of the Enlightenment that no “dialectic” would ever fully ruin: The rays of the sun Drive away the night; Destroyed is the hypocrite’s Hidden might. The Enlightenment idea of progress ultimately implied something very simple and very dramatic: transforming the invisible into the visible, the ineffable into the discursive, and the unknown into the known. Hobbes put the matter well when he noted in De Cive (1642) that “there is a certain clue of reason whose beginning is in the dark; but by the benefit of whose conduct, we are led, as it were, by the hand into the clearest light.” It is secondary whether this meant clarifying the workings of electricity, translating ethical intuitions into discursive statements, the activities of the market into economic laws, or fears about human nature into institutions capable of constraining arbitrary power: Hegel only rendered absolute what had been the guiding impulse, the regulative principle, of the general trend toward “enlightenment” when he based his Phenomenology of Mind on the famous assumption that “there is nothing in the essence of object that does not become evident in the series of its appearances.” Marx would echo this sentiment and provide it with an even more radical material formulation in the second of the “Eleven Theses on Feuerbach” where he writes: The question whether objective (gegenstaendliche) truth can be attributed to human thinking is not a question of theory but is a practical question. In practice man must prove the truth, that is, the reality and power, the this-sidedness (Diesseitigkeit) of his thinking. The dispute over the reality or non-reality of thinking which is isolated from practice is a purely scholastic question. The Enlightenment envisioned progress as the process of bringing what had once been shrouded in darkness into the light. This meant not simply recognizing existing differences among people of different cultures as morally legitimate,6 but also what is institutionally required in order that people may safely exercise their differences. The crucial issue was, for this reason, never the “subjectivity of the subject.” Advocates of the Enlightenment instead sought to foster the moral autonomy of the individual over established traditions and the critical use of rationality against what Ernst Cassirer termed “mytho-poetical thinking.” This enabled them to link progress with the extension of freedom and the exercise of the intellect.

# AT: Enlightenment Totalitarianism

**Enlightenment values don’t cause totalitarianism or genocide – they are directly opposed to them**

**Bronner 4**

Stephen Eric, Professor of Political Science and Comparative Literature at Rutgers University, “Reclaiming the Enlightenment” Columbia University Press p. 7-8

Enlightenment thinkers evidenced anticipatory insights, speculations, and contradictory views on an extraordinary variety of issues. The less systematic the thinker, it is possible to assume, the more perverse the ways in which his or her ideas could be appropriated. Enlightenment thinkers, however, were rarely endorsed or embraced by conservative or fascist political movements: it is hard to imagine a bust of Locke or Voltaire sitting on the desk of Mussolini. The philosophes had their most profound impact on the Left: Locke and Kant influenced all manner of liberals, socialists, and anarchists. Beccaria, Holbach, and Adam Smith were deeply committed to moral development and social reform. Thomas Paine is among the founders of modern internationalism. There is hardly a genuinely democratic regime that is not indebted to Montesquieu. Enlightenment philosophers would inspire generations of those languishing under the weight of despotism and dogma. The extent to which their political contribution is forgotten is the extent to which the contemporary left will constantly find itself intellectually reinventing the wheel. The Enlightenment privileged a critical reflection on society, its traditions, its ideologies, and its institutions. Its spirit was opposed from the beginning, both in terms of style and content, by the type of fanaticism evidenced yesterday by secular totalitarians and today by religious fundamentalists. Just as there is a spirit of the Enlightenment, there is a phenomenology of the anti-Enlightenment. The language of both has—often unwittingly—carried over into the modern age. A lack of awareness about the past, however, has undermined the ability to make sense of the present. Arguing that the Enlightenment with its emphasis upon civil liberties, tolerance, and humanism was—for example—somehow responsible for the “Terror” of the French Revolution or twentieth-century totalitarianism indulges the pseudo-dialectical sensibility without looking at political history, movements, or institutional practices. The entire political landscape is distorted by this view: its revision alone justifies the popular academic reinterpretation of the enlightenment legacy. Understanding the current clash between secularism and religious fundamentalism in the present, no less than the most profound political conflicts of the past, calls for first recognizing that the “Counter-Enlightenment” was not some “dialectical” response to the success of the Enlightenment but an immediate response, born of fear and loathing, against everything associated with its spirit. Perversions of the original impulse still go unacknowledged. Enlightenment values run directly counter to the exercise of arbitrary power no less than the censorship, collectivism, and conformism of authoritarian or totalitarian regimes of both the left and the right. It was also not that the Enlightenment somehow blended with its opposite, the CounterEnlightenment, but that—from the first—two traditions confronted one another. The hatred between them only intensified in the aftermath of the age of democratic revolution and the epic battle would culminate in Auschwitz: it was a battle lost by the partisans of the Enlightenment and won by its enemies.

# Cede the Political

**Enlightenment-based politics allow for real change – escaping into meta-theory contributes to oppression of society**

**Bronner 4**

Stephen Eric, Professor of Political Science and Comparative Literature at Rutgers University, “Reclaiming the Enlightenment” Columbia University Press p. viii-xiii

What follows is an attempt to reclaim the Enlightenment, with its peculiar tradition of theory and practice. Of course, the twenty-first century is not the eighteenth: there is clearly no exact symmetry between past and present. The analog it might provide for engaged intellectuals, no less than its ethical model for resisting oppressive structures of power, needs reinterpretation to meet new conditions. Rigid notions of progress have fallen by the wayside; no group or party can any longer claim to incarnate the ideals of humanity, and the intellectual too often identifies the university with the world. Images from television and film rather than words on the page now shape the public sphere. Liberal regimes have often been corrupted by imperialist ambitions and parasitical elites. Both the left and the right have championed totalitarianism. The new global expansion of capitalism, the rise of the bureaucratic state, media consolidation, thoughtless consumerism, disregard for the environment, and cultural relativism have all undermined the ideals of cosmopolitan tolerance, economic justice, democratic accountability, and the idea of the “good society” generally associated with the Enlightenment. But, if the progressive intellectual can no longer guarantee the realization of reason’s promise, it is still the liberal rule of law with its explicit privileging of civil liberty, the interventionist state as an agent of social justice, and cosmopolitan movements intent on demanding recognition of the “other,” that serve as the precondition—the condition sine qua non—for bettering the lives of individuals, enabling them to expand the range of their experiences, which is the most basic meaning of progress. Current forms of engagement probably seem more pedestrian: perhaps that is the case. But political engagement is no less important than in earlier times. Universal interests remain real. It is only that the engaged intellectual can no longer indulge in the old romantic expectations of “changing the world” in one fell swoop. Enlightenment intellectuals may have laced their political engagement with drama, but they never fell into the trap of demanding all or nothing. To view them as either utopians or totalitarians is philosophically untenable and historically absurd. They took the world as it was, and sought to deal with the problems that it presented in a pragmatic and principled way. But the world has changed. There is no longer an “agent” capable of realizing the emancipatory values of the Enlightenment. Neither “humanity” nor the proletariat nor the once colonized peoples can any longer be identified with what Hegel termed “the world spirit.” There is also no longer a “republic of letters.” But these changes are, too often, employed as an excuse for passivity. There is an even more diverse cosmopolitan community of critical intellectuals and there exists an even greater variety than heretofore of progressive organizations that deal—and often deal positively—with crucial issues ranging from world hunger to the protection of individual liberties to animal rights. Specifying an ‘agent” of change or creating a hierarchy of causes is neither possible nor necessary. Teleology has fallen by the wayside and realizing freedom lacks any historical guarantee. The issue is no longer what party or social movement or interest group is joined; rather the issue concerns the initial decision to engage political reality and the choice of an ethical stance capable of fostering solidarity between organizations. That, indeed, is where the Enlightenment legacy still has a role to play. Solidarity should not simply be assumed: the landscape of the left is still littered by ideological turf-wars inherited from the 1960s. Enlightenment political values are important not only because they contest narrow organizational ambitions that interfere with cooperative action, but also because they provide a historical and speculative orientation for progressive activists and intellectuals. That orientation virtually vanished following the fragmentation of the civil rights and poor peoples movements and the new popularity accorded the variants of postmodernism and—what perhaps lies at the root of them all—the “late” brand of critical theory associated with Dialectic of Enlightenment by Max Horkheimer and Theodor Adorno. In keeping with the decline of radical political parties, and the identification of resistance with the expression of subjectivity, the Enlightenment has been subjected to a new metaphysical form of “immanent” critique. Its political legacy has thus become a secondary concern. The preoccupations of the philosophes with social and institutional reform , and what Max Weber termed the “elective affinity” between their values and progressive agents for change, now seem to receive scant attention. This is all the more unfortunate since new transnational movements have come into existence, often confused in terms of how they should respond to “globalization,” along with functioning transnational political institutions that still suffer from a deficit of loyalty. New communications technologies are providing new organizational possibilities for political resistance, expanding the range of available experiences, and opening the way for new understandings of the most diverse cultures. New forms of solidarity, reflected in the popular concern with “human rights,” have challenged imperialist wars, outdated cultural norms, and authoritarian politics. The objective conditions for realizing the unrealized hopes associated with internationalism, liberal democracy, and social justice are already there; only the ideological willingness to embrace the assumptions underpinning these values is lacking. That is what provides the Enlightenment with a new salience for our time. Humanity is not in the past, but rather in the making. Conservatism may have set the agenda since the last quarter of the twentieth century. But that does not justify the resignation and increasingly debilitating pessimism associated with so many current forms of “radical” thought. Genuinely progressive changes have occurred: dictators have fallen and more citizens of the world have been enfranchised; battles for economic justice have been won; racism and sexism are on the defensive; and there has been poetry— good poetry—after Auschwitz. Easy to downplay the gains, suggest that they have now been “absorbed”; and embrace a new version of the old and tired attitude known as “cultural pessimism.” Cynicism always comes cheap. The real challenge lies in recognizing how the “system,” which was never as “totally administered” as many would like to think has been changed for the better through social action inspired by the Enlightenment. The closed society has become more open and—against the provincial, religious, exploitative, and authoritarian sources of opposition—it has the potential of becoming more open still. Deciding to enter the fray, however, becomes more difficult when relying on philosophical perspectives that leave their supporters wandering about lost in Hegel’s night in which all cows are black. It is necessary to distinguish between traditions not by making reference to metaphysics, but rather by looking at the political conflicts between actual movements. Again, to be sure, the radical democratic and egalitarian aspects of the Enlightenment have been betrayed often enough. But this recognition presupposes that there was indeed something to betray. Which promises made by the Enlightenment have been broken becomes apparent not from the standpoint of “negative dialectics,” communitarian convictions, “pragmatism,” or ethical relativism, but rather by taking seriously its universal understanding of liberty and progress. To be sure: universalism can be found in western imperialist propaganda and notions like “the sun never sets on the British Empire.” In reality, however, such universalism is not universal at all: it lacks reciprocity, an open discourse, and a concern with protecting the individual from the arbitrary exercise of power: That is what differentiates Enlightenment universalism from its imitators, provides it with a self-critical quality, and enables it to contest Euro-centrism and the prevalent belief in a “clash of civilizations.” Let there be no mistake: it has no use for misguided tolerance. Refusals to entertain “western” criticisms can easily be used to insulate repressive non-western traditions from criticism if only because non-western elites can also be authoritarian. Enlightenment political theory always refuses to justify tradition simply because it exists. Its best representatives argue for tolerance over prejudice, innovation over stasis, the rights of the minority over the enthusiasms of the majority, and the moral autonomy of the individual over the revealed claims of religious authority. The radical moment of the Enlightenment lies in its universal assault on privilege and prejudice. Its reflexive and critical character enables its most distinctive political theory to call for constraining the arbitrary exercise of institutional power and expand the possibilities of individual experience in both western and nonwestern societies. Enlightenment intellectuals provide an analogy for what contemporary intellectuals should strive to accomplish and a model of how to combat oppressive institutions, unjustifiable privileges, and anachronistic cultural practices. Viewing their political theory as the source of bureaucratic conformism or totalitarianism is a profound mistake. Their insistence upon demonstrating a plausible—not a perfect, but a plausible—connection between means and ends with respect to political action and social change was not merely to be directed against the ruling elites but against those who would resist them. They anticipated how the collapse of this connection would historically work against the interests of the lowly and the insulted. They sensed that it would turn individuals into a means for political ends and let them be seen as nothing more than economic “costs of production.” Resisting this state of affairs is the most radical purpose of the two most important political products of the Enlightenment: liberalism and socialism. Both inspired progressive mass movements and, for good reasons, inspire them still. The point of their intersection has become the intellectual point of departure for any genuinely progressive politics. Identification with the disenfranchised and the exploited from a cosmopolitan standpoint is the necessary implication of this position. Such is the legacy of the Enlightenment. Making good on it, however, calls for privileging the satisfactions and benefits of political interpretation over the esoteric and metaphysical vagaries of fashionable pseudo-political philosophical currents. If philosophy really has been an expression of what Novalis termed “transcendental homelessness,” which I doubt, then perhaps it is time to confront the philosophical with the political and, finally, for the prodigal to return home.

# K Splits Movements

**The K collapses leftist movements – undermines intellectual coherence, helping conservatism**

**Bronner 4**

Stephen Eric, Professor of Political Science and Comparative Literature at Rutgers University, “Reclaiming the Enlightenment” Columbia University Press

p. 1-2

In the aftermath of the terrorist attacks of September 11, 2001, amid the intellectual retrenchment consonant with the unending “war against terror,” the Enlightenment legacy has become—more than ever before— a contested terrain. Human rights is often used as an ideological excuse for the exercise of arbitrary power; the security of western states has served as a justification for the constriction of personal freedom; and, with flags flying, Christian fundamentalists have called for the defense of western “values.” The best of them—political liberty, social justice, and cosmopolitanism— are rooted in the Enlightenment, and they retain their radical character. But not only the right is distorting them. These values have also come under assault from important intellectual representatives of the left: anarchists, communitarians, postmodernists, half-hearted liberals, and authoritarian socialists. Intellectual and political disorientation has been the result. Ideas long associated with reactionary movements—the privileging of experience over reason, national or ethnic identity over internationalism and cosmopolitanism, the community over the individual, custom over innovation, myth over science—have entered the thinking of the American left. Its partisans have thus become increasingly unclear about the tradition into which they fit and the purposes their politics should serve. The collapse of intellectual coherence on the left reflects the collapse of a purposeful politics from the left. Reconstructing such a politics depends upon appropriating the Enlightenment to meet new conditions. Conservatives have, ironically, been more clear-sighted. In the past, they deplored the “nihilism” of the Enlightenment1: its devastating assault on communal life, religious faith, social privilege, and traditional authority. Conservatives, and those even farther to the right, consistently rejected Enlightenment concerns with individualism, dissent, secularism, reform, and the primacy of critical reflection. This differentiated them from the left. If many leading conservatives now insist upon the importance of “reason” in chastising radical reformers in the West and the advocates of Islam in the Orient, indeed, their “cultural” appropriation truncates the radical spirit of the Enlightenment and its critical ethos.2 The defense of western civilization by conservative intellectuals is, unsurprisingly, mixed with anti-Enlightenment and anti-modern prejudices. They obsess about sexual license and the decline of family values, “radical” reformers and the loss of tradition, tolerance for divergent life-styles and the erosion of national identity. Their “west” is not the “west” of the Enlightenment. Those conservatives most concerned about the coming “death of the west,” in fact, sound like their forefathers who feared “the age of reason” and later the destruction of privileges associated with an obviously white and Christian world.3 Discussion of the Enlightenment has subsequently become skewed to the right where, instead, it should be treated as the razor that divides “left” and right.” The radical moment has dropped out. If there is any legitimacy to claims concerning the increasing irrelevance of fundamental political distinctions, indeed, here lies the historical source.

# AT: Modernism = Obsolete

**We can still explain the world on the terms of modernism—things like the nation-state aren’t obsolete, they’ve just become globalized**

**Jarvis, 2K** – Prof Philosophy @ U South Carolina (Darryl, Studies in International Relations, “International Relations and the Challenge of Postmodernism”, pg. 59-60)

Most generations are apt to be consumed with their own self-importance and their sense of difference from previous generations. But difference, transformation, or change does not necessarily equate with new. If we are in a new postmodern era, to what extent is this merely the consequence of the modernist epoch maturing, growing, and expanding? The notion of new, often expressed by the prefix post signifying disjuncture and breakage, is specious. Social processes, economics, politics, and the human condition have not suddenly reinvented themselves in the space of a few short decades. Rather is the case that they have been subtly altered and affected by changing scientific innovations, technological progress, and attendant reorientations in knowledge and understanding. This is the way Anthony Giddens explains the so-called postmodern age, not as a new era but part of the unfolding tapestry of modernity, where the radicalization and universalization of modernity now make its consequences manifest.29 Processes otherwise claimed as evidence of a "postmodern condition," then, are more appropriately explained as the consequences of modernity that, through reflexivity, continually transposes its form, effects, and style. Thus, for example, the new forms of cultural expressionism that postmodernists claim are a reaction against the monism of modernist universality are more likely the logical consequence of technological innovations that make the mass transmission of ideas possible, as with, for example, the explosion of niche magazines that cater to specific (mass) taste cultures. Likewise, the fragmentation of political movements and the growth of special interest groups that postmodernists insist represent a new political sensibility celebrating diversity might also be explained by the increasing spread and acceptance of liberal ideas that reject absolutism while embracing tolerance. So too, the innovative styles and objectives of literary texts which have been coterminous with challenges to traditional conceptions of the role and purpose of theory are likely not so much instances of postmodernist theory as they are a reflection of the depreciation of Western literary influences through greater cross-culturalism due to global advances in literacy, communications, and travel. Likewise, the advent of hyperconsumerism that postmodernists claim is a result of the "simulacra" and the fixation with image and style is more obviously caused by materialist saturation, mass consumption, and mass marketing techniques, and fabricated by the availability of the mass electronic and print medias. And far from the nation-state withering away in an era of globalization, it is more likely the case that we are witnessing the universaliza-tion of capitalism and of a liberal trade regime just as the nation-state too has become universalized as the preferred medium of territorial-sociopolitical organization. This is not "radical disjuncture" from previous historical experience, but the triumph of that experience on a global scale. The fact that Japanese wear Levi jeans while attending baseball games in Tokyo, or that the Chinese sample Big Macs in Beijing, or that a New Yorker can communicate via the internet with a South African in real time is more accurately explained by the spread of modernity, technology, and, perhaps, the Americanization of global cultural taste preferences than it is by declarations of new epochs, new cultures, and new worlds. In other words, talk of a postmodern age is merely talk of the consequences of modernity, particularly developments in its constituent parts, namely liberal democracy, industrialism, capitalism, technology, and science. What postmodernists mistake as new cultural forms or as new modes of production are really consequences of old and well-established modernist practices: a case of old wine in new bottles.

# AT: K Of Experts

**Rejection of expertise and training as "elitism" risks extinction**

Sam Harris, Newsweek 9-20-08 http://www.newsweek.com/id/160080/page/1

The prospects of a Palin administration are far more frightening, in fact, than those of a Palin Institute for Pediatric Neurosurgery. Ask yourself: how has "elitism" become a bad word in American politics? There is simply no other walk of life in which extraordinary talent and rigorous training are denigrated. We want elite pilots to fly our planes, elite troops to undertake our most critical missions, elite athletes to represent us in competition and elite scientists to devote the most productive years of their lives to curing our diseases. And yet, when it comes time to vest people with even greater responsibilities, we consider it a virtue to shun any and all standards of excellence. When it comes to choosing the people whose thoughts and actions will decide the fates of millions, then we suddenly want someone just like us, someone fit to have a beer with, someone down-to-earth—in fact, almost anyone, provided that he or she doesn't seem too intelligent or well educated. I believe that with the nomination of Sarah Palin for the vice presidency, the silliness of our politics has finally put our nation at risk. The world is growing more complex—and dangerous—with each passing hour, and our position within it growing more precarious. Should she become president, Palin seems capable of enacting policies so detached from the common interests of humanity, and from empirical reality, as to unite the entire world against us. When asked why she is qualified to shoulder more responsibility than any person has held in human history, Palin cites her refusal to hesitate. "You can't blink," she told Gibson repeatedly, as though this were a primordial truth of wise governance. Let us hope that a President Palin would blink, again and again, while more thoughtful people decide the fate of civilization.

**Rejecting expertism means you vote for Palin- this allows conservative, reactionary, uneducated masses to takeover democracy and swamp reason**

Mark Lilla is a professor of humanities at Columbia University and a former editor of the Public Interest.WSJ 11-8-08 <http://sec.online.wsj.com/article/SB122610558004810243.html?mod=article-outset-box>

The die was cast. Over the next 25 years there grew up a new generation of conservative writers who cultivated none of their elders' intellectual virtues -- indeed, who saw themselves as counter-intellectuals. Most are well-educated and many have attended Ivy League universities; in fact, one of the masterminds of the Palin nomination was once a Harvard professor. But their function within the conservative movement is no longer to educate and ennoble a populist political tendency, it is to defend that tendency against the supposedly monolithic and uniformly hostile educated classes. They mock the advice of Nobel Prize-winning economists and praise the financial acumen of plumbers and builders. They ridicule ambassadors and diplomats while promoting jingoistic journalists who have never lived abroad and speak no foreign languages. And with the rise of shock radio and television, they have found a large, popular audience that eagerly absorbs their contempt for intellectual elites. They hoped to shape that audience, but the truth is that their audience has now shaped them. Back in the '70s, conservative intellectuals loved to talk about "radical chic," the well-known tendency of educated, often wealthy liberals to project their political fantasies onto brutal revolutionaries and street thugs, and romanticize their "struggles." But "populist chic" is just the inversion of "radical chic," and is no less absurd, comical or ominous. Traditional conservatives were always suspicious of populism, and they were right to be. They saw elites as a fact of political life, even of democratic life. What matters in democracy is that those elites acquire their positions through talent and experience, and that they be educated to serve the public good. But it also matters that they own up to their elite status and defend the need for elites. They must be friends of democracy while protecting it, and themselves, from the leveling and vulgarization all democracy tends toward. Writing recently in the New York Times, David Brooks noted correctly (if belatedly) that conservatives' "disdain for liberal intellectuals" had slipped into "disdain for the educated class as a whole," and worried that the Republican Party was alienating educated voters. I couldn't care less about the future of the Republican Party, but I do care about the quality of political thinking and judgment in the country as a whole. There was a time when conservative intellectuals raised the level of American public debate and helped to keep it sober. Those days are gone. As for political judgment, the promotion of Sarah Palin as a possible world leader speaks for itself. The Republican Party and the political right will survive, but the conservative intellectual tradition is already dead. And all of us, even liberals like myself, are poorer for it.

# AT: K of Experts

**Experts necessary for change – even if their language can be obscure**

**Bronner 4**

Stephen Eric, Professor of Political Science and Comparative Literature at Rutgers University, “Reclaiming the Enlightenment” Columbia University Press p. 77-78

But praise for the amateur also has its limits. To ignore the need for critical disciplinary intellectuals with various forms of scientific expertise is to abdicate responsibility for a host of issues involving knowledge of fields ranging from physics and genetics to electronics and even environmentalism. There is surely an overabundance of jargon and mystification and, as has been mentioned before, the need exists for a new sensitivity to the vernacular. 39 But it is also the case that complex issues sometimes require complex language and, often for good reasons, fields generate their own vocabularies. A judgment is undoubtedly necessary with respect to whether the language employed in a work is necessary for illuminating the issue under investigation: that **judgment**, however, **can never be made in advance.** There must be a place for the technocrat with a political conscience as surely as for the humanist with a particular specialty. The battle against oppression requires a multi-frontal strategy. Best to consider the words of Primo Levi who understands the critical intellectual as a “person educated beyond his daily trade, whose culture is alive insofar as it makes an effort to renew itself, and keep up to date, and who does not react with indifference or irritation when confronted by any branch of knowledge, even though, obviously, he cannot cultivate all of them.”40

# Positivism Good

**Truth claims must come from empiricism**

**Houghton, ’08** – Prof. Poli Sci @ U of Central Florida (David, International Politics Vol. 45 pg. 115-128, pg. 116-117, “ Positivism ‘vs’ Postmodernism: Does Epistemology Make a Difference?”, Pro Quest)

Certainly, postpositivist epistemologies ‘license’ the analysis of topics, which mainstream positivist scholars have tended to ignore or otherwise neglect — as Smith argues, epistemology may beget ontology in this sense—but it is not clear whether postpositivists cover a broad range of topics because their epistemology allows them to, or choose a licensing epistemology because it matches their preexisting ontological commitments. The direction of the causal arrows is not clear, and as Smith concedes, the relationship appears to work in both directions. This essay takes issue with the position that epistemology matters in such a fundamental way. The reasoning offered is as follows: it is not clear whether there exists any real alternative to the kind of ‘observation’ beloved by positivists, denigrated by postpositivists, but engaged in by both. While doing empirical work does not make one an empiricist in the philosophical sense of that term, it is far from clear that the epistemological position one adopts has much effect on the kind of truth claims one makes. The adoption of postpositivist epistemologies has not meant that ‘anything goes’ in the new postpositivist scholarship; every example in the growing body of that literature, which illustrates (or is intended to illustrate) a theoretical point is drawn from experience and observation, and is surely ‘empirical’ in nature. This raises the question of whether it is possible to be genuinely postpositivist at all. I argue here that ultimately it is not, for observations cannot be plucked out of thin air; one’s truth claims about the world have to come from somewhere.

**Postmodernists inevitably support their scholarship with empirics**

**Houghton, ’08** – Prof. Poli Sci @ U of Central Florida (David, International Politics Vol. 45 pg. 115-128, pg. 118, “ Positivism ‘vs’ Postmodernism: Does Epistemology Make a Difference?”, Pro Quest)

Nevertheless, it is surely beyond dispute that positivists can be said to ‘buy into’ the first three propositions to some degree. Mainstream IR theorists are all essentially positivists, because all agree that — while analysts look at the world in ways that are partly subjective — some basic features of the world can be shown more or less ‘objectively’ to be a certain way (although they do of course disagree on what the objective realities are). Postmodernism, on the other hand, argues at its root that reality is socially constructed and subjective. This, postmodernists suppose, fundamentally undermines established theories of IR. If there is no objective international reality out there to understand, then our theories are in effect created by our values and beliefs and are nothing more than the reflections of ourselves and our own minds. There is, and can be, no privileged or objective standpoint that one can use to make sense of reality, and the analyst is effectively attempting to play God when he or she lays claim to such a standpoint. Postmodernism is often attacked as a ‘French fad’ or dismissed as the product of ‘Parisian intellectual fashions’ (Wallace, 1996; Navon, 2001), while others have regarded it as a genuine threat to serious thinking about IR (Jarvis, 2000). Certainly, dialogue between the two camps has been hindered by the failure of each camp to accept the core assumptions and comprehend the language used by the other. This has led to a widespread failure within mainstream circles to take postmodernist approaches seriously. However, I would argue that the approaches taken by scholars such as James Der Derian, David Campbell, Richard Ashley and R.B.J. Walker at least deserve to be assessed on their own merits. Rather than add to chorus of criticism here, I shall question whether the debate between postmodernists and positivists ultimately ‘matters’ in the sense of having a material impact upon the kind of empirical claims that each group of scholars makes. In short, I conclude that it does not matter in this sense, in part because postmodernist work as it currently exists is not genuinely ‘postpositivist’ in its practical application. Put differently, there exist — if not contradictions — then strains and inconsistencies in the work of some major postmodernists, which render the claims they make for their empirical research more or less indistinguishable in kind from those made by positivists.

# Positivism Good

**Empiricists don’t think that their scholarship is objective truth**

**Houghton, ’08** – Prof. Poli Sci @ U of Central Florida (David, International Politics Vol. 45 pg. 115-128, pg. 122-123, “ Positivism ‘vs’ Postmodernism: Does Epistemology Make a Difference?”, Pro Quest)

The foregoing is certainly a tenable position to adopt in a philosophical sense: there is no inherent contradiction between asserting that we can never know how the world is and then tentatively offering us one’s own highly subjective vision of it, although the analyst’s position as a legitimate commentator on the world is weakened by conceding the former. However, my argument is simply this: it does not materially change an argument to make it ‘tentatively’ and confess that one has some degree of personal doubt about it. Most if not all mainstream theorists would also readily concede that although they think their world views are better supported than those associated with rival approaches, they cannot definitively prove that they are correct in a scientific sense. In stressing the uncertainty of our perceptions of the social world, postmodernists do not depart from the views of mainstream scholars such as Gary King, Keohane and Sidney Verba, who readily concede this point in their widely-read book Designing Social Enquiry (King et al., 1994). To this one could counter that postmodernists are more likely and willing to admit to the contingency of their views than are most contemporary positivists. Perhaps this is true, but being so willing does not change the nature of those views, and it is therefore questionable what difference ‘tentativeness’ and ‘humility’ really makes. Deep down, most academics who believe in their theories truly believe them, whether they call themselves postmodernist, postpositivist, positivist or something else. For example, to return to Ashley and Walker’s quote, does it really make a difference to the content of an argument to be ‘respectful of the uncertainties of life’? And is it always true to say that postmodernists are more humble before knowledge than positivists? In answer to the latter, it is not always clear that postmodernists like Der Derian actually do express themselves in such a way or feel any less committed to their own personal visions of the world. Reading Anti-diplomacy, for instance, the author sounds just as convinced by the ‘truth’ of his vision as, say, Waltz does in Theory of International Politics or Keohane and Nye do in Power and Interdependence. And one wonders what the difference is between Ashley and Walker’s claim that practices of power ‘visibly labour’ to fixmeani ngs and Waltz’s conviction that bipolar systems are more stable than multipolar ones when one considers each proposition as a truth claim.

**Recognition of subjectivity does not alter the substance of an argument—all engage in empirical research**

**Houghton, ’08** – Prof. Poli Sci @ U of Central Florida (David, International Politics Vol. 45 pg. 115-128, pg. 123-124, “ Positivism ‘vs’ Postmodernism: Does Epistemology Make a Difference?”, Pro Quest)

It would be wrong to claim that all postmodernists are nothing more than positivists in disguise; they begin from different philosophical assumptions and study phenomena in which mainstream theorists have usually expressed only a fleeting interest. But as soon as one begins to make statements about how the world is, or how we think it is, we are engaging in an empirical (if not empiricist) exercise and making claims that are effectively identical in kind (though not usually in substance) to those made by mainstream scholars. What we can say is that postmodernists sometimes make their empirical and epistemological claims with more recognition of their subjectivity and contingency, or aspire to do this. But even if one concedes the argument that postmodernists ‘believe in’ their arguments less strongly than do positivists, it is rather questionable what difference this makes. Were Robert Keohane to declare himself a postmodernist tomorrow and hedge his arguments about the significance of international institutions around with great tentativity and reservations, would he not be making the same substantive argument? Or supposing that James Der Derian became a positivist overnight and asserted that his claims about the significance of simulation in world politics can be demonstrated more or less objectively, would this alter their content? Even if these two miracle counterfactuals were in fact to come to fruition, there is good reason to doubt whether the substantive theoretical debate between different paradigms would be altered in any significant way.

# Frontier K Slayer

Astrosociology’s unique perspective deconstructs imperialist thoughts of “ordering space” – we are link turning the criticism and supercharging the perm

Keenan, 8

[William, Prof. of Sociology @ Nottingham Trent University, “Review of *Cosmic Society: Towards a Sociology of the Universe*”, found on Sociological Research Online, <http://www.socresonline.org.uk/13/5/reviews/keenan.html>, NKN]

**Astrosociology** (Pass 2004; Omrod 2005) **takes us on an expeditionary voyage of cosmic discovery that carries the potential payoff of global recovery by getting us to see in true perspective our human frailty and vulnerability**, on the one side, and our terrifying overkill capacity, on the other side. As a veritable 21st century traveller's tale, this is a book designed to enthral and excite those who cling on to the pioneer sociologists' hopes of 'salvation through social science'. **This 'sociology of the universe' - eschewing hubris**, defiantly committed to a soaring, searing, far-seeing sociological ambition to tell it like it is and how it might become - **breaks out of the confines of the urban-industrial heritage of the discipline and reaches for the skies**, literally and figuratively, where new worlds are being staked out, designed and part-built for future colonisation. **Little wonder that 'imperialism' occupies one of the most packed items in the detailed index**. Indeed, in his hortatory front page remarks, Bryan **Turner commenting on** 'the modern period of cosmic colonialism', (**'cosmic imperialism'** is the author's own expression, p. 179), **refers to Dickens and Omrod as 'as it were, the Marx and Engels of the political economy of space** and consequently their publication is the Grundrisse of the mode of space production'. **With Cosmic Sociology we leave behind the trusty methodological anchors and reliable** 'first, second, third, fourth worlds' **signposts of the founding parents to float in the unchartered virtual spheres of cyber-space in search of post-sociological bearings**.

# Specific Perm Card

An interdisciplinary approach is needed – prefer the specificity of our evidence

Lallement, 05

[R. , June 05, ISSI Scientific Report, "The Need for Interdisciplinarity", <http://www.issibern.ch/PDF-Files/SR-003.pdf>]

**An ever-increasing number of scientific fields are using the opportunities offered by space flight that began with sounding rockets in the middle of the 20th century** and were quickly followed by the historic launch of Sputnik. Since then, **measurements in space and observations from space have assumed an essential role in Solar System research, astronomy and cosmology, and in the earth sciences. Indeed, today space research is indispensable for a multitude of scientific fields. But that is not enough. To cope with the growing complexity of scientific problems that are now being studied with the vastly improved sensitivity and resolving power of space-borne instruments, an interdisciplinary approach is required. Such an approach can also provide us with early warnings of the undesirable side effects that go along with every rapidly evolving technology**. All of these considerations were the guiding motivation in creating ISSI. In the brochure issued in 1994 by the Association Pro-ISSI one reads

# Specific Perm Card

Interdisciplinary approach proven to work - ISSI

Lallement, 05

[R. , June 05, ISSI Scientific Report, "The Need for Interdisciplinarity", <http://www.issibern.ch/PDF-Files/SR-003.pdf>)

“**Interdisciplinarity” is often invoked, but not as often implemented. There are practical reasons for this and, for space research, they are probably mostly the result of the involvements of the space scientists in projects that continue from one to the next. ISSI’s activities are, as a rule, not related to specific space projects, and this has allowed for true interdisciplinarity. I will try to show here that ISSI has done more than organize sequences of activities in different scientific fields, which would be multi-disciplinarity. ISSI has been a place where distinct scientific communities learn from each other.** It has thus been a true interdisciplinarity institution. Good examples of interdisciplinarity “at work” at ISSI that I have witnessed were the first workshop held in 1995, and one of the recent working teams, which met in autumn 2004. These examples illustrate that throughout the first 10 years ISSI has initiated and maintained interdisciplinary curiosity.

# AT: Numbing/Fear Good

Fear appeals coupled with policy proposals overcome numbing and motivate action to solve the threat—perm do both

**White ’86**

[Ralph, Emeritus Prof. Social Psych. – George Washington U., in “Psychology and the Prevention of Nuclear War”, Ed. White, p. 558-561]

4. Psychic numbing and the need for clearness about preventive action. Five chapters, two at the beginning and three at the end, bring out this theme. In Chapter 1, Lifton and Falk give striking examples of how "psychic numbing" works. They broaden out the concept by stating, "What I\* am calling psychic numbing includes a number of classical psychoanalytic defense mechanisms: repression, suppression, isolation, denial, undoing, reaction formation, and projection, among others. [A follower of Harry Stack Sullivan might add "selective inattention," a term about as broad as "psychic numbing" itself.] But the defense mechanisms overlap greatly around the issue of feeling and not feeling. With that issue so central to our time, we do well to devote to it a single overall category" (p. 12). Lifton describes also how his own anxiety and surprising reluctance to begin systematic study of the survivors of Hiroshima "seemed to recede as I found myself listening carefully during the interviews for psychological pat¬terns in survivors' descriptions. In other words, I had begun to carry out my professional task, with the aid of the selective professional numbing I have mentioned in connection with surgeons" (p. 14). The cure, it seems, **was involvement in a clear and meaningful course of action related to the source of anxiety**. Mack and Snow bring in the same theme when they describe the reactions of children and adolescents to the nuclear threat as more direct and honest than the reactions of most adults. The adults presumably have built up psychological defenses against candid recognition of the nuclear horror. The children, meanwhile, "having their whole lives to live and beffig less emotionally defended, penetrate with their words the barriers to feeling we have erected in relation to the nuclear threat" (p. 17). But action helps. "Some teenagers advocate specific actions, such as thinking actively about the nuclear threat, giving speeches, marching, and demonstrating. Those that recommend such ac¬tions seem to be more hopeful" (p. 25). Section XII, "Changing War-Related Attitudes," addresses somewhat indirectly a very practical question: **Should the antinuclear movement continue to emphasize fear appeals** such as those in Jonathan Schell's The Fate of the Earth and in films such as The Day After (1984)? Or, for those whose reaction to them is some form of psychic numbing, have they become counterproductive? The classic, path breaking experiment of Janis and Feshbach (1953) first raised doubts about the effectiveness of strong fear appeals. In keeping with much clinical evidence of resistance to painful thoughts, it had the surprising result that strong fear appeals seemed to change behavior less than weaker fear appeals did. In this volume Feshbach briefly reviews some later studies. The majority of them, such as that of Ronald Rogers and C. Ronald Mewborn (Chapter 31) have not shown that strong fear appeals are counterproductive; and some of them, in some experimental conditions, **have indicated that strong fear appeals are a good deal more effective than are weak ones.** My inference from these findings, and more directly from the experiment of Cohen (1957), is that **the antinuclear movement would be wise to continue occasional strong fear appeals, as a reminder and a revitalizer of motivation**, with one essential proviso: that each strong fear appeal should be followed by discussion of preventive actions and of reasons why some pre¬ventive actions are likely to be effective. As we have seen, the chapter by Yankelovich and Doble provides strong factual backing for hope that intelligent remedial actions, which take into account the new characteristics of American public opinion, are likely to be effective, most notably on the no-first-use issue. Chapter 31, by Rogers and Mewborn, gives strong support to our proposed proviso. It and other evidence shows that the clearness of paths of escape from danger is unquestionably more important in determining the effective¬ness of a fear appeal than is the strength or weakness of that appeal. Chapter 33, "New Ways of Teaching for the Nuclear Age," by Alexander and Wagner, brings out a similar theme. It stresses the need for hope, and for confidence in one's own ability to take constructive action, as major goals of peace education in the schools. "Educators are learning that nuclear education must do more than provide information about nuclear weapons; it must also enable young people to develop a realistic sense of hope and responsibility for the future" (p. 538). "A more collaborative approach to understanding the central problems of our time sparks students' belief in the possibility of creating change.. .. Students are encouraged to develop action-oriented projects of their choice—for instance, to survey their classmates about problems of racism or to write a letter to the editor for or against the MX" (p. 539). Similarly, though more briefly, Kimmel, in his introduction to Section XIII, "Peace Education," ends with this sentence: "The challenge is to translate our knowledge into educational programs and activities that students can understand and use" (p. 537; italics added). And, in Chapter 34, Boulding stresses the need for children to develop resourcefulness and confidence in knowing or discovering what to do. "As I looked at different studies of violence and aggression in children's behavior, it became very clear that the more experience children have in different ways of doing things, the more they've been encouraged to think, the more answers they're able to pull out of their own minds in a crisis. But the child who has very few ideas about what to do next sulks,, strikes out, hits. The same is true of an adult. The more resources you develop, the more answers you find. It's the richness and compassion of the life experience in dealing with others that keeps you from hitting out" (p. 542).

# Institutionalized Ethics Good

Institutionalization of our ethics is vital. Only the state can reconcile our obligations of preventing extinction with our other obligations

**Fagana ‘9**

[Madeleine, PhD Candidate in Int’l Pol. Dept. – Aberystwyth U., Contemporary Political Theory, “The Inseperability of Ethics and Politics: Rethinking the Third in Emmanuel Levinas”, 8, doi:10.1057/cpt.2008.20]

However, we can never live up to what the Other demands of us. We can never fulfil our responsibilities, never be assured that we have taken the responsible course of action, 'done the right thing'. The demands of the Other upon us are already infinite, because we are charged even with their responsibilities to Others, and we are always confronted also with our infinite responsibilities to the Third. If the face-to-face, my complete responsibility to the Other, is necessarily a one-on-one situation, the presence of a Third immediately moves relations into a different realm, for in absolute responsibility to the first person I betray my duty to the second, and so on. The Third for Levinas creates a problem for the idea of infinite responsibility in the face-to-face relation: 'responsibility for the Other [...] is troubled and becomes a problem when a third party enters' (2004, p. 157). If the Third is immediate, this problematization of responsibility is immediate. What this shift in focus does is to emphasize the way in which we are always obligated to one Other and to all the other Others, the generality, rules, institutions and norms. These demands are, necessarily, incompatible, because responding to the one Other via duty, rules or law is immediately to do violence to their alterity by approaching them as an instance of a type and to deny the immediacy of the face and its demands. This is, emphatically, not to say that the general, universal, rules, norms, law and so on have no place in Levinas's thought. Nor are they in any way secondary. What is key about Levinas's approach is the interpenetration of the general and the particular – he is concerned with 'Totality and Infinity' [emphasis added] rather than a hierarchy or choice between the two terms, as suggested by Dooley (2001, p. 43). The Third means that our obligations are not clear; we can never fulfil them because the infinite responsibility we have to the Other and to the Third are necessarily completely incompatible because of the excessive nature of these responsibilities. We are, then, always irresponsible in any attempt to be responsible. The difficulty arises in the fact that there is always more than one Other or that the Other is not a unitary self-identical subject, which means that any taking up of responsibility in response to one Other is necessarily a dereliction of duty with regard to another Other. It is also, by extension, a dereliction of duty to the generality of rules and norms which would adjudicate between the claims of the Other and the other Others. We are in this sense always turning away from the face of the Other, sacrificing them and reneging on our responsibility to them, in part because what is demanded of us is infinite and excessive but also because the demand itself and the structure of the way that demands are relayed to us are always impossible because the Third is already there, in the demand, in the face of the Other. And, importantly, this impossibility is not a limit, weakness, or oversight in Levinas's work. It is the very fact that the call of the Other does not determine a particular response and that it is always in competition with the incompatible calls of other Others and provides no way of adjudicating between these demands that means that the possibility of responsibility, rather than the violence of an obsession with the one Other, or a clear knowledge of what we should do, is maintained. Further, Levinas's approach of aligning responsibility with the choice to respond to the Other as face rather than in a totalizing way means that even in some hypothetical face-to-face relationship without the Third, 'being responsible' would not be possible. In a face-to-face without the Third there would be no possibility of decision and as such no possibility of responsibility. It is the possibility of the approach of proceeding from universality, entering into a totalizing relation with the Other that conditions the possibility of the response not being pre-determined; we could approach the face as face or we could approach it in a totalizing way. This possibility of there being a decision only happens when the Third enters (otherwise we would be completely commanded and our response determined by the face of the one Other), so the element of choice that Levinas seems to see as necessary for responsibility, or goodness, is only possible with the Third; it would not be possible to be responsible in this sense in the face-to-face. In the face-to-face we would know what to do, our obligations would be clear. But the Third is always already there in the face, our obligations are never clear, and rather than making responsibility impossible it is this which conditions its possibility. Responsibility (in terms of a responsible response rather than in terms of obligation) as a concept only makes sense with an appreciation of the Third in Levinas's work. It is the Third which conditions the possibility of responding in some un-predetermined way, of responding responsibly, but the Third simultaneously makes this responsibility impossible because there is no response which could meet my responsibilities to both the Other and the Third. It is in this sense that Levinas must be seen as confronting an aporia of responsibility and in this sense that he does not attempt to offer a way out of the aporia, not because of a failure of his theorizing at this point, but through an acknowledgement that it is the aporia itself, and perhaps its foregrounding and recognition, which conditions the possibility of responsibility. As such, the idea of Levinas's face-to-face relation as providing the horizon or grounding for thinking about responsibility and politics becomes problematic. Problematizing Ethics and Politics: The Ethico-Political This interpenetration of the responsible and the irresponsible in the figure of the Third is mirrored in Levinas's discussion of ethics and politics. Levinas is sometimes read as calling for a critique or disruption of the political in the name of the ethical (Critchley, 1992, p. 223; Simmons, 1999, p. 98; Critchley, 2004, p. 182; Thomson, 2005, p. 101). Similarly, the idea of the passage or movement from ethics to knowledge, the Other to the Third and so on characterizes much of the debate regarding Levinas's political utility (Critchley, 1992, p. xiv; Simmons, 1999, p. 96). However, this approach relies on a distinction, both categorical and temporal, between these realms, which I do not think is to be found in much of Levinas's work. His understanding of ethics and politics, charity and justice is, I argue, more complex than this separation suggests and can be more usefully characterized by the idea of the ethico-political. Levinas's approach to politics concerns the need to create institutions, rules, universalizable and generalizable structures as required by the Third. It also encompasses a more traditional, concrete understanding of politics, addressing issues such as the state and democracy, although these issues arise out of the same concerns. **It is justice that demands institutionalization and politics for Levinas.** He is definite about the requirement for justice, which for him is in the realm of the general, abstract and universalizable: 'Justice is necessary, that is, comparison, coexistence, contemporaneousness, assembling, order, thematisation, the visibility of faces' (Levinas, 2004, p. 157). Justice is, he argues, the only way to regulate relations with other Others, the mechanism by which the claims of Others are compared and judged. Justice, as calculation and legislation, plays an important role: 'against the persecution which targets Others and especially those close by, one has to have recourse to justice' (Levinas and Robbins, 2001, p. 100). Justice is necessary because of the Third, immediately present in the face of the Other. In approaching the Other, 'A third party is also approached; and the relationship between the neighbour and the third party cannot be indifferent to me when I approach. There must be a justice among noncomparable ones' (Levinas, 2004, p. 16). The demand for responsibility to the Third, and in this to a multiplicity of Others, requires that what may seem initially a commitment to infinite responsibility to one Other is in fact in Levinas's work an argument that there must be a comparison between incomparables. It is this comparison and calculation, in the form of justice, that makes charity or responsibility possible among many Others: 'justice and the just state constitute the forum enabling the existence of charity within the human multiplicity' (Levinas and Robbins, 2001, p. 230). However, it is also this calculation and comparison which threatens this possibility, if separated from a continued concern with the infinite responsibility of the face-to-face (as discussed below). Levinas's introduction of the Third then requires a consideration of justice, which demands politics. The Third means that justice and comparison are required, in the name of infinite responsibility, and it is the state which institutionalizes this necessity for Levinas and Robbins (2001, p. 66); **'This multiplicity of human beings must be organised, calculated. I can cede my responsibility within a society organised in a State, in justice'**. The state is not put forward as purely positive or negative, as ethical or unethical (although these categories are themselves problematic in this context). The Third both extends and limits our responsibility and this very difficulty is reflected in the state and in institutions. It is, for Levinas and Robbins (2001, p. 67), 'necessary in order to make comparisons, judge, have institutions and juridical procedures, which are necessary'. However, as well as being necessary, the state is unavoidably violent, as all limits to infinite responsibility to one singular Other are violent: 'You find [...] the necessity of the state. Violence, of course, in relation to the charity rendered necessary precisely by the charity inspired by the face of the neighbour' (Levinas and Robbins, 2001, p. 67). The state both supplements and denies the 'work of interpersonal responsibility' (Levinas and Robbins, 2001, p. 67). As such, the state or institutionalization are not necessarily a corruption of some ethical relationship which needs to be interrupted in the name of that relationship; the relationship between ethics, charity and politics or justice is more complex than this. Levinas is however concerned with an approach which separates politics and justice out from concerns of charity. Although charity for Levinas and Robbins (2001, p. 181) is impossible without justice and the state, justice is 'warped' without charity. It is in this sense that Levinas criticizes the state and justice, as problematic when approached as sufficient in, or legitimized by, themselves. Again, this is a reflection of the aporia of the ethico-political relation, the insufficiency of either the face-to-face or the relation to the Third to the demands of responsibility. **Justice, taken by itself, inseparable from formalized and sedimented institutions or the 'pure' politics criticized above 'risks causing us to misrecognise the face of the other man'** (Levinas and Robbins, 2001, p. 223). The judgement required by justice is, for Levinas and Robbins (2001, p. 115), violent, in that it transforms faces into "[O]bjective and plastic forms, into figures which are visible but defaced, the appearing of men, of individuals, who are unique but restituted to their genera. With intentions to scrutinise and acts to remember." It is in response to this (unavoidable) violence that Levinas argues that 'love must always watch over justice', in order to provide a foil to its possible totalizing tendencies, to negotiate the violence done in its name (although in the name of another violence aimed at the Third) (Levinas and Robbins, 2001, p. 169). Justice is for Levinas an impossible concept, precisely because of its position with regard to the competing demands of the Other and the Third. Justice, Levinas argues, 'remains justice only in a society where there is no distinction between those close and those far off, but in which there remains the impossibility of passing by the closest' (2004, p. 159). Justice is then in a sense the very impossibility at the heart of the ethico-political relation whereby we are under obligation both to the immediate absolute demand of the Other and to the generality, rules and norms which adjudicate between Others. The complexity of the relationship between justice and charity is what complicates Levinas's approach to politics and the state. Levinas does not see all politics as totalizing, as inimical to a concern with the ethical. What, I argue, Levinas is concerned to emphasize is the danger in some kind of idea of pure politics, of generalization, univeralization, a concern only with the Third in an abstract sense: 'Politics left to itself bears a tyranny within itself; it deforms the I and the Other who have given rise to it, for it judges them according to universal rules, and thus as in absentia' (Levinas, 2005, p. 300). For him, this approach does not make sense, in the same way that a 'pure' ethics does not. Politics is always already about a negotiation between the Other and the Third, always already the ethico-political. Levinas contrasts the liberal state with a totalizing state arguing that one leaves space for charity and the interpersonal where the other attempts to bring everything within 'pure' politics or institutionalization. Although Levinas's commitment to the liberal state is problematic, even (or especially) on his own terms, this question of the relative merits of various types of state is not central to this stage of the argument being made here.1 Levinas's work on the liberal state is relevant in this context because of the way he uses it to highlight the importance of charity within justice, in contrast to the totalitarian state which he sees as an attempt at closing down this dimension of charity and the interpersonal but which, importantly, always fails in this task. His discussion of the totalizing state also acts to illustrate his concern with the fragility of charity in the face of totalizing 'pure' justice and politics. Whether Levinas is correct in his approach to various forms of state does not impact on the conclusions regarding the relationship between justice and charity in his work. Levinas suggests that the liberal state recognizes, at least to an extent, the impossibility of the concept of 'pure' politics. Because the state is an institutionalization of the aporetic ethico-political interpersonal relationship it contains within itself contradictory elements, and so an openness: space for the personal and the institutional and an acknowledgement of the singular and particular as that which demands the universal and general and the liberal state recognizes this. For Levinas and Robbins (2001, p. 69) **there is 'an appeal to mercy behind justice' in the liberal state, an acknowledgement of the duty we have to the Other at the same time as our duties to the Third and the generality, that is, to justice.** The state is viewed not as a result of some 'war of all against all', a limitation of violence, but rather as a tool to control and limit our excessive responsibilities (Levinas, 1985, p. 80). A state which recognizes this has the possibility, for Levinas, of not excluding charity, it is an acknowledgement of 'the presence of the singular in the universal' (Levinas and Robbins, 2001, p. 69).

# Institutionalized Ethics Good

Institutional ethics is vital to mediate competing ethical demands.

**Simmons, 99**

[William Paul, Associate Prof. Pol. Sci. and Dir. MA Program in Social Justice and Human Rights – ASU, Philosophy & Social Criticism, “The Third: Levinas’ Theoretical Move From An-Archical Ethics to the Realm of Justice and Politics” 25:6, Sage]

However, it is impossible to have a face-to-face relationship with each member of humanity. Those far away can only be reached indirectly. Thus, the appearance of the Third extends the an-archical responsibility for the Other into the realm of the said, ushering in the latent birth of language, justice and politics. The an-archical relationship with the Other is the pre-linguistic world of the saying. Language is unnecessary to respond to the Other. The Third, however, demands an explanation. ‘In its frankness it [language] refuses the clandestinity of love, where it loses its frankness and meaning and turns into laughter or cooing. The third party looks at me in the eyes of the Other – language is justice.’38 The appearance of the Third also opens up the dimension of justice. Judgements must be made. The ego must compare incomparable Others. ‘It is consequently necessary to weigh, to think, to judge, in comparing the incomparable. The interpersonal relation I establish with the Other, I must also establish with other men.’39 Therefore, Levinas distinguishes the ethical relationship with the Other from justice which involves three or more people.40 Finally, the Third introduces the realm of politics. The ego’s infinite responsibility must be extended to all humanity, no matter how far off. Ethics must be universalized and institutionalized to affect the others. To the extent that someone else’s Face brings us in relation with a third party, My metaphysical relation to the Other is transformed into a We, and works toward a State, institutions and laws which form the source of universality. 41

Political institutions are key to ethics

Simmons, 99

[William Paul, Associate Prof. Pol. Sci. and Dir. MA Program in Social Justice and Human Rights – ASU, Philosophy & Social Criticism, “The Third: Levinas’ Theoretical Move From An-Archical Ethics to the Realm of Justice and Politics” 25:6, Sage]

Levinas’ critique of the foundations of political thought changes the very nature of politics. A politics based on the battle between autonomous selves, like Hobbes’, is a negative politics whose primary purpose is to constrain individual desires. Levinas, on the other hand, insists that politics must have a positive role. Politics must serve ethics. The occidental ethic always proceeds from the fact that the other is a limitation for me. Hobbes says you can come directly to philosophy from this mutual hatred. Thus we could attain a better society without love for the other, in which the other is taken into account. That would be a politics that could lead to ethics. I believe, on the contrary, that politics must be controlled by ethics: the other concerns me.32 Although Levinas is suspicious of the Western political tradition, his thought is not apolitical as some have charged. His philosophy begins and ends with politics. For example, Peperzak argues that ‘the point of orientation and the background of all other questions’ in Totality and Infinity is ‘the question of how the violence that seems inherent to all politics (and thus also to history) can be overcome by true peace’.33 Politics is also a necessary step that Levinas’ ethical thought must take. Just as the an-archical saying requires the ontological said, an-archical ethics requires politics. The mutually interdependent relationship between the saying and the said serves as the paradigm for the relationship between ethics and politics. Ethics, which is a manifestation of the saying, has been traditionally subordinated by politics, a manifestation of the said. A resuscitation of the ethical is needed to check the political. However, the political should not be abandoned. Ethics requires the political to be universalized into laws and institutions**.**

# K Alts Fail – McClean

Abstract philosophizing kills alt solvency – it fails at policy prescription

McClean, 1

(David E., “The Cultural Left and the Limits of Social Hope,” Am. Phil. Conf., www.americanphilosophy .org/archives/ past\_conference\_programs/pc2001/Discussion%20papers/david\_mcclean.htm)

Yet for some reason, at least partially explicated in Richard Rorty's Achieving Our Country, a book that I think is long overdue, leftist critics continue to cite and refer to the eccentric and often a priori ruminations of people like those just mentioned, and a litany of others including Derrida, Deleuze, Lyotard, Jameson, and Lacan, who are to me hugely more irrelevant than Habermas in their narrative attempts to suggest policy prescriptions (when they actually do suggest them) aimed at curing the ills of homelessness, poverty, market greed, national belligerence and racism. I would like to suggest that it is time for American social critics who are enamored with this group, those who actually want to be relevant, to recognize that they have a disease, and a disease regarding which I myself must remember to stay faithful to my own twelve step program of recovery. The disease is the need for elaborate theoretical "remedies" wrapped in neological and multi-syllabic jargon. These elaborate theoretical remedies are more "interesting," to be sure, than the pragmatically settled questions about what shape democracy should take in various contexts, or whether private property should be protected by the state, or regarding our basic human nature (described, if not defined (heaven forbid!), in such statements as "We don't like to starve" and "We like to speak our minds without fear of death" and "We like to keep our children safe from poverty"). As Rorty puts it, "When one of today's academic leftists says that some topic has been 'inadequately theorized,' you can be pretty certain that he or she is going to drag in either philosophy of language, or Lacanian psychoanalysis, or some neo-Marxist version of economic determinism. . . . These futile attempts to philosophize one's way into political relevance are a symptom of what happens when a Left retreats from activism and adopts a spectatorial approach to the problems of its country. Disengagement from practice produces theoretical hallucinations"(italics mine).(1) Or as John Dewey put it in his The Need for a Recovery of Philosophy, "I believe that philosophy in America will be lost between chewing a historical cud long since reduced to woody fiber, or an apologetics for lost causes, . . . . or a scholastic, schematic formalism, unless it can somehow bring to consciousness America's own needs and its own implicit principle of successful action." Those who suffer or have suffered from this disease Rorty refers to as the Cultural Left, which left is juxtaposed to the Political Left that Rorty prefers and prefers for good reason. Another attribute of the Cultural Left is that its members fancy themselves pure culture critics who view the successes of America and the West, rather than some of the barbarous methods for achieving those successes, as mostly evil, and who view anything like national pride as equally evil even when that pride is tempered with the knowledge and admission of the nation's shortcomings. In other words, the Cultural Left, in this country, too often dismiss American society as beyond reform and redemption. And Rorty correctly argues that this is a disastrous conclusion, i.e. disastrous for the Cultural Left. I think it may also be disastrous for our social hopes, as I will explain. Leftist American culture critics might put their considerable talents to better use if they bury some of their cynicism about America's social and political prospects and help forge public and political possibilities in a spirit of determination to, indeed, achieve our country - the country of Jefferson and King; the country of John Dewey and Malcom X; the country of Franklin Roosevelt and Bayard Rustin, and of the later George Wallace and the later Barry Goldwater. To invoke the words of King, and with reference to the American society, the time is always ripe to seize the opportunity to help create the "beloved community," one woven with the thread of agape into a conceptually single yet diverse tapestry that shoots for nothing less than a true intra-American cosmopolitan ethos, one wherein both same sex unions and faith-based initiatives will be able to be part of the same social reality, one wherein business interests and the university are not seen as belonging to two separate galaxies but as part of the same answer to the threat of social and ethical nihilism. We who fancy ourselves philosophers would do well to create from within ourselves and from within our ranks a new kind of public intellectual who has both a hungry theoretical mind and who is yet capable of seeing the need to move past high theory to other important questions that are less bedazzling and "interesting" but more important to the prospect of our flourishing - questions such as "How is it possible to develop a citizenry that cherishes a certain hexis, one which prizes the character of the Samaritan on the road to Jericho almost more than any other?" or "How can we square the political dogma that undergirds the fantasy of a missile defense system with the need to treat America as but one member in a community of nations under a "law of peoples?" The new public philosopher might seek to understand labor law and military and trade theory and doctrine as much as theories of surplus value; the logic of international markets and trade agreements as much as critiques of commodification, and the politics of complexity as much as the politics of power (all of which can still be done from our arm chairs.) This means going down deep into the guts of our quotidian social institutions, into the grimy pragmatic details where intellectuals are loathe to dwell but where the officers and bureaucrats of those institutions take difficult and often unpleasant, imperfect decisions that affect other peoples' lives, and it means making honest attempts to truly understand how those institutions actually function in the actual world before howling for their overthrow commences. This might help keep us from being slapped down in debates by true policy pros who actually know what they are talking about but who lack awareness of the dogmatic assumptions from which they proceed, and who have not yet found a good reason to listen to jargon-riddled lectures from philosophers and culture critics with their snobish disrespect for the so-called "managerial class."

# AT: Link of Omission

Omission is not exclusion; NO discursive act can include everything; this doesn't mean we reject or marginalize these concerns

Rorty, 2

(Richard, Professor of Comparative Literature @ Stanford, Richard, Peace Review, vol. 14, no. 2, p. 152-153)

I have no quarrel with Cornell's and pivak's claim that "what is missing in a literary text or historical narrative leaves its mark through the traces of its expulsion." For that seems simpl ty o say that any text will presup osp e the existence of people, things, and institutions that it hardly mentions. So the readers of a literary text will always be able to ask themselves questions such as: "Who prepared the sumptuous dinner the lovers enjoyed?" "How did they get the money to afford that meal?" The reader of a historical narrative will always be able to wonder about where the money to finance the war came from and about who got to decide whether the war would take place. "Expulsion," however, seems too pejorative a term for the fact that no text can answer **all possible questions** about its own background and its own presuppositions. Consider Captain Birch, the agent of the East Indian Company charged with persuading the Rani of Sirmur not to commit suicide. Spivak is not exactly "expelling" Captain Birch from her narrative by zeroing in on the Rani, even though she does not try to find out much about Birch's early days as a subaltern, nor about the feelings of pride or shame or exasperation he may have experienced in the course of his conversations with the Rani. In the case of Birch, Spivak does not try to "gently blow precarious ashes into their ghostly shape," nor does she speculate about the possible sublimity of his career. Nor should she. S.ivak has her own fish to and her own witness to bear just as Kipling had his when he spun tales of the humiliations to which newly arrived subalterns were subjected in the regimental messes of the Raj. So do all authors of literary texts and historical narratives, and such texts and narratives should not alwa s be read as disin enuous exercises in repression. They should be read as one version of a story that could have been told, and should be told, in many other ways.

# AT: Anthro/Frontier K – No Link

The Space and Terrestrial environments are unconnected

**Reiman 09’**

[Saara, Department of Social and Moral Philosophy, University of Helsinki, “Is space an environment?” <http://www.sciencedirect.com/science/article/pii/S0265964609000289#sec3>]

**One good reason to think that environmental ethics is important and that we ought to regulate our actions towards other beings is that, on Earth, all things are connected and the harm we inflict upon our environment may well become harm done to ourselves. Earth is** practically **a closed system,1 and we do not yet fully understand its complexity** [1]. Even if we agree that there are good reasons to limit the exploitation of Earth and preserve it, **do we have to agree that we should adopt similar attitudes regarding outer space?** Most people think intuitively that it **should make no moral difference whether we travel some thousands of kilometres westwards or upwards. But is this intuition correct?** Considering space as something that does not enjoy a moral status equal to that of Earth's environments does not imply that it would be wise for us to exploit it short-sightedly. **Certainly, it would still be wise to keep our own long-term interests in mind while planning new projects. However, it is a very different thing to recognize that it is in our own best interes**t, e.g. to reduce the amount of debris in important orbits (see [2]) or to preserve areas that have important historical or aesthetic value, than it is to say that space, for the most part, has inherent value in the same way that Earth environments are thought to have. **On Earth, the term ‘environment’ is loaded in so many ways that ‘space’ is not. Our own well-being is closely connected with the well-being of our planet. If there is excessive pollution we will become ill or may even have to move away from areas that have become unsafe.** Space, on the other hand, is extremely hostile to humans to begin with. While it can be argued that some phenomena taking place in space are significant from the perspective of human well-being, our actions in general do not have the power to affect those phenomena in nearly the same way that we can affect the flourishing or extinction of life on Earth. **Second, on Earth we have an abundance of life forms. In space we have interesting phenomena but it is lifeless, and in environmental ethics life is of special importance; many central environmental ethical concepts and ideas make sense only when we are talking about places where there is life**. It is still under dispute how far we should go to protect and cherish life here on Earth. Another complication is that the theory of environmental ethics is often quite different from the practices in place in various levels of society: even when we know that polluting our environment is harmful, we often choose to do it anyway for one reason or another. Keeping this in mind, it may be difficult to argue that we should prohibit all exploitation of space on the grounds that pollution in the process is inevitable. **For instance, if we think about the idea of terraforming Mars, the ‘ethics of life’ makes a great deal of sense. If there is indigenous life on Mars, the question is: would it thrive more if the atmosphere were denser, if there were steady supplies of water on the surface, etc. Or would such life suffer and perhaps even become extinct?** In the latter case, terraforming would not be ethically acceptable because doing so would diminish the diversity of life in the universe, even if we could later bring Earth life to Mars. Spreading life from Earth to other planets would just increase its quantity (and consequently the chances of survival were a disaster to make Earth hostile to such life). **But Martian life would be qualitatively different and, therefore, losing it would be a loss that could not be compensated by introducing Terran life to a terraformed Mars, even if it were possible to introduce more species than originally existed on that planet. The danger, as pointed out by Williamson, is that an attempt to terraform Mars** - the most likely candidate - could destroy existing but undiscovered life forms, as well as changing existing landforms and other physical features [1]. **Strictly speaking, it is unlikely that, at the time when a decision to terraform another planet was made, we could completely exclude from consideration the possibility of the existence of life not yet discovered. A good question is thus when is the likelihood of discovering hidden life low enough to justify terraforming? On the other hand, if we can assert with great certainty that Mars is a dead planet, then terraforming it would be a good deed,** as it would make Mars more diverse, a more special place than it is as a lifeless place, as well as increasing the chances of long-term survival for species that could be introduced to a new planet. Interesting geological features of Mars would still probably exist and possibly even provide a base for forming new kinds of ecosystems capable of supporting the evolution of species that could not evolve on Earth. Our connection with minor planets, comets and stars is very thin, however. How could building polluting mines on Ceres affect human welfare at all (except that it might reduce pollution on Earth)? And since Ceres is – as far as we know - a lifeless place, what good would be gained by investing in expensive systems that reduce pollution? **The concept of pollution is a negative one, something that is undesirable and produces adverse effects. It may, however, be misleading to talk about pollution in places where there is nothing that could be affected adversely.** Not every effect that is caused by human action, nor every alteration to a natural state, may be adverse. Not every piece of discarded material may be pollution - **the presence of that material has to produce bad consequences in some way. In many cases, humans will be the ones to suffer from a build-up of debris. In the case of congested major orbits this is already true [1]. This fact can be acknowledged without talking about ‘harm to the environment’ in cases where the existence of an ‘environment’ is questionabl**e. Besides, most of what we can perceive in outer space is not nearly as complex as any one square metre of Earth, a planet soaked in life.2 Rocks and snowballs, clouds of dust and stars are fascinating, but often lack complexity compared to the smallest eucaryotes found on Earth. While some space environments display phenomena that are not known on Earth, others do not. It is perfectly coherent to think that we ought to protect life on Earth and at the same time believe that, apart from a few special places – such as the Apollo landing site and the geostationary orbit - **exploitation of space has few ethical issues unrelated to the protection of mankind's long-term interests. Therefore, we might as well talk about protection of humanity's long-term interests when appropriate, without assigning any special moral status to space.**

# AT: Anthro – Inevitable

The space environment will naturally become much worse – factors like the sun and moon dust – the alt can’t solve the alt causes

**Huebert, 08** [Jacob Huebert, http://jhhuebert.com/articles/environmentalists-in-outer-space/, “Environmentalists in Outer Space” in *The Freeman*. In addition to serving as Adjunct Professor of Law at Ohio Northern University Pettit College of Law, Professor Huebert also serves as Adjunct Faculty Member of the Ludwig von Mises Institute. He was twice awarded a Felix Morley Competition Prize in Journalism.]

All of that may sound bad, but in fact the space environment is only going to become much worse. That’s because our sun will eventually change to a “subgiant” star, then a Red Giant, then a nebula, then a White Dwarf, then a Black Dwarf. In the end, all the planets, including earth, will lose their atmospheres and exist at a temperature just a few degrees above absolute zero. In sum, the space environment is so bad right now that, from anything other than a human-hating perspective, it could not get much worse—except that billions of years from now, it will get worse, and there is nothing anyone can do about that. Considering the solar system’s present and future environmental state, the idea of space pollution becomes absurd. Air pollution? As we’ve seen, there is no air on the moon—and to the extent that our neighboring planets have an atmosphere at all, it’s almost entirely carbon dioxide, which is toxic and the bane of environmentalists when produced by humans here on earth. Thus nothing we could do to other celestial bodies could make the “air” more toxic than it already is. Water pollution? There is no surface liquid water anywhere but on earth. Radiological pollution? There’s already dangerous radiation in space against which humans must shield themselves. The Mars atmosphere may limit the amount of radiation on its surface—but given its poison-gas environment, not to mention its already highly toxic soil, how much worse would some radiation here and there make the planet? To speak of pollution or contamination of space in the abstract—apart from human beings’ property rights—makes no sense. Law professor Lawrence D. Roberts suggests that “[u]biquitous commons [sic] resources on Earth such as air and water will likely pose the same kinds of environmental challenges for space developers as they do for Earth developers,” adding, “The need to recycle such valuable commodities will require stringent regulation of the discharge of hazardous byproducts into the waste stream.” We find this implausible. If there’s any air or surface water on the moon or elsewhere in space, how did it get there? It could only be from humans who brought or created it there. Where would it be found? Inside the space vehicles or other structures people brought or built there. And here we get to the key space environmental policy: to protect humans’ environment in space, we need only protect their private property rights. On earth such a policy has presented some technical difficulties. For example, it may be difficult to determine which factories contributed to victims’ air or water pollution and in what amounts, as contaminants may travel imperceptibly over long distances. Pollution victims may also suffer very small harms individually such that a lawsuit would cost them more than it was worth. Those problems are not insurmountable in the earthbound context—technological advances and the availability of class-action lawsuits should make them decreasingly problematic—but they do exist. In space, though, apart perhaps from radiological poisoning, some sort of clear physical invasion would be necessary for anyone to pollute anyone else’s air or water. Thus enforcement of a property-rights regime for pollution should be simple and effective.

# AT: Anthro – Perm Card

Permutation solves – absolute rejection is unnecessary

**Barry, 99**

[John, Lecturer in Politics @ Keele, 1999, *Rethinking Green Politics*, pg. 35]

We may think of environmental virtue as having to do with the refinement of moral discernment in regard to the place of nature as a constitutive aspect of the human good. The cultivation of environmental virtues can then be regarded as a matter of discerning the place nature has within some particular human good or interest. A more positive statement would be to say that those who destroy nature are motivated by an unnecessarily narrow view of the human good, and that 'what they count as important is too narrowly confined' (Hill, 1983: 219). In so doing the inherent plurality of the 'human good' is occluded. That is, forms of anthropocentrism which narrow the human good and human interests can be criticized as vices, or potential vices. At the same time, those who destroy nature also often have a mistaken appreciation of the 'seriousness' (Taylor, 1989) of the human interest or good in the service of which nature is destroyed. However, **to reject anthropocentrism** **is not the solution,** but is rather itself a vice of which we need to be aware. A virtue approach is thus anthropocentric in that its reference point is some human good or interest, but as argued in the next chapter, this ethical (as opposed to metaphysical) anthropocentrism is compatible with including considerations of non-human interests and welfare.

# AT: Deep Eco/Anthro – Alt Fails

Philosophy has rendered itself useless to change – pure critique fails

Zimmerman, 89

[Micheal E., “In a Interview with Zimmerman,” found in *In Context*, a Quarterly on Sustainable Human Culture, Summer, pg. 24, <http://www.context.org/ICLIB/IC22/Zimmrman.htm>, NKN]

Alan: How do these kinds of developments in philosophy and other academic disciplines filter their way out into actual social change?

Michael: That's a very good question, and it's an unfortunate response I have to give. I think that philosophy has made itself socially useless. No one cares what philosophers say. Now, that wasn't true before World War II. Dewey and other American pragmatists had an enormous impact on American education and social reflection. But after the war philosophers, with their interest in analytic philosophy and epistemology, made their questions and their research not relevant to the larger public. They engaged in much less reflection upon the categories and presuppositions of culture, and their reflection became so rarefied that they just took themselves out of the ball game.

# AT: Deep Eco/Anthro – Alt = Genocide

Sacrificing humanity on the altar of space, in the form of the alt, leads to genocide

Smith, 9

(Wesley J., Senior Fellow in Human Rights and Bioethics at the Discovery Institute and a special consultant for the Center for Bioethics and Culture, “Poverty is the Answer: Radical Environmentalism Leading Us to a New Form of Human Sacrifice”, <http://stanford.wellsphere.com/bioethics-article/poverty-is-the-answer-radical-environmentalism-leading-us-to-a-new-form-of-human-sacrifice/632295>)

So, people need to be poorer, with all the concomitant increase in human suffering and shorter lives that would result from lower levels of prosperity. And remember, he only writes here about the well off areas of the world. But you can bet that he and his co-believers would strive mightily to stifle development in now destitute areas of the world--dooming perhaps billions of people to lives of continued squalor, disease, and lower life expectancies. More to the point of what we discuss here at SHS, human beings are a logical species: We take our ideas where they lead! (Thus, once Americans accepted the verity of Jefferson's "We hold these truths to be self evident, that all men are created equal..."it doomed slavery, because servitude and equality are incompatible.) For the same reason, once we accept the fundamental premise of the piece--that we must sacrifice human prosperity to "save the planet"--the misanthropic ideology of Deep Ecology--humans as a viral infection afflicting Gaia--with radical depopulation as the cure--consider the genocidal implications--become a logical next step And thus we see how the healthy environmentalism that cleaned up filthy rivers and reduced Los Angeles air pollution is quickly mutating into an implicit and explicit anti-humanism that is in danger of leading to becoming so degraded in our self perception, that we could reach the point of being urged (forced?) to become human sacrifices on Gaia's altar.

# AT: Anthro – Humans First – Key to Environment

Human-centeredness is key to environmental sustainability

Schmidtz 2k

[David, Philosophy Prof. @ University of Arizona, Environmental Ethics, p. 379-408]

Like economic reasoning, ecological reasoning is reasoning about equilibria and perturbations that keep systems from converging on equilibria. Like economic reasoning, ecological reasoning is reasoning about competition and unintended consequences, and the internal logic of systems, a logic that dictates how a system responds to attempts to manipulate it. Environmental activism and regulation do not automatically improve the environment. It is a truism in ecology, as in economics, that well-intentioned interventions do not necessarily translate into good results. Ecology (human and nonhuman) is complicated, our knowledge is limited, and environmentalists are themselves only human. Intervention that works with the system’s logic rather than against it can have good consequences. Even in a centrally planned economy, the shape taken by the economy mainly is a function not of the central plan but of how people respond to it, and people respond to central plans in ways that best serve their purposes, not the central planner’s. Therefore, even a dictator is in no position simply to decide how things are going to go. Ecologists understand that this same point applies in their own discipline. They understand that an ecology’s internal logic limits the directions in which it can be taken by would-be ecological engineers. Within environmental philosophy, most of us have come around to something like Aldo Leopold’s view of humans as plain citizens of the biotic community.[[21]](http://www.theihs.org/libertyguide/hsr/hsr.php?id=41&print=1" \l "_ftn22) As Bryan Norton notes, the contrast between anthropocentrism and biocentrism obscures the fact that we increasingly need to be nature-centered to be properly human-centered; we need to focus on "saving the ecological systems that are the context of human cultural and economic activities." [[22]](http://www.theihs.org/libertyguide/hsr/hsr.php?id=41&print=1" \l "_ftn23) If we do not tend to what is good for nature, we will not be tending to what is good for people either. As Gary Varner recently put it, on purely anthropocentric grounds we have reason to think biocentrically.[[23]](http://www.theihs.org/libertyguide/hsr/hsr.php?id=41&print=1" \l "_ftn24) I completely agree. What I wish to add is that the converse is also true: on purely biocentric grounds, we have reason to think anthropocentrically. We need to be human-centered to be properly nature-centered, for if we do not tend to what is good for people, we will not be tending to what is good for nature either. From a biocentric perspective, preservationists sometimes are not anthropocentric enough. They sometimes advocate policies and regulations with no concern for values and priorities that differ from their own. Even from a purely biocentric perspective, such slights are illegitimate. Policy makers who ignore human values and human priorities that differ from their own will, in effect, be committed to mismanaging the ecology of which those ignored values and priorities are an integral part.

# AT: Eurocentrism – West is Good

**West good: not perfect, but comparatively better for happiness and freedom. Even if they win their framework of being intellectuals, we must celebrate and teach Western values in this debate round for Western civilization to survive**

**Kors, ’01** – Prof history @ U Penn (Summer 2001, Alan, American Foreign Relations, “America and the West: Triumph Without Self Belief”, pg. 354-355)

The fruits of that civilization have been an unprecedented ability to modify the remediable causes of human suffering, to give great agency to utility and charity alike; to give to each individual a degree of choice and freedom unparalleled in ail of human history; to offer a means of overcoming the station in life to which one was born by the effort of one's labor, mind, and will. A failure to understand and to teach that accomplishment would be its very betrayal. To the extent that Western civilization survives, then, the hope of the world survives to eradicate unnecessary suffering; to speak a language of human dignity, responsibility, and rights linked to a common reality: to minimize the depredations of the irrational, the unexamined, the merely prejudicial in our lives: to understand the world in which we find ourselves, and. moved by interest and charity, to apply that knowledge for good. The contest, then, is between the realists and the antirealists, and the triumph of the West ultimately depends on its outcome. The failure to assess the stakes of the struggle between the West and its communist adversary always came from either a pathological self-hatred of one's own world or at the least, from a gross undervaluation of what the West truly represented in the history of mankind. The West has altered the human relationship to nature from one of fatalistic helplessness to one of hopeful mastery. It has made possible a human life in which biological atavism, might be replaced by cultural value, the rule of law, individuation, and growing tolerance. It also created an intellectual class irrationally devoted to an adversarial stance. That adversarial view of the West, in the past generation at least, had become a neo-Gramscian and thus nee-Marxist one in which the West was seen as an unparalleled source of the arbitrary assignment of restrictive and life-stultifying roles. The enemies of the West—for some, in practice; for others, increasingly in the ideal—represented an active make-believe that supposedly cast grave doubt upon the West's claim of enhancing freedom, dignity, and opportunity. With the triumph of the West in reality, and with the celebration of Marxism and the Third World shown more and more to have been truly delusional, the adversarial intellectual class appears to be retreating into ideologies and philosophies that deny the very concept of reality itself. One sees this in the growing strength in the humanities and social sciences of critical theories that view all representations of the world as mere text and fiction. When the world of fact can be twisted to support this or that side of delusion (as in astrology or parapsychology'), pathology tries to appropriate what it can of the empirical. When the world of fact manifestly vitiates the very foundations of pathological delusion, then it is the claim of facticity or reality per se that must be denied. This is what we now may expect: the world having spoken, the intellectual class, the left academic wing of it above all, may appropriate a little postcommunist chaos to show how merely relative a moral good the defeat of Stalin's heirs has been. If it does so, however, it will assail the notion of reality itself. In Orwell's 1984, it was the mark of realistic, totalitarian power to make its subjects say that all truth was not objective but political—"a social construction,'' as intellectuals would say now—and that, in the specific case, 2 + 2 = 5. By 2004, making students in the humanities and social sciences grant the equivalent of 2 + 2 = 5 will be the goal of adversarial culture. They will urge that all logical—and, one should add, inferential—inductive truths from experience are arbitrary, mere social constructions. The West Has Indeed Sur ived—So Far The ramifications of that effort will dominate the central debates of the humanities in the generation to come. Until there is a celebration and moral accounting of the historical reality of "The Triumph of the West," that "triumph" will be ephemeral indeed. Academic culture has replaced the simplistic model that all culture was functional, a model that indeed could not account for massive discontents or revolutionary change, let alone for moral categories, by the yet more astonishing and absurd model that virtually all culture is dysfunctional. Whole disciplines now teach that propositions are to be judged by their therapeutic value rather than by their inductive link to evidence until, in the final analysis, feeling good about saying something determines the truth-value of what is said. Understanding human weakness, however, the West has always believed that it is precisely when we want to believe something self-gratifying that we must erect barriers of experiment, rigor, and analysis against our self-indulgence and our propensity for self-serving error. The human ability to learn from experience and nature, so slighted in current humanistic theory, is not merely an object of cultural transmission, let alone of social control, but an evolutionary triumph of the species, indeed, a triumph on which our future ultimately depends. There is nothing more desperate than helplessness, and there is no more inveterate cause of helplessness than the inability to affect and mitigate the traumas of our lives. If the role of both acquired knowledge and the transmission and emendation of the means of acquiring knowledge is only a "Western" concern, then it is a Western concern upon which human fate depends. In the current academic climate of indoctrination, tendentiousness, and fantasy, the independence of critical intellect and the willingness to learn open-mindedly from experience of a reality independent of the human will are the greatest hopes of our civilization. Has Western civilization survived? That is, has a human relationship to the world based upon the assumption of a knowable reality-, reason, and a transcendent value of human dignity and responsibility survived? Has a will to know oneself and the world objectively survived? Has a recognition of human depravity and the need to limit the power of men over men survived? I do not think that free men and women will abandon that hard-won shelter from chaos, ignorance, parochial tribalism, irrationalism, and, ultimately, helplessness. Has Western civilization survived, its principle of reality justified and intact? Yes, indeed, though it requires constant defense. The demand for perfection is antinomian, illogical, and empirically absurd. The triumph of the West is flawed but real. While everyone else around you weeps, recall Alexander Ushakov and celebrate the fall of the Soviet threat as he celebrated the fall of Grenada. Then recall how everything depends on realism in our understanding, and rejoin the intellectual struggle.

# AT: Eurocentrism – Knowledge Production

**West inevitable: resilient and constantly produces new and better forms of knowledge production to respond to crises**

**Kors, ’01** – Prof history @ U Penn (Summer 2001, Alan, American Foreign Relations, “America and the West: Triumph Without Self Belief”, pg. 348-349)

The view that Western civilization has ended has had various incarnations, with the most sensitive souls of many epochs imagining themselves to be the last bearers of the Western torch. One needs perspective in such things. The question, in many ways, was more compelling when Athens fell: when Christian Rome was sacked by barbarians: when the Norsemen ravaged settled Europe when feudal warlords reigned unchecked; when, at the end of the first millennium, all signs indicated a divine disfavor that seemed to presage the end of the world when the Black Death of the fourteenth century left, soul and society without mooring. Indeed, imagine the question posed to Catholic and Protestant apologists of the sixteenth century, viewing each other’s religion as the Antichrist and seeing Western Christendom rent first in two and then into a multitude of competing sects. How fragile, if not spent. The Nest seemed during, the religious civil wars culminating in the devastation of the Thirty Years' War. There were lamentations in profusion during the Terror of the French Revolution and the decades of revolutionary and Napoleonic Wars that followed, and again, with gravitas. There were the inward and outward sermons on the West uttered on the slaughterfields of World War 1, and at Auschwitz, and in the gulag. The West is resilient beyond all seeming possibility, and something gives it that resiliency. The West has survived its barbarians without and—more dreadful yet—its own barbaric offspring within. If it could outlast Attila the Hun and the armed ideologies of the Third Reich and Stalin's Russia, it surely can outlast Jacques Derrida, Stanley Fish, and Michel Foucault. At each moment of seeming dissolution, there were diverse profound voices that compellingly analyzed the depths to which we had fallen: the almost infinite remove we were from any light: the loss of something that we never could recover—and yet the West survived. There was something about its mind and spirit. Greece fell, but its philosophers conquered the minds of the Romans who conquered its soil, and its conceptual categories still organize our understanding of reality and knowledge. Rome fell, but its language became the lingua franca and thus the definitional universe of Christendom, while its history became the great drama by which to understand the glory and the baseness of political life. The barbarian tribes believed that they had conquered Rome, but Rome in greater part had conquered them. Their descendants called their realm the Holy Roman Empire, terms that were not, until much later, bereft of meaning. When the Norsemen came, learning fled to monasteries, and that learning and even those monasteries eventually conquered the Norse, whose Norman descendants in Britain founded universities that live to this day. It is the last thing that any frightened monk taking desperate shelter in the eighth century ever could have imagined. The Thirty Years' War seemed to sensitive and moral observers the end of civilization, but its battles are mostly forgotten, and what is it that remains of the seventeenth century? Bacon, Galileo, Descartes, Hobbes, Pascal, Bayle, Boyle, Fenelon, Harvey, Huyghens, Newton, Locke. Louis XIV is a tourist attraction at Versailles: his wars changed precious little. The conceptual revolution of the West, however, changed a great deal in that same century. It arose from the very dynamics of the West's models of learning-disputation, accounting for appearances, refining inductive and deductive logic-now linked to expanded education and printing. What happened in the minds of the graduates of Europe's Christian universities changed the human relationship to nature, to knowledge, to the rights of inquiry and conscience, and to political and economic life. The Christian West kept the traditions of the Greek mind alive, and thus, through its own debates, it overthrew the presumptive authority of the past in matters of natural knowledge and its application. The West believed that we were not cast fatally adrift in this world, but that we could learn new things and that we could alter the sorry scheme of experience closer to the heart's desire for knowledge, order, and well-being. It was not Faust, who dreamed of occult knowledge that would make him a demigod, but Bacon, who commanded that knowledge proceed from humility and charity, who becarne the prophet of the great scientific revolution of the West. Louis XIV is a statue; Bacon is a living force wherever the West touches minds.

# AT: West Exclusive

**Enlightenment/Western values aren’t exclusive to Western peoples or universal – multiple historical examples**

**Bronner 4**

Stephen Eric, Professor of Political Science and Comparative Literature at Rutgers University, “Reclaiming the Enlightenment” Columbia University Press p. 31-32

The belief that enlightenment values are somehow intrinsically “western” is surely parochial and most likely racist. Just as money, the division of labor, and class conflict can be found in precapitalist cultures like Egypt, Greece, and Rome, so is it the case that liberal and cosmopolitan values usually identified with western thinking in general and the Enlightenment in particular were expressed in any number of nonwestern societies—including the three great civilizations of India, China, and Islam40—by religious figures like Mohammed and the Buddha; political leaders from Cyrus the Great, who allowed each nation to choose its religion and keep its customs, to the sixteenth-century leader Akbar who condemned slavery and the immolation of widows; and philosophers like Plotinus, Avicenna, Averroes, who highlighted the cosmological elements of the classical heritage and generated a tradition that extended from Giordano Bruno over Spinoza and Leibniz to Ernst Bloch. Amid the civil wars and religious conflicts of the premodern world, enough reflective people of compassion, appalled by religious fanaticism and the devastation of war insisted upon fairness and the rule of law, and highlighted the sanctity of the individual conscience and the plight of the lowly and the insulted. In a fine essay,41 Amartya Sen has made western intellectuals aware of what we should have been more aware of from the beginning: nonwestern and premodern thinkers had also emphasized the “pursuit of reason” rather than “the reliance on tradition.” The idea of progress, of making the solutions to conflict more civilized, is not simply a western idea. This does not mean that all regions and nations embraced the idea of progress—along with its liberal, egalitarian, and cosmopolitan implications— or that all will ever do so to the same degree. This is not the venue in which to examine the complex reasons why capitalism and the modern notion of progress were generated in the West. But it is necessary to emphasize that progress and enlightenment values are not the preserve of a geographic entity. 42 Intellectual tendencies that seek to promote such an understanding of progress have existed within diverse cultures and manifold traditions, and these have something to offer for the vision of a liberated society. It would be the height of arrogance, for example, to suggest that a Chinese tradition harking back three thousand years is somehow invalidated by the philosophical efforts of a small minority of European intellectuals writing between 1650 and 1800 or to deny that Gandhi could justify his vision of a multi-ethnic, democratic order from within his own religious understanding. The belief that achieving a genuine consensus on moral issues calls upon all participants in the discourse to think through arguments in the same way is absurd. The quest for humanitarian values has taken many paths in the past and it will do so, again, in the future.

# Alt Links to the K: Uses Western Epistemology

**Postmodern critiques of Western epistemology contradict themselves—they must inevitably take part in what they claim to oppose**

**Kors, ’01** – Prof history @ U Penn (Summer 2001, Alan, American Foreign Relations, “America and the West: Triumph Without Self Belief”, pg. 349-351)

It is odd that conservatives question whether Western civilization has survived the twentieth century at the very time that so many academics on the cultural Left define that civilization as a singular hegemon that stands astride the globe. What, after all, is the "multiculturalism" so ardently but desperately proclaimed in higher education but the belief that there is a hegemonic Western civilization that, unchallenged, frames all issues and provides almost all modes of understanding? For the so-called multiculturalists, the question is not whether what they see without complexity as Western civilization will survive into the twenty-first century, but whether anything other than Western civilization will so survive. What do they mean by the hegemony of the West? It is not physical colonialism and imperialism that concern them anymore. No, they see as far more ominous what they term the cultural colonialism and imperialism of the West, a triumphant colonialism of the mind by a civilization that believes in universal categories that transcend itself. The West believes its values to be accessible to all human souls. The West believes its science to be a method bv which ail human beings everywhere can rise above ignorance, superstition, helplessness, and prejudice. The West believes that there are rights and obligations that belong to humanity qua humanity, beyond the power of governments and political wills. Conservatives despair at the disappearance of the West: the cultural Left despairs at its transcendent success. There are profound ironies about the multiculturalists, so many of which testify to the dynamism and inescapable appeal of precisely that Western civilization to whose dismemberment they are in theory committed. In theory, they are all moral relativists, but in reality, they tend to sound like Biblical prophets, calling power to categorical moral duty, or like traditional Western social critics who in this case have not thought out either their facts or their logic terribly well. Their self-contradictions betray their inability to escape from the civilization they claim so to despise. In their epistemology, they are the third-rate heirs of the Greek skeptics and historians—without, to their shame, even knowing that fact. Their assaults upon dogmatism, at their best, never rise above the level of the subtleties and paradoxes handed down to us by Sextus Empiricus, chronicler and compiler of the Greek skeptical tradition. The works of Sextus Empiricus were best sellers during the sixteenth century and widely translated in the seventeenth. I lis writings intellectually delighted European men of letters, including clerics, many of whom embraced him as a tonic antidote to the pride of human reason. Many philosophers modified their views of the claims of metaphysics in the face of such skepticism. The West has always been concerned with the limits of reason and knowledge, the role of received prejudice and custom, the appropriateness or arrogance of its metaphysical conclusions, and the phenomenon of paradox. Indeed, the West has authored the formal exposition and mental fireworks of such concerns. The heirs of the least subtle forms of that tradition do not even know their parentage. It was the Greeks and their heirs—not any postmodern critics of postcolonialism—who obsessed so creatively about the role of King Nomas, of received opinion, of education and prejudgment, and of the seeming relativity of values, beliefs, and taste to time, place, and accident of birth. Montesquieu, in the eighteenth century, was profoundly struck by the malleability of the human condition and by the relativity of what might seem the most foundational aspects of human existence to geography, time, and historical vicissitudes. He also saw, however, what our current social constructionists do not see: that as undeniable as that malleability may be, there is a natural reality that underlies, conditions, and sets limits to it, and that the relationship of human malleability and natural reality is a proper subject of deep objective study. For Montesquieu, certain forms of human association may persist for a wide variety of reasons—including terror and despotism— but there is a real human nature and a set of real human needs, and these will out toward their true ends because there is an ultimate reality in which our human forms nave consequences. Postmodern canon, despite its proclaimed alienation from Western thought and values, derives not from any non-Western culture, but from the internal debates of the West and the products of its educational vitality: from Marcuse, Gramsci, Marx, Hegel, and Rousseau—from, in short, the debates that the West has always had with itself. Postmodernists, when the issue is involuntary female circumcision, for example, seek asylum in America for the victims of such customary rites, citing notions of legal equality and of universal human dignity, not their alleged commitments to the relativity of all human values and cultures. They seek tenure at universities with medieval traditions of what the West called "philosophical liberty." In the first and in the final analysis, so-called multiculturalists are simply Western radicals, in the Western radical tradition, with the most imperial, dogmatic, and absolutist aspirations of all. Further, they are the beneficiaries of the Western commitment to intellectual debate instead of coerced intellectual conformity in the Republic of Letters. They are the beneficiaries of the Western tradition, from Aristotle's insistence that we overcome all possible arguments against our beliefs, to the medieval insistence upon seek contra objections in formal disputations, to Mill's insistence that beliefs untested by free criticism are no longer truly alive. The radical dissenters are thus the unwitting and ungrateful beneficiaries of the West's own philosophical pluralism, and, indeed, of its constant extension. The current barbarians within also remind us that the West is, again and again, the author of its own worst follies and abuses, compared to most of which the postmodernists pale into virtual insignificance. We are the authors of our own religious wars and persecutions, our own enthusiastic superstitions, our own conquests of lands and peoples over which and whom we had no rights, our own ultimate nightmares of National or Leninist Socialism, which drowned our world in blood unimaginable in any century but the twentieth, and which truly threatened to bring this civilization to an awful end. We have had the will, however, to learn from depravity and from reality, and to bear ultimate witness to the higher sides of our being. What civilization has ever engaged in more searing analysis and soul searching of its own sins? Having defeated the National Socialists and the communists within, the bearers of the best of this civilization have reason for a moment of optimistic pride.

# Alt Bad: Introverted/Ignorant

**The alt relies on an introverted, self-contained view of the West that masks the wrongs of imperialism**

**Krishna, ’93** – Prof Poli Sci @ U of Hawaii (Summer, Sankaran, Alternatives, “The Importance of Being Ironic: A Postcolonial View on Critical International Relations Theory”, pg. 402-403)

What is particularly compelling about the critique of postmodernist positions on subjectivity that emanates from writers such as Spivak and hooks is the fact that they connect it explicitly to the self-contained view of the West that informs many of these works. Thus, whereas Foucault's meticulous genealogies of the micropolitics of power in discursive practices have had such a tremendous impact, his work itself geopolitically isolates the West and is completely oblivious to a whole history of imperialism that surely has much to do with the very practices that he investigates. In this context, Spivak notes: I am suggesting ... that to buy a self-contained version of the West is to ignore its production by the imperialist project. Sometimes it seems as if the very brilliance of Foucault's analysis of the centuries of European imperialism produces a miniature version of the heterogeneous phenomenon: management of space—but by doctors; development of administrations—but in asylums; considerations of the periphery—but in terms of the insane, prisoners and children. The clinic, the asylum, the prison, the university—all seem to screen allegories that foreclose a reading of the broader narratives of imperialism. . . . "One can perfecdy well not talk about something because one doesn't know much about it," Foucault might murmur [Power/Knowledge p. 66]. Yet, we have already spoken of the sanctioned ignorance that every critic of imperialism must chart.40 If these works argue for the necessity of strategically essentializing identity or subjectivity, critical international theorists are by no means completely blind to the issue. It is more a matter of emphasis: focused on a critique of the essentialist conceits and the unitary notion of sovereignty that characterizes international theory, critical theorists seem to underestimate the implications for people interested in retaining a notion of political subjectivity. In this regard, Ashley and Walker note that a political essentializing of subjectivity may be necessary for others in their struggles. They eschew a blanket decrying any notion of subjectivity when they note: It would have been far better to have respected the paradoxical reality of one's local situation, a reality that radically subverts all pretenses that one's situation might be bounded, clearly represented, and represented as a paradigm for the strategic situation of others. Respecting this reality would not lead to any kind of introversion, imperial conceit, or smug indifference to others' circumstances. Least of all would it lead to passivity. It would instead encourage a patient labor of listening and questioning that seeks to explore possible connections between the strategic situations of others and one's own, always sensitive to the problem of expanding the space and resources by which the ongoing struggle for freedom may be undertaken there as well as here.41 Unfortunately, it is a fact that many of the thinkers and authors who have formed the inspirational core of critical international theory can be charged precisely with what Ashley and Walker describe as "introversion, imperial conceit, or smug indifference to others' circumstances." I am thinking here of Baudrillard, Lyotard, Chantal Mouffe, Julia Kristeva, Gilles Deleuze, and Foucault, as far as their attitudes and statements regarding the Third World are concerned.42 It is difficult to imagine a more appropriate location for an explicit discussion of these imperial conceits than the discipline of international relations.

\*\*\*Astrosociology Neg

# Neg Strat Ideas

Out-lefting them:

Off:

K of Enlightenment/Rationality OR Post-positivism K

ANTHROPOCENTRISM K

Asteroids Reps K (if you can’t win a link to this on astrosociology, you suck)

Case:

Asteroids Defense

Mini-Ks

Specific Intellectualism Turn

\*\*\*Framework

Out-righting them:

Off:

Framework

PTX

Some big DA (preferably with an impact that’s existential)

STEM/Ground CP

UN CP

Case:

Asteroids Defense/AT: Existential risk framing

Specific Intellectualism Turn

# 1NC

A. Interpretation: The aff can only defend advantages based on the consequences of hypothetical enactment of their plan by the USFG.

B. Violation – the aff claims advantages and arguments off their speech act

C. Standards

1) Plan focus – [insert some arguments here]

2) Judge evaluation – their framework provides no coherent criteria for how the judge should assess competing claims or weigh impacts. We give criteria by which one can make decisions, whereas their arguments amount to empty speculation at best.

3) Topic education – [insert arguments here]

D. Voter for fairness and education. Framework is a prerequisite to debate.

Shively, 2k

(Ruth Lessl, Associate Professor of Political Science at Texas A&M, *Political Theory and Partisan Politics*, 2000, p. 181-182)

The requirements given thus far are primarily negative. The ambiguists must say "no" to—they must reject and limit—some ideas and actions. In what follows, we will also find that they must say "yes" to some things. In particular, they must say "yes" to the idea of rational per­suasion. This means, first, that they must recognize the role of agreement in political contest, or the basic accord that is necessary to discord. The mistake that the ambiguists make here is a common one. The mistake is in thinking that agreement marks the end of contest—that consen­sus kills debate. But this is true only if the agreement is perfect—if there is nothing at all left to question or contest. In most cases, however, our agreements are highly imperfect. We agree on some matters but not on others, on generalities but not on specifics, on principles but not on their applications, and so on. And this kind of limited agreement is the starting condition of contest and debate. As John Courtney Murray writes: We hold certain truths; therefore we can argue about them. It seems to have been one of the corruptions of intelligence by positivism to assume that argument ends when agreement is reached. In a basic sense, the reverse is true. There can be no argument except on the premise, and within a context, of agreement. (Murray 1960, 10) In other words, we cannot argue about something if we are not com­municating: if we cannot agree on the topic and terms of argument or if we have utterly different ideas about what counts as evidence or good argument. At the very least, we must agree about what it is that is being debated before we can debate it. For instance, one cannot have an argument about euthanasia with someone who thinks euthanasia is a musical group. One cannot successfully stage a sit-in if one's target audience simply thinks everyone is resting or if those doing the sitting have no complaints. Nor can one demonstrate resistance to a policy if no one knows that it is a policy. In other words, contest is meaningless if there is a lack of agreement or communication about what is being contested. Resisters, demonstrators, and debaters must have some shared ideas about the subject and/or the terms of their disagree­ments. The participants and the target of a sit-in must share an under­standing of the complaint at hand. And a demonstrator's audience must know what is being resisted. In short, the contesting of an idea presumes some agreement about what that idea is and how one might go about intelligibly contesting it. In other words, contestation rests on some basic agreement or harmony.

# Deliberative Democracy Impact

Instrumental affirmation of a policy through role-playing is a prerequisite to liberal democratic participation

Rawls, 99

(John, Harvard Professor of Philosophy, bad-ass, The Law of Peoples, 1999, p. 56-57)

To answer this question, we say that, ideally, citizens are to think of themselves as if they were legislators and ask themselves what statutes, supported by what reasons satisfying the criterion of reciprocity, they would think it most reasonable to enact. When firm and widespread, the disposition of citizens to view themselves as ideal legislators, and to repudiate government officials and candidates for public office who violate public reason, forms part of the political and social basis of liberal democracy and is vital for its enduring strength and vigor. Thus in domestic society citizens fulfill their duty of civility and support the idea of public reason, while doing what they can to hold government officials to it. This duty, like other political rights and duties, is an intrinsically moral duty. I emphasize that it is not a legal duty, for in that case it would be incompatible with freedom of speech. Similarly, the ideal of the public reason of free and equal peoples is realized, or satisfied, whenever chief executives and legislators, and other government officials, as well as candidates for public office, act from and follow the principles of the Law of Peoples and explain to other peoples their reasons for pursuing or revising a people’s foreign policy and affairs of state that involve other societies. As for private citizens, we say, as before, that ideally citizens are to think of themselves as if they were executives and legislators and ask themselves what foreign policy supported by what considerations they would think it most reasonable to advance. Once again, when firm and widespread, the disposition of citizens to view themselves as ideal executives and legislators, and to repudiate government officials and candidates for public office who violate the public reason of free and equal peoples, is part of the political and social basis of peace and understanding among peoples.

# Deliberative Democracy Impact

Our interpretation is better – simulating policymaking is key to good citizenship and activism

Gunderson, 2k

Adolf G., Associate Professor of Political Science at Texas A&M, *Political Theory and Partisan Politics*, 2000, p. 108-9)

Will deliberation work the same way among ordinary citizens? Yes and no. Yes, deliberation will tend to heighten citizens apprecia­tion of their interdependence. At the same time, the results are likely to be analogous rather than identical to those in formal governmental bodies, since citizen deliberation must of course function in the ab­sence of the institutional interdependence established by the US con­stitution, with its clear specification of joint responsibilities. The theoretical mutuality of interests assumed by the Constitution exists among ordinary citizens, too. The difference is that they have only their interests, not the impetus of divided power, to encourage them to discover and articulate them. Granted. But once they begin to do so, they are every bit as likely to succeed as the average representative. Citizen deliberation, in other words, will intensify citizens' apprecia­tion of interdependence. Although I cannot prove the point, there are compelling reasons to think that citizen deliberation yields an awareness of overlapping interests. I have already alluded to the first, and perhaps most telling of these: if governors in a system of divided government such as our own succeed in deliberating their way to the public interest (however imperfectly or irregularly), surely ordinary citizens can be counted upon to do the same thing. Indeed, if my initial argument that deci­sion-making spells the end of deliberation is on the mark, then we have good reason to expect citizens to deliberate better than their rep­resentatives. One can add to these theoretical considerations a length­ening list of empirical findings which suggest not only that citizens are willing and able to engage in political deliberation, but also that they are quite able to do so—able, that is, precisely in the sense of coming to a deeper appreciation of the collective nature of the prob­lems they face (Dale et al. 1995; Gundersen 1995; Dryzek 1990; see also Gundersen n.d., chapter 4). In the end, the claim that deliberation enhances interdependence is hardly a radical one. After all, if deliberation will of itself diminish partisanship, as I started out by saying, it must at the same time en­hance interdependence. To aim between Athens and Philadelphia requires, perhaps more than anything else, a changed way of thinking about partisanship. Institutions and ways of thinking tend to change together; hence if the institutional reorientation suggested here is to take root, it must be accompanied by a new way of thinking about partisanship. Shifting our appraisal of partisanship will amount to a nothing less than a new attitude toward politics. It will require that we aspire to something new, something that is at once less lofty (and less threatening) than the unity to which direct democracy is supposed to lead, but more demo­cratic (and more deliberative) than encouraging political deliberation among a selected group of representatives. As I argued above, it will require that we seek to stimulate deliberation among all citizens. With Madison, we need to view partisanship as inevitable. Collec­tive choice, indeed choice itself, is a partisan affair. But we also need to resist the equation of politics and partisanship. If politics is seen as nothing more than a clash of partisan interests, it is likely to stay at that level. Conversely, for deliberation to work, it must be seen as reason­able, if not all-illuminating—as efficacious, if not all-powerful. At the same time, of course, citizens must borrow a page from the participa­tory democrat's book by coming to view deliberation as their responsi­bility rather than something that is done only by others in city hall, the state capitol, or Congress—others who are, after all, under direct and constant pressure to act rather than deliberate. Politics, in other words, must be resuscitated as an allegiance to democratic deliberation.

\*\*\*K Things

# 1NC—Eurocentrism Critique of Sociology

Sociology is profoundly Eurocentric—their acceptance of western sociology as universal displaces local knowledges and entrenches epistemological hegemony.

John **Clammer**, Visiting Professor and Deputy Director of the United Nations University-International Courses, Director of International Cooperation and Development at the UNU-IC, Adjunct Professor at Kanda University of International Studies, former Professor of Sociology and Asian Studies at Sophia University, holds a D.Phil. from Oxford University, **2009** (“Sociology and Beyond: Towards A Deep Sociology,” *Asian Journal of Social Science*, Volume 37, Number 3, Available Online to Subscribing Institutions via BRILL, p. 333-334)

Does sociology actually answer the questions that it purports to? This is partly a question of levels of course: at the level of statistical generalisations sociology has proved quite successful but beyond that, ‘explanations’, the goal of conventional sociology, **weaken as they deepen**. The primary examples of this, and representing a kind of litmus test for the claims of sociology as a whole, are the subjects of religion, art and suicide. All have attracted a substantial sociological literature, yet little of it is fully satisfying — for example, the paucity and weaknesses of sociological theories of art (Heywood, 1997). Furthermore, since Durkheim sociologists have struggled with the explanation of suicide, the most insightful and sensitive book that I know of on the subject is the work not of a sociologist but of a literary critic personally acquainted through his friendship with the poet Sylvia Plath with this tragic phenomenon (Alvarez, 1974).

There are, I suggest, a number of reasons for this which include **an unwillingness to confront** what are in fact **the basic existential questions of human life** — death, love, embeddedness in nature, illness, the continuation of the old philosophical error of **confusing explanation and understanding**, and a **commitment to a now very outdated model of what sociologists think that the natural sciences do**, with a corresponding **attachment to a positivistic and reductionist mode of analysis**. This is tied to a continuing **de facto epistemological Eurocentrism** signalled by the failure to take the philosophical dimensions of globalisation seriously: while accepting, and perhaps celebrating, the fact that globalisation and its corresponding universalisation of knowledge makes an ever bigger range of indigenous knowledge available to all of us, while simultaneously **refusing to take them seriously as rivals or alternatives to hegemonic Western ‘scientific’ knowledge**, or admitting the possibility that Western sociology and anthropology are, as Marshall Sahlins has argued, [end page 333] simply forms of local knowledge that for historical reasons (imperialism, colonialism and military power being amongst the main ones) have become effectively universalised, suppressing as a consequence **legitimate alternative local anthropologies and sociologies** of other cultures and societies (Sahlins, 1996).

Eurocentrism is the greatest threat to humanity—comparatively outweighs and accesses every major impact.

Tim **Wise**, antiracist author and educator, **2006** (“Paleness as Pathology: The Future of Racism and Anti-Racism in America,” *LIP Magazine*, May, Available Online at http://www.timwise.org/2006/05/paleness-as-pathology-the-future-of-racism-and-anti-racism-in-america/, Accessed 07-07-2011)

While most of the left has long argued that capitalism is the primary impediment to peace and stability — whether economic, ecologic or otherwise — in fact, white world supremacy may be at least as critical, if not more so. Indeed, the extent to which capitalism is itself an outgrowth of European/white supremacy has been underappreciated by most on the left (particularly the white left, for reasons that are probably easy to understand). Marimba Ani, in her classic work Yurugu: An African Centered Critique of European Cultural Thought and Behavior, and Charles Ephraim, in The Pathology of Eurocentrism, (among others), have argued persuasively that competitive systems of economics did not simply develop naturally, as if by some Marxian edict of logical progression. Rather, they grew principally out of the dualistic mindset so common to European cultural thought and systems, stemming from Platonic and Aristotelian ethics. The splitting off of reason from emotion, now to be seen as conflicting human characteristics, or the splitting of nature from humanity, whereby the latter is seen as in need of controlling the former, and other such dyads, led to the creation of market systems, as well as racism and patriarchy.

Ani explains that Plato laid the groundwork of “an elaborate trap:”

“Once the person was artificially split into conflicting faculties or tendencies, it made sense to think in terms of one faculty ‘winning’ or controlling the other(s). And here begins a pattern that runs with frighteningly predictable consistency throughout European thought…The mind is trained from birth to think in terms of dichotomies or ‘splits,’ (which) become irreconcilable, antagonistic opposites…one is considered ‘good,’ positive, superior; the other is considered ‘bad,’ negative, inferior. And unlike the Eastern conception of the Yin and the Yang, or the African principle of ‘twinness,’ these contrasting terms are not conceived as complementary and necessary parts of a whole. They are, instead, conflicting and ‘threatening’ to one another…it is this dichotomized perception of reality on which the controlling presence (imperialistic behavior) depends.”

To clarify: I am not saying that racism, in modern terms, preceded capitalism or patriarchy. Rather, I am suggesting that a particular way of viewing reality and the world — a dominant cultural paradigm, or what scholars call cosmology — emanating from Europe, having first taken root in ancient Greece and Rome, is what made the class system (ultimately capitalism), the gender system (patriarchy) and the race system (white supremacy) inevitable. All three are essentially European.

What began as a system of cultural imperialism, and Christian religious imperialism, later became racialized, with the creation of the concept of the white race. Although this concept was, as Theodore Allen has noted, largely crafted so as to rationalize oppression of African peoples, and to divide and conquer economically oppressed persons from one another, what Marxist theorists have often ignored is the origin of class conflict itself, which was necessary for either capitalism or racism to blossom. Most Marxists view capitalism as an inevitable stage of development, and thus, see no need to delve further into its culture-specific roots. But can we really view as merely coincidental the fact that the class system and capitalism as we know it developed in and from Europe? Or should we recognize in this something specific, something unique (and uniquely dangerous) about the European worldview?

As Euro/white supremacy developed into a full-blown system of now racialized and color-coded exploitation, it gained new life in the colonies of what would become the United States, and then the U.S. itself, even as the old European empires were beginning to crumble. Thus, white supremacy increasingly came to be a USAmerican product: after all, being expelled from one’s colonial outposts, as happened with the British, the French, the Belgians, the Dutch and the Portuguese, made it increasingly difficult for Europeans to cling to the fantasies of their own inherent superiority. That dream had begun to die, for them, at the hands of Toussaint L’Ouverture in Haiti, and would continue its slow demise throughout the 19th and 20th centuries. Likewise, the visible depravity with which Europeans treated one another — with Nazi Germany being only the most extreme example — made the idea of European supremacy harder to swallow, for those actually embedded in the cultures that had brought forth such monstrosities.

But in the U.S., second thoughts have been harder to come by, if for no other reason than the relative insularity, provincialism and even security that being bound by two oceans has long provided and encouraged. It is the American form of white supremacy, still, as with its predecessor rooted in the dichotomization of peoples into good/bad, responsible/irresponsible, which leads a nation such as the U.S. to believe itself entitled to the resources of the earth, be they oil reserves beneath the sands of Iraq, or coal deposits in a West Virginia mountainside. That entitlement mentality precedes the drive for profit, and helps to place it in its proper context. That same mentality then contributes to the world’s ecological predicament, including global climate change, soil and wetland erosion, polluted drinking water and air, and the related health effects of all these.

It is the same white supremacist mindset that leads such a nation to believe itself worthy of dictating which nations around the globe can and cannot have weapons of mass destruction, or develop nuclear energy programs “responsibly.” White nations can, as can Israel–which although not quite as “white” as the lands of Northern Europe, nonetheless is led by mostly European-descended Jews, in contradistinction to the region’s darker, Arab majority. On the other hand, the black and brown are presumed incapable of possessing such munitions, and are to be stopped whenever possible in their quest to do so.

White supremacy, American-style — which has become the dominant form on the planet today — is what leads U.S. policy elites not only to believe an invasion of Iraq on false pretenses is justified, but also to assume it will be a smashing success. The hubris and self-congratulatory narcissism that predicted Americans would be met in the streets by Iraqis throwing flowers to the troops — and which now cannot seem to fathom how badly things are going for the American empire — stems from the mindset of racial and cultural supremacy that simply fails to see oneself through the eyes of others. After all, privilege and domination has allowed that same culture to never really care, or need to care, what others think. The result of such willed ignorance, is, sadly, now proving to be disastrous.

And it was only white Americans who seemed not to envision such a disaster, or to consider the moral implications of such a course of action. After all, prior to the March 2003 invasion, persons of color were largely opposed to the war in Iraq — especially when the prospect of large-scale civilian death there was raised — while whites, especially white men, remained resolute that the slaughter must go on, no matter how many Iraqis had to perish in the process. While black and brown folks, and even white Europeans, took a more nuanced and critical view of American war plans, that special breed of white person who we might call Caucasoid Americanus — who, unlike their European counterparts haven’t (yet) had their attachment to white supremacy tempered by the crumbling of our own version of colonialism — pushed forward, convinced in the righteousness of the cause, and the invincibility of our gung-ho military.

This same mindset has regularly allowed the brushing off of mass death, so long as those doing the dying weren’t white like us. Five hundred thousand Iraqis dead from U.S. sanctions, according even to former Secretary of State Madeline Albright? No problem. At least 30,000 Iraqi civilians dead because of the current war, even according to Bush–who proclaimed this grim (and no doubt highly understated) fact with no more emotion than one might demonstrate when telling another the day’s weather forecast? Again, no problem. It’s worth it: a sentiment most assuredly to be heard as well, and delivered every bit as coolly somewhere deep in the caves of Afghanistan with regard to 9/11. Sorry, but them’s the breaks.

Even the Cold War was seen by many American war planners as a racial, and not merely economic or ideological conflict. Consider what General Edward Rowney, who would become President Reagan’s chief arms negotiator with the Soviets, told Manning Marable in the late 1970s, and which Marable then recounted in his book The Great Wells of Democracy:

“One day I asked Rowney about the prospects for peace, and he replied that meaningful negotiations with the Russian Communists were impossible. ‘The Russians,’ Rowney explained, never experienced the Renaissance, or took part in Western civilization or culture. I pressed the point, asking whether his real problem with Russia was its adherence to communism. Rowney snapped, ‘Communism has nothing to do with it!’ He looked thoughtful for a moment and then said simply, ‘The real problem with Russians is that they are Asiatics’.”

In other words, even the struggle with the Soviet Union, which drained both nations of such resources, helped squander monies that could have been used for human needs, and led to millions of deaths in Africa, Asia and Central America (and the deaths of more than a few U.S. and Russian citizens as well, in places like Korea, Vietnam and Afghanistan) was in large measure predicated on a desire to maintain white supremacy. Quite a cost, this system.

White supremacy also cannot prepare for, though it is directly implicated in, the coming energy crunch facing the West. Largely unwilling to move toward renewable energy — because it is less profitable (at least at the present time), and because it fails to satiate the white desire to consume and destroy, thereby demonstrating the power of one’s will and genius — the West ambles into unsustainable and irrational energy policies (like drilling in the Arctic National Wildlife Refuge or building more refineries and drilling platforms in the hurricane-ravaged Gulf of Mexico). So, too, we maintain our dependence on Middle East oil reserves, not realizing that given a few more years of American imperialism abroad, OPEC may decide they’ve had enough, and choose to stop trading in dollars as their main currency. A shift to the euro on the part of the oil producing nations (something a few of those states have already talked about) would literally cripple the American economy, demonstrating the limits of white supremacy, American style.

In other words, and to put it in colloquial terms, this cowboy shit won’t work for much longer. At some point, the Indians fight back: economically, militarily, socially and culturally. For those seeking an answer to the eternal (and almost exclusively white) question, “Why do they hate us?” you couldn’t do much better than to come to understand the way in which racism and white supremacy, with capitalism and militarism as its primary transmission belts, has been experienced by the brown-skinned persons of the planet.

These are folks, after all, who know (whether at the level of the actual data, or merely intuitively) that a fraction of our culture’s military budget could save millions of lives if redirected to the immunization needs of their nation’s people; that less than a couple of weeks of spending on the war in Iraq could guarantee sanitary water supplies for everyone in the world. That the U.S. in this way could save millions of children from death every year and yet chooses not to do so, speaks volumes about the fundamental evil of the white supremacist mindset, and fairly guarantees the kind of hatred, instability and even terrorism down the line, that Americans have come to fear.

So, for those concerned about terrorism; upset by how the war is going in Iraq; pissed off at the price of gasoline, or worried about the melting of the polar ice caps, extreme weather events, and related environmental catastrophes: Blame white supremacy. For those upset about the unavailability of health care in the U.S., and the unwillingness of this nation to make such a thing a birthright rather than a commodity, blame white supremacy too. After all, the difference between the U.S. and Europe when it comes to providing a wide array of social services has long been the sense that in America “those people” (meaning the black and brown) would suck up too many taxpayer dollars under such initiatives. Racist backlash to welfare programs has then, ironically, limited benefits for whites as well.

And for those concerned about their wages being too low, don’t just lash out at capitalism: blame white supremacy, too. After all, it is the sense that persons working in sweatshops abroad or harvesting our food here at home are not fully human (and certainly not the intellectual or cultural equals of white Americans) that feeds our unwillingness to push for higher wages and better working standards globally, not just the desire for mega-profits in a vacuum.

Likewise, how else (except as a product of a deeply supremacist mind) can we rationalize the words of former World Bank chief economist (and most recently President of Harvard University) Lawrence Summers, who said in a 1991 memo that the West should encourage polluting industries to locate in “less developed countries,” because “health impairing pollution should be done in the country with the lowest cost, which will be the country with the lowest wages.” He went on to explain, “I think the economic logic behind dumping a load of toxic waste in the lowest wage country is impeccable and we should face up to that,” and that, in his estimation, “under-populated countries in Africa are vastly under-polluted.” While such sentiment poses as mere economic hard-headed rationality, in fact it demonstrates a racist contempt for the victims of such policies, which whether deliberate and thought out, or merely so taken for granted as to approach the level of the banal, results in the same thing: dead brown people for the benefit and glory of whites.

Ironically, by keeping the world’s black and brown poor in a state of destitution (or even making it worse, as Summers would prescribe), we guarantee the kind of economic hardship that will encourage businesses to take advantage of their labor — desperate people, after all, will work for shitty wages and in awful conditions — to the detriment of wage rates and benefits in the U.S. as well. And anyone who has a problem linking such cavalier dismissals of human life and worth on the one hand, to “anti-Americanism” and terrorism on the other, demonstrates a profound inability to connect even the most basic of dots.

At some level, perhaps we already know the linkages are real, even as we are loathe to say so out loud. Consider, just for a moment the meaning of a 2004 study in the Journal of the American Medical Association, noting that America has a rate of mental illness roughly double the global average, and five times higher than conflict and corruption-torn Nigeria. And not just for any mental disorders, but specifically for “anxiety related” disorders and substance abuse maladies. Why, pray tell would such a thing be true? Why should the most powerful people on the planet — and we can rest assured that as with all clinical studies, whites were likely oversampled and make up the disproportionate bulk of those examined in the U.S. — have more anxiety and feel more stressed than the world’s poor?

Perhaps it is precisely the privilege and power that remains so tightly in our hands, which generates the anxiety, the sense of dread, the fear that provokes such ludicrous concepts as “preventative war,” so as to get them before they get you. Add to the disproportionate power the mindset of competition and greed nurtured by both white supremacy and capitalism and you have the perfect recipe for mass paranoia. As Derrick Jensen explains in The Culture of Make Believe, such a national ethos causes the world, in the eyes of its people, to “devolve into consisting almost entirely of victims and perpetrators, the fuckers and the fucked…You will perceive that everyone is out to get you. And why not? After all, you are certainly out to get them.” In other words, white supremacy is crazy-making, and not only for its targets.

The alternative is to contest sociology.

Instead of blindly extending it into outer space, we should contest the dominant ideologies that underwrite modernist sociology—our critique is a prerequisite to the case.

Ananta Kumar **Giri**, Associate Professor at the Madras Institute of Development Studies in India, holds a Ph.D. in Anthropology from Johns Hopkins University, an M.A. in Sociology from the Delhi School of Economics at the University of Delhi, and an M.A. in Anthropology from Johns Hopkins University, **2009** (“Sociology and Beyond,” *Asian Journal of Social Science*, Volume 37, Number 3, Available Online to Subscribing Institutions via BRILL, p. 329)

Exploring new frontiers of sociology **does not mean extending the existing theories and methods of sociology but an interrogation of some of its uncritically accepted modernist assumptions**, such as the equation of society and nation-state, the dualism of individual and society and that of ontology and epistemology. This special issue of Asian Journal of Social Science explores pathways beyond sociology in terms of exploring the contours of a transformational sociology which seeks to transform the assumptions, as well as horizons, of sociological imagination. Despite all the waters that have flown around the world for the last one hundred and fifty years, contemporary sociology, even the so-called global sociology, suffers from what Ulrich Beck himself calls **the NATO-like fire-power of western sociology**. In this context, sociology has to open itself to transcivilisational dialogues and planetary conversations as to the very themes of thinking about self, culture and society. So far, **globalisation of sociology has meant globalisation of themes and methods of modernist sociology which makes an easy equation between sociology and modernity**. For sociologists, such as Giddens, Beck and Beteille, sociology is a modern discipline. But if sociology blindly follows the post-traditional teleology of modernity how can it study varieties of forms of life — traditional, modern, as well as postmodern? These varieties of forms of life exist not only in so-called traditional societies, such as India or Lapland, but in all contemporary societies — be it India, Indonesia, Sweden, France, England, Germany, Singapore, China or the USA. Beyond Sociology thus challenges us first of all to go beyond an a priori teleological privileging of the post-traditional telos of modernist sociology. It invites us for **a foundational interrogation of modernist sociology as a prelude to making sociology part of a planetary conversation as to the very themes**, such as society and individual **that it seeks to understand**.

# 2NC/1NR—Alternative

The aff goes in exactly the wrong direction—instead of taking sociology to space, we need to bring it back down to Earth.

John **Clammer**, Visiting Professor and Deputy Director of the United Nations University-International Courses, Director of International Cooperation and Development at the UNU-IC, Adjunct Professor at Kanda University of International Studies, former Professor of Sociology and Asian Studies at Sophia University, holds a D.Phil. from Oxford University, **2009** (“Sociology and Beyond: Towards A Deep Sociology,” *Asian Journal of Social Science*, Volume 37, Number 3, Available Online to Subscribing Institutions via BRILL, p. 344)

The founder of Deep Ecology, the Norwegian philosopher Arne Naess, in an early essay (Naess, 1973/1995), contrasted what he called the shallow approach of conventional, reformist environmentalism with all its compromises with the resource extraction industries and its wholly anthropocentric approach which sees nature simply as a place for recreation for humans and as a source of medicines or other benefits equally for humans and with no intrinsic value in itself, and the approach of Deep Ecology which takes a biocentric approach, expands the concept of the self to include its deep dependence on and interconnectedness with nature and recognises the rights of other living entities to be allowed to live and evolve in peace. In a similar way in this essay, I am contrasting what I find to be the existential **shallowness, culturalism and anthropocentrism** of conventional sociology with the possibility of **a rich and transforming engagement** with the issues and approaches to life that artists, spiritual seekers, poets and deep ecologists have long pioneered and the absence of which is both the source of so much of the aridity of sociology and the crises that global society and environment now confront. The materials for this reconstruction lie all around us — in those visions of the world just enumerated, in the works of those significant, but marginalised, thinkers mentioned earlier in this essay and in the works of many others like them, and in the possibility that art and nature are not passive subjects of analysis, but the carriers of valid knowledge, and as such, like the many forms of indigenous knowledge supposedly the subject matter of anthropology, ways of seeing and acting in and on the world. As the theologian and ecologist Thomas Berry puts it, that in the context of our present crisis and the extraordinary denial that surrounds it, “We must recognise that **the only effective programme available as our primary guide toward a viable human mode of being is the programme offered by the Earth itself**” (Berry, 1999: 71). The responsibility of sociology, as with the other social sciences, is to grasp that challenge.

# 2NC/1NR—Sociology Bad

Sociology doesn’t have the answers we need—only the critique avoids replicating the failed methodology of modernist sociology.

John **Clammer**, Visiting Professor and Deputy Director of the United Nations University-International Courses, Director of International Cooperation and Development at the UNU-IC, Adjunct Professor at Kanda University of International Studies, former Professor of Sociology and Asian Studies at Sophia University, holds a D.Phil. from Oxford University, **2009** (“Sociology and Beyond: Towards A Deep Sociology,” *Asian Journal of Social Science*, Volume 37, Number 3, Available Online to Subscribing Institutions via BRILL, p. 334-335)

Entrapment within the discourse that sociology has created for itself and which is the legacy of its founding fathers **may not be a sufficient model for addressing the human, social and ecological problems of the current century**. Even as Marxism was a child of and a profound shaper of a now outdated industrial, resource extractive, polluting and unequal societal order, so too sociology shares in that legacy and, for all its undoubted achievements in throwing light on the organisation of human society, **now needs rethinking if it is to have any constructive role in the civilisation that must arise from the failures of the old order if humanity and nature are to have a future at all**.

Thus, **beyond, below and behind** the conventional questions of sociology (or the questions of conventional sociology) — issues of class, stratification, deviance, social order and control — , lie ultimately the fundamental existential questions — of birth, death, our place in nature, meaning, ends, sleep and dreams, love and suffering — that sociology, having largely severed its roots in philosophy, rarely speaks of. To confront these as the fundamental issues at the heart of existence at all times and in all cultures (however specifically framed or addressed in different instances) poses **basic methodological and theoretical questions** for the student of the human and social sciences. Given the emerging and challenging features of the world system, ecological and social justice issues paramount amongst them, how do we define the nature and scope of our investigations as contemporary sociologists? And, once defined, how do we interrogate it in ways that truly illuminate the human condition to act for change where we believe that to be necessary? How do we site sociology, place it in the context that gives it reality and meaning as an enterprise, that context in fact being nothing less than the basic and evolutionary forces that shape the cosmos? To do this we have to work paradoxically at both the maximal and minimal levels — at the very micro in the internal worlds of individual [end page 334] memory, imagination, anticipation, hope and purpose, and at the very macro level, not only of the ‘world system’ and its structural qualities, but also of the cosmic context in which all human systems are embedded, including, pre-eminently, nature.

The very foundation of sociology is wrong—the “social” doesn’t exist independently of its natural and existential context.

John **Clammer**, Visiting Professor and Deputy Director of the United Nations University-International Courses, Director of International Cooperation and Development at the UNU-IC, Adjunct Professor at Kanda University of International Studies, former Professor of Sociology and Asian Studies at Sophia University, holds a D.Phil. from Oxford University, **2009** (“Sociology and Beyond: Towards A Deep Sociology,” *Asian Journal of Social Science*, Volume 37, Number 3, Available Online to Subscribing Institutions via BRILL, p. 336)

Clearly sociology has always had a critical and self-critical dimension, and indeed has always been a contentious and even undefined discipline (a characteristic that it shares with anthropology). However, in most cases it is **discourses within sociology that are critiqued, not the notion of sociology itself**. It has sometimes been pointed out that Asian societies (China being the paradigm case) have rarely spontaneously produced what in the West would be recognised as sociology and this is seen as some kind of deficiency; this is **a serious mistake**: all such societies have rich traditions of social thought but primarily expressed through philosophical and religious idioms. One of **the central errors** of Western sociology and hence of **the limits of its explanatory power** has been the assumption, again largely deriving from Durkheim, of the autonomy of society: of there being, in other words, a category of phenomena that can be **abstracted from** and **studied independent its larger existential and natural context**. The very recent discovery in the West of a new sub-discipline, entitled ‘environmental sociology’, is highly indicative of this and unwittingly signals the existence of a concept of society divorced from nature and in which sociological explanations were thought to be autonomous. When, however, one looks at social thought in Japan, China and India, and in particular those forms of thought rooted in Buddhism, Hinduism and to a lesser extent Shinto, **a very different conception of human life in the universe begins to emerge**.

Separating society from the individual is methodologically indefensible—there is no “self” distinct from the “social”.

John **Clammer**, Visiting Professor and Deputy Director of the United Nations University-International Courses, Director of International Cooperation and Development at the UNU-IC, Adjunct Professor at Kanda University of International Studies, former Professor of Sociology and Asian Studies at Sophia University, holds a D.Phil. from Oxford University, **2009** (“Sociology and Beyond: Towards A Deep Sociology,” *Asian Journal of Social Science*, Volume 37, Number 3, Available Online to Subscribing Institutions via BRILL, p. 335-336)

This broad conception has a number of elements. Firstly, that the fundamental uncertainty of life — its hazards and unpredictability (that have [end page 335] surfaced in Western social thought as the ‘risk’ analyses of Ulrich Beck and Mary Douglas, amongst others) — has tended, in mainstream sociology, to generate ‘systems’ when, in fact, **it should point us back to life itself and to the richness of the present moment**. Existence is actually **unknowable by analytical means** and can only be grasped through other techniques that have not so far appeared in the vocabulary of sociology, including the meditative techniques common to the religious traditions of Asia. Secondly, that the common assumptions of autonomy, independence and individualism that pervade Western thought make no sense from the perspective of Asian social psychologies which stress the interdependence of all entities, at the social level what the Vietnamese Buddhist thinker and activist Thich Nhat Hanh calls ‘Interbeing’ (Thich, 1998) and, at the ecological level, in the recognition of the fundamental embeddedness of humans in nature. The ‘ecological self’ announced by ‘Deep Ecology’ has, in fact, long been anticipated in Asian religious traditions. **The self is not autonomous** — it is **the nexus of both socio-cultural forces and natural ones and the points at which these meet** such as in the biological/ cultural heritage enshrined and celebrated in the notion of ancestors, so central to East Asian religious and social practices. The recent invention in the West of ‘ecopsychology’ and the recognition of the deep scars that result from the artificial and, in fact, non-existent radical separation of humans and nature imposed on people by many aspects of our industrial-urban civilisation, signals the belated re-emergence of a clearer and more modest perception of the place of humans in the cosmos as simply a part in a complex web of life and not necessarily as the apex of evolution. To overcome the illusion of separateness is **the first step in a reinvented sociology**.

# K of Enlightenment/Rationality Link

Astrosociology is the central planning of space – relying on elites and technocrats and a new Enlightenment of rational thought

Gangale and Dudley-Flores, 7

[Thomas, Executive Director, OPS-Alaska ; and Marilyn, CEO/Chief Research Scientist, OPS-Alaska; “The Globalization of Space – The Astrosociological Approach”, Presented at the AIAA SPACE 2007 Conference & Exposition 18 - 20 September 2007, Long Beach, California, NKN]

Lifting our gaze skyward, the question arises, what forms of governance shall we take with us, and what shall we leave behind? We have an opportunity for a revolution in human thought regarding human nature and human rights, the relationship of individual, society, and state, and to question the factors of production, the means of production, and modes of production. In short, as one writer on outer space law has remarked to the authors, we get to do the Enlightenment over again. Stewart B. Whitney (1984, pp. 11-12)34 wrote:

We can challenge sociology to provide the conceptual basis of the social design for space

settlement, to construct social models required for the successful adaptation of Humankind to

space. Planning the social design of space settlements is necessary for the success of space

industrialization; without appropriate social organization, accomplishment of industrialization

tasks will fail.

Rational planning for the social design of space settlements must rest on the knowledge of social

scientists and scholars. This requirement presents a particularly difficult problem for those who

plan the social aspects of space settlements. This does not constitute an insurmountable difficulty,

however, because knowledge of human social responses to various types of problems and

difficulties is available; this knowledge can be applied to analysis of the unique problems that are

likely to require societal resolution in space settlements from which logical models of social

design can be developed. These logical models can serve as a starting point for social planning

and can be modified as additional knowledge and insight are developed.

# Anthropocentrism K Link

The aff’s calculative use of nature extends to space – the frontier of hyperrationality, eliminating natural distinctions and thought

Thorburn, 10

[Stephanie Lynn, MA in Sociology from Goldsmiths College and a BSc. (Honors) in Sociology/ Psychology from City University, Space Renaissance Initiative Board of Directors, professor @ the UAS, her dissertation *The Astrosociological Imagination and the Space Renaissance Initiative: A Discourse Analytical Perspective*, taken from Chapter 1: “The SRI: A Radical Approach to Re-rationalisation in Response to the Ecological Crisis of Postmodernity”, <http://www.spacerenaissance.org/papers/Abridged_STR.pdf>, NKN]

In ‘Rationality and Nature’ (1994), Raymond Murphy summarises effectively some of the key ‘green options’ under which central strands of thought within ecological politics can be analysed. He forwards the categories of the intensification of rationalisation under the premise of greenness, re-rationalisation and de-rationalisation. **Underlying these alternatives is the idea that the intensification of rationality involves a certain ‘plastic’ view of our interactions with nature through an anthropocentric manipulation process, leading further toward hierarchical domination**, economically and politically of humans over other humans. **The conceptual background to this classification system is the application of Weber’s theory of instrumental rationality** or goal **as opposed to value-orientated reason,** in association with an increasingly bureaucratic society, **suffering from the destructive dominance of technical reason**. The intensification of rationality involves ecological goals still connected to the maintenance of a high standard of living for humans. The now familiar ideas of reduction of waste, reuse and recycle are therefore a form of ecological rationality and part of a dialectical relationship between social action and the processes of nature. In this ‘garden vision’ the consequences of technology upon the environment are calculated so as to produce an ecological improvement towards the next stage of societal development. In this context, **the visions of the SRI can be seen as extending the remit of sustainable development beyond our own atmosphere**. Neo- Malthusians have attacked sustainable development ideas on the grounds that nature is not in fact malleable and our capacity to sustain population and consumption may be more limited than assumed implicitly by sustainability theorists. **This equation has almost certainly been considered within the manifesto of the SRI**, who unlike conventional sustainable development theorists do not ignore more fundamental equations and instead suggest a need for reassessment of economic and environmental issues through an ‘open world view’, **extending our concept of society from the parochial remit of Earth**. Whether the SRI have appraised the origins of our present societal crises within a sufficiently critical standpoint regarding the role of capitalism and bureaucratic processes is however unclear and a point I will return to later.

# Deep Eco/Anthro K Link

The desire and impulse to explore and colonize space is a symptom of the root cause – anthropocentric movement dividing and moving away from nature

Mander, 95

[Jerry, activist and author about environmental issues, Chapter 29 “Leaving the Earth: Space Colonies, Disney, and Epcot”, pg. 311-2 of *Deep Ecology for the 21st Century*, edited by George Sessions, NKN]

BANISHMENT FROM EDEN  
Over the years, **I have wondered about the apparently strong appeal of space travel and development to the public mind. I can understand why corporations, militaries, and governments want to promote departing** from the planet, and I have mentioned its appeal to the New Age collective ego. But it hasn't been easy for me to grasp why the idea is so attractive to others. I finally realized that **space travel is not new; it is only the final stage of a departure process that actually began long ago**. **Our society really "left home" when we placed boundaries between ourselves and the earth**, when we moved en masse inside totally artificial, reconstructed, "mediated" worlds-huge concrete cities and suburbs and **we aggressively ripped up and redesigned the natural world**. By now, **nature has literally receded from our view and diminished in size. We have lost contact with our roots**. As a culture, **we don't know where we came from; we're not aware we are part of something larger than ourselves**. Nor can we easily find places that reveal natural Processes still at work. . . **. As a corporate culture, we have begun to feel that one place is as good as the next; that it's okay to sacrifice this place for that one, even when the new place is not even on Earth.** In the end, this leaves us all in a Position similar to the millions of homeless people on our streets. In truth we are all homeless, though we long to return.

# Deep Eco/Anthro K Link

The drive to colonize space is an eternal longing for an Eden we can’t find, a new grasp and hold of nature. This drive manifests itself in greater destruction of the Earth and means no solvency – turning the case

Mander, 95

[Jerry, activist and author about environmental issues, Chapter 29 “Leaving the Earth: Space Colonies, Disney, and Epcot”, pg. 312 of *Deep Ecology for the 21st Century*, edited by George Sessions, NKN]

My friend Gary Coates, an architecture professor at Kansas State University, has argued provocatively that **our quest for space is actually a distorted expression of a desire to return home to Eden**, the place we abandoned. He sees **our whole culture as caught in a replay of the Adam-and-Eve story**. In a recent conversation, Coates put it to me this way: "Like all creation myths, the story of the Garden of Eden is not something that never happened or only happened long ago; it is something that is happening in every moment. . . . **It was the murder of Abel, who represented a state of oneness with the earth, that set Cain off wandering in a never-satisfied quest for the return to**, or re-creation of, **paradise**. **Within the confines of our totally artificial environments on Earth, as they will soon also be in heaven, we also seek to re-enter Eden**. In particular, the creation of the Leisureworlds' Disney Worlds, megamalls, Air Stream mobile home cities, lifestyle-segregated condominium communities, and especially genetic engineering, **space colonization, and terraforming of planets, are all updated forms of Cain's desire to return home by remaking the original creation**. **The tragedy is that in attempting to recover paradise we accelerate the murder of nature**. It's yet another repeat of the story of Cain and Abel, another acting out of the founding myth of Western history."

# Deep Eco/Anthro K Link

The drive to colonize space is an eternal longing for an Eden we can’t find, a new grasp and hold of nature, the root cause of impacts. This drive manifests itself in greater destruction of the Earth and means no solvency – turning the case

Mander, 95

[Jerry, activist and author about environmental issues, Chapter 29 “Leaving the Earth: Space Colonies, Disney, and Epcot”, pg. 319 of *Deep Ecology for the 21st Century*, edited by George Sessions, NKN]

Remaking authentic communities into packaged forms of themselves, **recreating environments in one place that actually belong somewhere else**, creating theme parks and lifestyle-segregated communities, **and space travel and colonization-all are symptomatic of the same modern malaise: a disconnection from a place on Earth that we can call Home**. **With the natural world**—our true home—**removed from our lives**, **we have built on top of the pavement our new world**, a new Eden, perhaps; **a mental world of creative dreams. We then live within these fantasies of our own creation**; we live within our own minds. **Though we are still on the planet Earth, we are disconnected from it**, afloat on pavement, **in the same way the astronauts float in space.**

**That our culture has taken this step** into artificial worlds on and **off the planet is a huge risk, for the logical result is disorientation and madness and**, as Coates argues, **the obsessive need to attempt to re-create nature and life.**

# Agency Mini-K

Agency can only be articulated in opposition to the restrictive structuralisms of the status quo—we can claim our agency only by rejecting a state-centric view of politics – turns the case

**Bleiker, 2k**

[Roland, Ph.D. visiting research and teaching affiliations at Harvard, Cambridge, Humboldt, Tampere, Yonsei and Pusan National University as well as the Swiss Federal Institute of Technology and the Institute of Social Studies in The Hague, Popular Dissent, Human Agency and Global Politics, Cambridge University Press]

Questions of agency have been discussed extensively in international theory, mostly in the context of the so-called structure—agency debate. Although strongly wedded to a state-centric view, this debate nevertheless evokes a number of important conceptual issues that are relevant as well to an understanding of transversal dynamics. The roots of the structure—agency debate can be traced back to a feeling of discontent about how traditional approaches to international theory have dealt with issues of agency. Sketched in an overly broad manner, the point of departure looked as follows: At one end of the spectrum were neorealists, who explain state identity and behaviour through a series of structural restraints that are said to emanate from the anarchical nature of the international system. At the other end we find neoliberals, who accept the existence of anarchy but seek to understand the behaviour of states and other international actors in terms of their individual attributes and their ability to engage in cooperative bargaining. If pushed to their logical end-point, the two positions amount, respectively, to a structural determinism and an equally farfetched belief in the autonomy of rational actors. [24](http://www.questia.com/reader/action/next/105471074#24)

The structure—agency debate is located somewhere between these two poles. Neither structure nor agency receive analytical priority. Instead, the idea is to understand the interdependent and mutually constitutive relationship between them. The discussions that have evolved in the wake of this assumption are highly complex and cannot possibly be summarised here. [25](http://www.questia.com/reader/action/next/105471074#25) Some of the key premises, though, can be recognised by observing how the work of Anthony Giddens has shaped the structure—agency debate in international relations. Giddens speaks of the 'duality of structure,' of structural properties that are constraining as well as enabling. They are both 'the medium and outcome of the contingently accomplished activities of situated actors'. [26](http://www.questia.com/reader/action/next/105471075#26) Expressed in other words, neither agents nor structures have the final word. Human actions are always embedded in and constrained by the structural context within which they form and evolve. But structures are not immutable either. A human being, Giddens stresses, will 'know a great deal about the conditions of reproduction of the society of which he or she is a member'. [27](http://www.questia.com/reader/action/next/105471075#27) The actions that emerge from this awareness then shape the processes through which social systems are structurally maintained and reproduced.

# Foucault Mini-K

The aff’s search for a pure political system of order and control obscures power relations and the true nature of institutions – turns the case

Rabinow, 84

(Paul, Professor of Anthropology at the University of California (Berkeley), Director of the Anthropology of the Contemporary Research Collaboratory (ARC),*The Foucault Reader,* Introduction, p 5-6, NKN)

Foucault, typically, refuses to answer why he is interested in politics. He finds this both trivial and self-evident. Instead, he shifts the "why" question to a "how" question-how am I interested in politics? Certainly not, he parries, "by imagining an ideal social model for the functioning of our scientific or technological society." One of the hallmarks of Western political philosophy, in Foucault's interpretation, has been its devotion to such abstractions, first principles, and utopias-i.e., theory . In the West we have consistently approached the problem of political order by building models of the just social order or searching for general principles by which to evaluate existing conditions. But, Foucault claims, it is exactly this emphasis, this "will to knowledge," that has left us almost totally in the dark about the concrete functioning of power in Western societies. Our task is to cast aside these utopian schemes, the search for first principles, and to ask instead how power actually operates in our society. "It seems to me," Foucault expounds, "that the real political task in a society such as ours is to criticize the working of institutions which appear to be both neutral and independent; to criticize them in such a manner that the political violence which has always exercised itself obscurely through them will be unmasked, so that one can fight them. "4

# Methodology Mini-K

**Only pure critique can solve — disruption of the status quo frees theory from the constraints of fact-sorting and opens thought to methodological pluralism – internal-link turns their framework arguments**

**Bleiker, 2k**

(Roland, Ph.D. visiting research and teaching affiliations at Harvard, Cambridge, Humboldt, Tampere, Yonsei and Pusan National University as well as the Swiss Federal Institute of Technology and the Institute of Social Sudies in The Hague, Popular Dissent, Human Agency and Global Politics, Cambridge University Press)

What follows may thus be called 'disruptive writing', a process that Shapiro describes as tackling an issue not by way of well-rehearsed debates, but through an alternative set of texts and narratives. [46](http://www.questia.com/reader/action/next/105471082#46) My analysis juxtaposes familiar images of agency in global politics, such as the collapse of the Berlin Wall, with relatively unusual sites of investigation, such as Renaissance perceptions of dissent or contemporary poetics. The objective of this disruptive process is not to declare alternative forms of knowledge true or even superior, but to reveal what has been discussed above: that the nature of international relations is intrinsically linked to the stories that are being told about it, and that an unsettling of these stories has the potential to redirect the theory and practice of global politics.

Disruptive writing disturbs. It inevitably creates anxieties. Max Horkheimer observed half a century ago that widespread hostility emerges as soon as theorists fail to limit themselves to verifying facts and ordering them into familiar categories — categories which are indispensable for the sustenance of entrenched forms of life. [47](http://www.questia.com/reader/action/next/105471082#47) Likewise, a disruptive reading of agency in global politics will not be met with uniform approval. There are those who are concerned with maintaining the proper epistemological boundaries of a coherent and selfcontained discipline. Jack Levy, for instance, defends a distinct separation between the work of historians and international relations scholars. The former, he points out, use theory 'primarily to structure their interpretations of particular events'. The latter, by contrast, are political scientists whose task is to 'formulate and test general theoretical propositions about relationships between variables and classes of events'. [48](http://www.questia.com/reader/action/next/105471082#48) Ensuing methodological principles, which are strongly influenced by a positivist understanding of social dynamics, have often been discussed in the context of the level of analysis problem. That is, they have been evoked to determine what is and is not a proper subject-study of international relations. Barry Buzan convincingly points out that such approaches, which have become particularly influential in North American academia, fail to see that there are two different issues at stake. On one side are ontological questions that have to do with determining the proper units of analysis (individuals, state, system, etc.), and on the other side are epistemological questions that concern the proper research method, the manner in which one explains the units' behaviour. [49](http://www.questia.com/reader/action/next/105471083#49) By combining these two forms of delineating theoretical and analytical activities, the discipline of international relations has turned into a rather narrowly sketched field of inquiry. A focus that is all too often confined to states and systemic factors is further restricted by limits imposed on the types of knowledge that are considered legitimate to understand global politics. Consider how a group of highly influential scholars argue that the objective of proper research is 'to learn facts about the world' and that all hypotheses about them 'need to be evaluated empirically before they can make a contribution to knowledge'. [50](http://www.questia.com/reader/action/next/105471083#50) As soon as these epistemological boundaries are transgressed, anxieties emerge and defensive mechanisms become operative. The warning against such transgressions is loud and clear: 'A proposed topic that cannot be refined into a specific research project permitting valid descriptive or causal interference should be modified along the way or abandoned.' [51](http://www.questia.com/reader/action/next/105471083#51)

A disruptive reading and writing of the agency problematique in international theory combines a commitment to methodological pluralism with an interdisciplinary and multi-layered understanding of transversal struggles. International relations, then, is to be treated primarily as a broadly sketched theme of inquiry, rather than a disciplinary set of rules that determine where to locate and how to study global politics.

Gazing beyond the boundaries of disciplinary knowledge is necessary to open up questions of transversal dissent and human agency. Academic disciplines, by virtue of what they are, discipline the production and diffusion of knowledge. They establish the rules of intellectual exchange and define the methods, techniques and instruments that are considered proper for this purpose. Such conventions not only suggest on what ground things can be studied legitimately, but also decide what issues are worthwhile to be assessed in the first place.

# Specific Intellectualism Turn

Their definition of specific intellectualism is wrong – specific intellectuals are those who hold power (the hard-scientists), not those who engage it (astrosociologists/debaters). This turns their framework

**Rabinow, 84**

(Paul, Professor of Anthropology at the University of California (Berkeley), Director of the Anthropology of the Contemporary Research Collaboratory (ARC), *The Foucault Reader,* Introduction, p23, NKN)

But Foucault is not a biologist or a physicist, a man of science, either . Such scientists occupy the key positions of the "specific intellectual" (Foucault's term for those sectorial specialists on whom our future depends and who must speak to us from their laboratories ) . Their voices are given an authority because their work and our fate are intertwined, not because they have any special claim to represent reason . The specific intellectual is "he who, along with a handful of others, has at his disposal, whether in the service of the state or against it, powers which can either benefit or irrevocably destroy life . He is no longer the rhapsodist of the eternal, but the strategist of life and death . " 33 As a professor who holds the Chair of the History of Systems of Thought at the College de France, Foucault is clearly not without a certain prestige, yet he is obviously not a "strategist of life and death"-even if he has become their historian .

\*\*We do not endorse and we apologize for the gendered language Foucault uses

\*\*\*Policy Case Defense

# 1NC Frontline – Asteroid Impact

1. Zero impact to asteroids – either too improbable or too small to matter

Bennett, 10

[James, Eminent Scholar and William P. Snavely Professor of Political Economy and Public Policy at George Mason University, and Director of The John M. Olin Institute for Employment Practice and Policy, “The Chicken Littles of Big Science; or, Here Come the Killer Asteroids!” THE DOOMSDAY LOBBY 2010, 139-185, DOI: 10.1007/978-1-4419-6685-8\_6]

The smallest falling bodies, those with diameters under a few meters, are of “no practical concern,” says Chapman, and in fact they are to be desired, at least by those who keep their eyes on the skies watching for brilliant fireballs whose burning up in the atmosphere provides a show far more spectacular than the most lavish Fourth of July fireworks. Even bodies with diameters of 10–30 meters, of which Chapman estimates six may fall to earth in a century, cause little more than broken windows. They explode too high in the atmosphere to cause serious harm. The next largest potential strikers of Earth are those in the Tunguska range of 30 meters–100 meters. The shock waves from the atmospheric explosion would “topple trees, wooden structures and ignit[e] fires within 10 kilometers,” writes Chapman. Human deaths could result if the explosion took place over a populated area. Though Chapman estimates the likelihood of a Tunguska occurring in any given century at four in ten, it is worth noting that there is no evidence that such an explosion has killed a single human being in all of recorded history. Either we’re overdue or that 40 percent is high. Moreover, given that the location of such an explosion is utterly unpredictable, it would be far more likely to happen over an ocean or a desert than over, say, Tokyo or Manhattan. The after effects would be minimal, and Chapman says that “nothing practical can be done about this modest hazard other than to clean up after the event.” In fact, “It makes no sense to plan ahead for such a modest disaster… other than educating the public about the possibility.” The cost of a telescopic survey capable of picking up bodies of such diminutive size would be prohibitive. It would be the ultimate Astronomers Full Employment Act. A body of 100 meters–300 meters in diameter would either explode at low altitude or upon impact with the ground; it would be “regionally devastating,” but Chapman pegs the chances of such a catastrophe at 1 percent per century. A small nation could be destroyed by the impact of a body of 300 meters—1 km in diameter, or a “flying mountain” of sorts, which would explode with energy yield ten times more than “the largest thermonuclear bomb ever tested.” If striking land, it would carve out a crater deeper than the Grand Canyon. If it hit a populated area, the death toll could be in the hundreds of thousands. The likelihood of such a collision Chapman estimates at 0.2 percent per century. An asteroid or comet of 1–3 kilometers in diameter would cause “major regional destruction,” possibly verging on “civilization-destruction level.” Chapman puts the chances of this at 0.02 percent per century. The impact of a body more than 3 kilometers in diameter might plunge the Earth into a new Dark Age, killing most of its inhabitants, though the chances of this are “extremely remote” — less than one in 50,000 per century. Finally, mass extinction would likely occur should a body greater than 10 kilometers pay us a visit, though the chances of this are less than one in a million every century, or so infinitesimal that even the most worry-wracked hypochondriac will not lose sleep over the possibility. In fact, for any impact with a Chapman-calculated likelihood of less than one in a thousand per century, he concedes that there is “little justification for mounting asteroid-specific mitigation measures.” The chance of a civilization-ender is so remote that he counsels no “advance preparations” — or almost none. For Chapman recommends further study of NEOs, as well as investigation into methods of their diversion. 82 This is exactly what the NEO lobby wants.

2. Status quo surveys solve for extinction-level asteroids

Morrison, 10

[David, Director, Carl Sagan Center for Study of Life in the Universe, “ Impacts and Evolution: Protecting Earth from Asteroids,”

PROCEEDINGS OF THE AMERICAN PHILOSOPHICAL SOCIETY VOL. 154, NO. 4, DECEMBER 2010, <http://www.amphilsoc.org/sites/default/files/1540404.pdf>]

Although the impact hazard was treated with substantial skepticism two decades ago when surveys were i rst proposed, it has become conventional wisdom that we should carry out the Spaceguard Survey for asteroids large enough to threaten global disaster (e.g., Posner 2004; Clarke 2007; Slovic 2007; Morrison 2007). The question whether need a much more expensive survey for sub-km asteroids is still being debated, however (Atkinson et al. 2000; Chapman 2000, 2007a; Morrison et al. 2003; Stokes 2003; Sidle 2007; NRC Report 2010). As the original Spaceguard Survey goals are within reach, the residual hazard lies in the few undiscovered asteroids larger than 1 km and in the sparsely sampled sub-km asteroids. The largest hazard will be from tsunamis caused by impactors several hundred meters in diameter, but this is primarily a risk to property since fatalities can be greatly reduced by the application of tsunami warning systems. The most life-threatening hazard from sub-km impacts is associated with airbursts over land. The survey results have already transformed our understanding of the impact risk. For asteroids with diameter of 5 km or more, which is roughly the threshold for an extinction event, our knowledge is complete today. Astronomers have already assured us that we are not due for an extinction-level impact from an asteroid within the next century. Barring a very unlikely strike by a large comet, we are not about to go the way of the dinosaurs. Thus, the rest of this paper focuses on the more frequent impacts by asteroids with diameters from 5 km down to the atmospheric cut-off at about 50 m diameter, spanning the range from global catastrophic disasters at the top end down to local endurable disasters at the lower end of the energy range.

3. Self-interest means we won’t deflect

Schweickart, 4

[Russell, AIAA Associate Fellow, Chairman, B612 Foundation, “ THE REAL DEFLECTION DILEMMA,” 2004 Planetary Defense Conference: Protecting Earth from Asteroids Orange County, California February 23-26, 2004 ]

This challenge is, by its nature, international. While there is the exceptional circumstance where the deflection path will lie entirely within the bounds of a single nation state, the general case is one where the path of risk will cross several, or even many, national borders. It would therefore seem appropriate that the many legal and risk sharing issues embedded in deflecting asteroids be addressed by either the United Nations or some other authoritative international policy institution. The timing for such policy consideration is a challenging issue in itself. The quality of information on a pending NEO impact is highly variable over time. It ranges from a surprise impact with no prior knowledge to the case of 1950 DA 2 where we know today that there is a probability between 0 and 0.33% that this 1.1 km asteroid will impact Earth on March 16, 2880. For all other known NEOs between these two cases we can only state that with the exception of ~ 45 of them the remaining 2700 pose no threat to the Earth for the next 100 years. The residual 45 pose a very small but non-zero threat of an Earth impact at various times within the next 100 years. The issue then, of what will we know and when will we know it, becomes extremely critical to the timing and development of a coordinated international public policy on the NEO environmental threat. The natural temptation with such an improbable event is to wait until it becomes either a certainty or near-certainty before addressing it seriously. The price that would be paid for such an avoidance option in this instance will be the wielding of extreme selfserving national influence in the policy making process. If, e.g., it is discovered that a modest NEO will impact in Japan and that the deflection path would take it across Korea and over Beijing and China prior to liftoff, one can easily imagine the difficulty in only then initiating international deliberations on appropriate deflection policies. Clearly, rational mission planning criteria and risk sharing policies should be discussed and even put into formal treaty documents well before the specifics of a particular impact come to light. Objective evaluation of risk trade-offs and rational mission design will be far easier to achieve in such a proactive environment than in the power-politics confrontation that would dominate a wait and see alternative. An even more difficult, though similar, situation applies to the considerations of mission execution. What agency or agencies of any national government will be trusted to “truck” a 100+ MT bomb across the countryside in order to eliminate certain devastation in a neighboring country? Could one seriously imagine today the U.S. DoD being accepted by the world as the responsible agency for deflecting an asteroid from an impact in Afghanistan when the path of deflection would take it directly across Tehran? Of course this is a highly improbable example, but the likelihood that similar political considerations will not exist when we discover a probable NEO impact is dangerous wishful thinking. CONCLUSION The Real Deflection Dilemma will arise when the people of Earth awake to discover that a near Earth asteroid is headed for an impact with the planet. It will present itself as a terrible choice; do nothing to prevent it and suffer the consequences, or mount a mission to deflect it from impact thereby, in the process, placing a swath of people and property not otherwise at risk in jeopardy. In a very real sense, however, we are already ensnared in this dilemma, for we all know that such a moment in time will come. Therefore our own Real Deflection Dilemma is whether to confront the intractable policy choices implicit in protecting the Earth from asteroids now, or to avoid this terrible responsibility and force some future generation to face them in real time when they will become all but impossible to resolve

# Ext 1 – No Asteroid Risk

Err Neg – Aff authors exaggerate

Bennett, 10

[James, Eminent Scholar and William P. Snavely Professor of Political Economy and Public Policy at George Mason University, and Director of The John M. Olin Institute for Employment Practice and Policy, “The Chicken Littles of Big Science; or, Here Come the Killer Asteroids!” THE DOOMSDAY LOBBY 2010, 139-185, DOI: 10.1007/978-1-4419-6685-8\_6]

We should here acknowledge, without necessarily casting aspersions on any of the papers discussed in this chapter, the tendency of scientific journals to publish sexy articles. (Sexy, at least, by the decidedly unsexy standards of scientific journals.) Writing in the Public Library of Science, Neal S. Young of the National Institutes of Health, John P.A. Ioannidis of the Biomedical Research Institute in Greece, and Omar Al-Ubaydli of George Mason University applied what economists call the “winner’s curse” of auction theory to scientific publishing. Just as the winner in, say, an auction of oil drilling rights is the firm that has made the highest estimation — often overestimation — of a reserve’s size and capacity, so those papers that are selected for publication in the elite journals of science are often those with the most “extreme, spectacular results.” 63 These papers may make headlines in the mainstream press, which leads to greater political pressure to fund projects and programs congruent with these extreme findings. As The Economist put it in an article presenting the argument of Young, Ioannidis, and Al-Ubaydli, “Hundreds of thousands of scientific researchers are hired, promoted and funded according not only to how much work they produce, but also where it gets published.” Column inches in journals such as Nature and Science are coveted; authors understand full well that studies with spectacular results are more likely to be published than are those that will not lead to a wire story. The problem, though, is that these flashy papers with dramatic results often “turn out to be false.” 64 In a 2005 paper in the Journal of the American Medical Association, Dr. Ioannidis found that “of the 49 most-cited papers on the effectiveness of medical interventions, published in highly visible journals in 1990–2004… a quarter of the randomised trials and five of six nonrandomised studies had already been contradicted or found to have been exaggerated by 2005.” Thus, those who pay the price of the winner’s curse in scientific research are those, whether sick patients or beggared taxpayers, who are forced to either submit to or fund specious science, medical or otherwise. The trio of authors call the implications of this finding “dire,” pointing to a 2008 158 6 The Chicken Littles of Big Science; or, Here Come the Killer Asteroids! paper in the New England Journal of Medicine showing that “almost all trials” of anti-depressant medicines that had had positive results had been published, while almost all trials of anti-depressants that had come up with negative results “remained either unpublished or were published with the results presented so that they would appear ‘positive.’” Young, Ioannidis, and Al-Ubaydli conclude that “science is hard work with limited rewards and only occasional successes. Its interest and importance should speak for themselves, without hyperbole.” Elite journals, conscious of the need to attract attention and stay relevant, cutting edge, and avoid the curse of stodginess, are prone to publish gross exaggeration and findings of dubious merit. When lawmakers and grant-givers take their cues from these journals, as they do, those tax dollars ostensibly devoted to the pursuit of pure science and the application of scientific research are diverted down unprofitable, even impossible channels. The charlatans make names for themselves, projects of questionable merit grow fat on the public purse, and the disconnect between what is real and what subsidy-seekers tell us is real gets ever wider. 65 The matter, or manipulation, of odds in regards to a collision between a space rock and Earth would do Jimmy the Greek proud. As Michael B. Gerrard writes in Risk Analysis in an article assessing the relative allocation of public funds to hazardous waste site cleanup and protection against killer comets and asteroids, “Asteroids and comets are… the ultimate example of a low-probability/high-consequence event: no one in recorded human history is confirmed to have ever died from one.” Gerrard writes that “several billion people” will die as the result of an impact “at some time in the coming half million years,” although that half-million year time-frame is considerably shorter than the generally accepted extinction-event period. 66 The expected deaths from a collision with an asteroid of, say, one kilometer or more in diameter are so huge that by jacking up the tiny possibility of such an event even a little bit the annual death rate of this never-beforeexperienced disaster exceeds deaths in plane crashes, earthquakes, and other actual real live dangers. Death rates from outlandish or unusual causes are fairly steady across the years. About 120 Americans die in airplane crashes annually, and about 90 more die of lightning strikes. Perhaps five might die in garage-door opener accidents. The total number of deaths in any given year by asteroid or meteor impact is zero — holding constant since the dawn of recorded time

You overexaggerate by a factor of 10,000

Bennett, 10

[James, Eminent Scholar and William P. Snavely Professor of Political Economy and Public Policy at George Mason University, and Director of The John M. Olin Institute for Employment Practice and Policy, “The Chicken Littles of Big Science; or, Here Come the Killer Asteroids!” THE DOOMSDAY LOBBY 2010, 139-185, DOI: 10.1007/978-1-4419-6685-8\_6]

The closest thing to an impact even distantly related to the “catastrophic” occurred just over a century ago. In June 1908, in an event that is central (because seemingly unique in modern times) to the killer asteroid/comet lobby, the so-called Tunguska asteroid, 70 yards (60 meters) in length, exploded about 8 kilometers above the ground in remote Siberia. Its explosion unleashed 20 or more megatons of energy and “flattened about 2,000 square kilometers of forest.” 30 No human casualties were reported, as this was an unpopulated spot in Siberia. Sharon Begley of Newsweek once quoted John Pike of the Federation of American Scientists as saying that a Tunguska-sized rock from outer space could kill 70,000 people if it hit in rural American and 300,000 if it struck an urban area. 31 Maybe. Although it helps to remember that a Tunguska-sized rock did hit the Earth a century ago, and its human death toll was a nice round number: zero. Does Tunguska have antecedents? As Gregg Easterbrook elucidated in the Atlantic Monthly, geophysicist Dallas Abbott of Columbia University has argued that space rocks of, respectively, 3–5 kilometers and 300 meters struck the Indian Ocean around 2800 B.C. and the Gulf of Carpentaria in 536 A.D. 32 The latter led to poor harvests and cold summers for two years, while the former may have unleashed a planetary flood. Abbott’s evidence is a crater 18 miles in diameter at the bottom of the Indian Ocean, the impact from which she believes a 600-foot-high tsunami wracked incredible devastation. It should be noted, as the New York Times did, that “Most astronomers doubt that any large comets or asteroids have crashed into the Earth in the last 10,000 years.” Abbott and what she calls her “band of misfits” in the Holocene Impact Working Group take a decidedly minority view of the matter, and while that does not mean that they are wrong, it does mean that their alternative estimation of the frequency of 10-Megaton-size impacts — once every 1,000 or so years as opposed to the more generally accepted once every million years — should be viewed with great skepticism. 33 (Easterbrook, ignoring the majority of scientists who dispute Abbott’s contentions, concludes that “Our solar system appears to be a far more dangerous place than was previously believed.”) Easterbrook is a fine science writer but his piece contains certain telltale phrases (100-kilometers asteroids are “planet killers” and NASA’s asteroid and comet-hunting efforts are “underfunded”) that point to an expensive conclusion. He takes up the cause of Dallas Abbott, who complains that “The NASA people don’t want to believe me. They won’t even listen.” Consider this quote: After noting that scientists estimate that a “dangerous” object strikes the Earth every 300,000 to one million years, Easterbrook asks William Ailor of The Aerospace Corporation, “a think tank for the Air Force,” what his assessment of the risk is. Ailor’s answer: “a one-in-10 chance per century.” 3

Risk is almost nil and civil defense solves

Rozeff, 7

[Michael, retired Professor of Finance living in East Amherst, New York. February 21, 2007, “ Asteroid Risk Mitigation, Anyone?,” <http://www.lewrockwell.com/rozeff/rozeff139.html>]

The space fliers and explorers of the ASE pass themselves off as experts on the risks of a catastrophe arriving from outer space; but they are far more likely to be biased observers and commentators than scientists who have no space axe to grind. Robert Roy Britt writes for Live Science. In an article posted two years ago, he pointed out many pertinent facts. At that time, he gave the lifetime odds (over one's entire life) of an asteroid hit as 1 in 200,000 or perhaps as little as 1 in 500,000. Death by lightning has odds of 1 in 84,000, by legal execution 1 in 59,000, by air travel 1 in 20,000, by fire 1 in 1,100, by falling down 1 in 246, and by suicide 1 in 121. He pointed out that there are those who have held to asteroid death odds of 1 in 50,000, however, until more asteroids are catalogued and their movements accounted for. Even at 1 in 50,000, the risk is very low. Famine, disease, and war are the biggest killers on the planet and occur constantly. Two of these are preventable, and one can be ameliorated.

The ASE is making noises about an asteroid 140 meters long called Apophis. Astronomers say that it has a chance of striking the earth on April 13, 2036. This will be a Palm Sunday. The odds noised about in the recent spate of articles are 1 in 45,000 that it hits the earth. It's supposed to miss us by 20,000 miles. If it does hit, the damage could be large, depending on many factors. If it landed in the Pacific Ocean, a likely target, it would create 50-foot tidal waves lasting an hour. The odds of being killed are far lower, as Britt notes, and they vary depending upon where one lives. In the worst eventuality that Apophis hit the earth, the area of impact would by the time it headed for earth be pinpointed. People could then evacuate that area, and the death toll could be greatly reduced. The stated odds do not take human action into account.

# A2: Panic -> Nuclear War

Best evidence proves no panic

Clarke, 2

[ Lee Clarke, professor of sociology at Rutgers University, and the author of Worst Cases; Terror and Catastrophe in the Popular Imagination, “Panic: Myth or Reality?” Contexts; Fall 2002; 1, 3; Social Science Module]

panic facts Panicky behavior is rare. It was rare even among residents of German and Japanese cities that were bombed during World War II. The U.S. Strategic Bombing Survey, established in 1944 to study the effects of aerial attacks, chronicled the unspeakable horrors, terror and anguish of people in cities devastated by firestorms and nuclear attacks. Researchers found that, excepting some uncontrolled flight from the Tokyo firestorm, little chaos occurred An enormous amount of research on how people respond to extreme events has been done by the Disaster Research Center, now at the University of Delaware. After five decades studying scores of disasters such as floods, earthquakes and tornadoes, one of the strongest findings is that people rarely lose control. When the ground shakes, sometimes dwellings crumble, fires rage, and people are crushed. Yet people do not run screaming through the streets in a wild attempt to escape the terror, even though they are undoubtedly feeling terror. Earthquakes and tornadoes wreak havoc on entire communities. Yet people do not usually turn against their neighbors or suddenly forget personal ties and moral commitments. Instead the more consistent pattern is that people bind together in the aftermath of disasters, working together to restore their physical environment and their culture to recognizable shapes. Consider a few cases where we might have expected people to panic. The first, investigated by Norris Johnson, happened during Memorial Day weekend in 1977, when 165 people perished trying to escape a fire at the Beverly Hills Supper Club in Southgate. Kentucky. The supper club case recalls the fire-in-the-theater concept in which panic supposedly causes more deaths than the failure to escape in time. Roughly 1,200 people were in the club's Cabaret Room, which had three exits. Two exits were to the side and led outdoors, and one was in the front and led to another part of the dub. When the clubs personnel, having discovered fire in the building, started telling customers to leave, a handful of people went to the front entrance while the others started filing calmly out of the other exits. However, the people who tried to get out of the front entrance soon ran into smoke and fire, so they returned to the Cabaret Room. Survivors reported feeling frightened, but few acted out their fear. People were initially calm as they lined up at the two side exrts, near which all of the deaths occurred. When smoke and fire started pouring into the Cabaret Room, some began screaming and others began pushing. As fire entered the room, some people jumped over tables and chairs to get out. Notice what they did not do They did not pick up those chairs and use them to strike people queued up in front of them. They did not grab their hair and shove them aside in a desperate rush to get out. They did not overpower those more helpless than themselves. They did not act blindly in their own self-interest. In Kentucky, few people acted out a panic. Indeed, had people developed a sense of urgency sooner, more would have gotten out and fewer would have died. Panic was probably not the cause of any of the deaths, ft is more accurate to say that the building layout was inadequate for emergencies. The second case, also researched by Johnson, happened in December 1979 at the Riverfront Coliseum (as it was then called) m Cincinnati, where 11 people were killed at a rock concert by The Who. The concertgoers were killed in a crush that was popularly perceived as a panic. The reality was far different. Approximately 8.000 people were waiting for the concert, but the building was not built to accommodate that many people waiting at once. After the doors opened, about 25 people fell. Witnesses say there was little panic. In fact, people tried to protect those who had fallen by creating a human cordon around them. But the push of the people behind was too strong. The crowd trampled the 25 people out of ignorance rather than panic. Like the Beverly Hills club, Cincinnati's Riverfront Coliseum was not designed to fail gracefully. Users would be safe as long as they arrived in anticipated numbers and behaved in ways designers had anticipated. Consider, also, the tragic flight of American Airlines 1420. In Little Rock, Arkansas, on June 1,1999, Flight 1420 tried to land in a severe thunderstorm. As the pilots approached, they couldn't line the plane up with the runway and by the time they righted the craft they were coming in too fast and too hard. Seconds after the plane touched down, it started sliding and didn't stop until after lights at the end of the runway tore it open. The plane burst into flames, and 11 of the 145 aboard were killed. The National Transportation Safety Board's "Survival Factors Factual Report" has more than 30 pages of survivor testimony. Most survivors who were asked about panic said there was none. Instead there were stores of people helping their spouses, flight attendants helping passengers, and strangers saving each other's lives. One fellow said that after the plane came to rest "panic set in." But his description of subsequent events doesn't look much like panic. Having discovered the back exit blocked, he found a hole in the fuselage. Then, "he and several men." says the report, "tried to pull the exit open further." He then allowed a flight attendant and "six to eight people" to get out before he did. Another passenger said that people panicked somewhat. But in his telling, too, people worked together to push an exit door open. He himself helped pick up a row of seats that had fallen atop a woman. As "smoke completely filled the cabin from floor to ceiling." people could barely see or breathe; yet they "were in a single file line [and] there was no pushing and shoving." We would not expect that much order if everyone was panicking. The same message rises from the rubble of the World Trade Center. Television showed images of people running away from the falling towers, apparently panic-stricken. But surely no one would describe their flight as evincing "excessive fear" or" injudicious effort." Some survivors told of people being trampled in the mass exodus, but those reports are unusual. More common are stories such as the one from an information architect whose subway was arriving underneath the Trade Center just as the first plane crashed. He found himself on the north side of the complex, toward the Hudson River; "I'm looking around and studying the people watching. I would say that 95 percent are completely calm. A few are grieving heavily and a few are running, but the rest were very calm. Walking. No shoving and no panic." We now know that almost everyone in the Trade Center Towers survived if they were below the floors where the airplanes struck. That is in large measure because people did not become hysterical but instead created a successful evacuation. Absent a full survey of disasters, we do not have statistical evidence that chaotic panic is rare, but consider the views of E. L. Quarantelli. co-founder of the Disaster Research Center and a don of disaster research. He recently concluded (in correspondence to me) that "I no longer believe the term 'panic" should be treated as a social science concept. It is a label taken from popular discourse... During the whole history of [our] research involving nearly 700 different field studies, I would be hard pressed to cite... but a very few marginal instances of anything that could be called panic behavior." panic rules That people in great peril usually help others, even strangers, seems to contradict common sense. It also contradicts the idea that people are naturally self-interested. If people are so self-regarding, why do they act altruistically when their very lives are at stake? One answer is that people sometimes act irrationally by going against what is in their best interests. From this view, the men on American Airlines Flight 1420 were not exercising sound judgment when they helped free the woman whose legs were pinned. They could have used the time to save themselves. If cases like this were rare, it might be reasonable to call such behavior irrational. But they're not rare, and there is a better explanation of them than irrationality. When the World Trade Center started to burn, the standards of civility that people carried around with them every day did not suddenly dissipate. The rules of behavior in extreme situations are not much different from rules of ordinary life. People die the same way they live, with friends, loved ones and colleagues—in communities. When danger arises, the rule—as in normal situations—is for people to help those next to them before they help themselves. At the Supper Club fire and The Who concert, people first helped their friends and family. As we have seen, people help strangers. That's one of the big lessons from the World Trade Center. Such behavior seems odd only if we're all naturally selfish. Instead, an external threat can create a sense of 'we-ness' among those who are similarly threatened. Disasters, like other social situations, have rules, and people generally follow them. They are not special rules, even though disasters are special situations. The rules are the same ones at work when the theater is not on fire. Human nature is social, not individually egoistic. People are naturally social, and calamities often strengthen social bonds.

Err neg on risk – panic is highly unlikely

Chapman, 4

[Clark, Southwest Research Institute, Boulder CO, “The hazard of near-Earth asteroid impacts on earth” Earth and Planetary Science Letters 222 (2004) 1 – 15 ]

The practical, public implications and requirements of the impact hazard are characterized by its uncertainty and ‘‘iffy’’ nature. Yet, the chief scientific evaluations of the hazard, and thus (because of the subject’s popularity) its public promulgation in the news, is skewed with respect to reality. In the last few years, many peer-reviewed papers have been published (often with popular commentaries and even CNN crawlers) about how many >1-km NEAs there are, ranging from lows of f 700 [71] to highs approaching 1300. Yet far less attention is paid (although not quite none at all (e.g., [72]) to the much greater uncertainties in environmental effects of impacts. And there is essentially no serious, funded research concerning the largest sources of uncertainty—those concerning the psychology, sociology and economics of such extreme disasters— which truly determine whether this hazard is of academic interest only or, instead, might shape the course of history. For example, many astronomers and geophysicists, who are amateurs in risk perception and disaster management, assume that ‘‘panic’’ is a probable consequence of predicted or actual major asteroid impacts. Yet some social scientists (e.g., [73]) have concluded that people rarely panic in disasters. Such issues, especially in a post-September 11th terrorism context, could be more central to prioritizing the impact hazard than anything earth and space scientists can do. If an actual Earthtargeted body is found, it will be the engineers and disaster managers whose expertise will suddenly be in demand.

# A2: High risk of Small Asteroids

Even small asteroids only hit once in 10,000 years

Morrison et. al, 3

[Morrison, D., NASA Astrobiology Institute, A. W. Harris, NASA Jet Propulsion Laboratory, G. Sommer, RAND Corporation, C. R. Chapman, Southwest Research Institute, and A. Carusi, Istituto di Astrofisica Spaziale, Roma, Dealing with the impact hazard. In Asteroids III, ed. W. Bottke, A. Cellino, P. Paolicchi, and R. P. Binzel, 739–54. 2003. University of Arizona Press. ]

While most of the data are approximately consistent with a power law, the lunar-derived NEO population curve of Werner et al. (2002) shows an obvious departure, usually interpreted as a shortage of small (diameter less than a few hundred meters) impactors, although it might also suggest an early excess of large asteroids or comets not currently represented in the NEA flux. Interpreted in the usual way, however, the lunar curve indicates that the frequency of Tunguska-size impactors is roughly one per 10,000 yr, more than an order of magnitude below the usually quoted frequency of such impacts, and a surprising result given that we experienced such an event within the last century. We don’t know where the problem lies, but we suggest that the NEA population derived by Werner et al. from the lunar cratering statistics warrants consideration of alternative interpretations of the data

# Ext 2 – Squo surveys Solve

The risk is zero – current surveys are adequate

Harris, 8

[Alan, senior research scientist with the Space Science Institute, “ What Spaceguard did,” Nature 453, 1178-1179 (26 June 2008) ]

Meanwhile the estimated risk of impact is dwindling. In the very largest size range, asteroids about 10 kilometres in diameter, the three already discovered are almost certainly all that exist. These would produce an impact similar to that which killed the dinosaurs 65 million years ago, with an estimated impact interval of around 108 years — roughly the last time dinosaurs walked on Earth. Oddly, an object that might cause a Tunguska-like event — roughly 50 metres in diameter — should collide with Earth only about every 1,500 years, and the last event we saw was only 100 years ago. Recently, Mark Boslough at Sandia National Laboratories, in Albuquerque, New Mexico, suggested that the energy of the Tunguska event may have been as low as 3 megatonnes6. That adjustment reduces the expected time between similar events to perhaps about once in 500 years, still leaving the chances of an event within a century as unlikely. 'Statistics of one' cannot be held too rigorously to formal probability estimates, but our view of the skies has produced a strong predictor for the frequency of impacts. It is so strong, in fact, that it could and should rule out some suggestions of past impacts such as the multiple kilometre-sized objects claimed by some to have pelted Earth during the Holocene period7. Such an event is inconsistent with what we see in the skies, by about two orders of magnitude. Another NASA study8 in 2003, estimated the expected damage from impacts of various sizes. Using those values of expected damage, and the impact frequency from the newly derived population (Fig. 1), I estimated the 'risk spectrum' of impacts over the entire size range of those that can penetrate the atmosphere. Figure 2 shows that 'spectrum', first for the entire population, that is, the 'intrinsic risk' before any NEOs had been discovered, and secondly the 'residual risk' from the fraction of the NEO population that remains undiscovered. Since the objects that have been discovered have been found to have no, or a vanishingly small, probability of hitting Earth in the next 50 or more years, we can think of that fraction of the intrinsic risk as 'retired' for the short term over which we can predict impact trajectories, about a human lifetime. Figure 2 shows that the risk from large impacts — the kind that would cause global climatic disaster and potentially bring down our civilization — has been dramatically reduced, by more than an order of magnitude. In the smaller size range, from several-hundred-metre-diameter objects that could cause massive tsunamis if they crashed into an ocean, down to sub-hundred-metre objects the size of that in the Tunguska event — which could cause ground damage from airbursts — current surveys have done little to retire the risk. But the intrinsic risk from these events is very small, and in fact resembles that of other natural disasters such as tsunamis, earthquakes and volcanic eruptions in that they do not pose a global threat to life as we know it. In the 2003 NASA report8, the recommendation was made for a new survey to reduce the assessed residual impact risk from objects less than 1 kilometre in diameter by a further order of magnitude. It was estimated at that time that to achieve this goal would require discovering 90% of NEOs larger than 140 metres in diameter. This has become the new mantra of survey plans9, but perhaps this should be reconsidered. Because of the steep dip in the population curve in the size range between about 50 metres and about 500 metres, the intrinsic impact frequency, and hence the impact risk, is about three times lower than was estimated in the 2003 report. So, in a way, two-thirds of the risk assumed to exist in those reports is gone already, without even looking at the sky. In the earlier reports, the 'residual risk' to be addressed by a next-generation survey was assumed to be approximately 300 fatalities per year, but using my new population estimate that figure drops to around 80 per year. In comparison to other risks in life, this is negligible. What is the risk that your death will come from the sky? Before the Spaceguard Survey, it was thought to be comparable to the risk of dying in a commercial aeroplane accident. Currently, however, the residual risk from the remaining undiscovered NEOs is more comparable to the risk of death from a fireworks accident (see graphic, previous page). At some point one has to ask how far down we need to drive the residual risk, especially because the cost of doing so increases steeply as the size of impactors decreases.

# Ext 3 – Won’t Deflect

Bureaucratic inertia means no deflection

Schweickart, 4

[Russel, Chairman B612 Foundation, “ Asteroid Deflection: An International Challenge,” Presented at the World Federation of Scientists meeting of the Multidisciplinary Core Group on Planetary Emergencies, Rome, Italy, December 2004]

In any event, the minimal policy decision involved in any asteroid deflection would be whether to deflect it at all or simply suffer the consequences of the nominal impact. If the incoming asteroid were on the order of 100 meters in diameter the resultant impact would be on the order of 80 MT and the resulting damage could lie entirely within the borders of one nation. If this nation were not a space faring nation who would respond to a request to mount such a mission? Conversely if the nominal impact were located within the borders of a space faring nation, would the risk to others along the deflection risk path deter that nation from mounting a deflection mission? Who will make these decisions? Who will pay for a deflection mission? Who will be charged with the responsibility for executing such a mission? How is liability to be assigned? Who will trade off local devastation vs. placing many remote lives at slight risk? Who will determine the planning criteria? Who will monitor and/or control the deflection mission? These and many other difficult and critical policy questions are implicit in the concept of asteroid deflection. In all but the exceptional case the choices to be made involve several, if not many, nations. The entire subject is planetary in scope since asteroid impacts may (and eventually will) strike anywhere on the globe. An Alternative to Institutional Inertia The easiest and perhaps most likely course of action for international institutions facing questions of this kind is to simply avoid them. And yet, for those involved in the Spaceguard Survey and others informed on the subject it is clear that addressing these choices only after the announcement of a pending impact will result in great contention, self serving argument, and power politics. Once a specific IP is determined the hope for rationale, equitable policies emerging from such a belated undertaking becomes futile. In the limit an asteroid impact which destroys all human civilization is possible, though extremely improbable. No other natural disaster is capable of such destruction, and yet this natural hazard, unlike most others, can actually be prevented by human intervention. We therefore face the daunting challenge of convincing the international community to plan for a highly unlikely but devastating global event, and to do it now. Yet many more immediate problems involving the lives of millions of people face the international community on virtually a continuous basis. It is “natural” to avoid this issue. Risk situations characterized by extreme infrequency and devastating consequences are difficult for individual human beings, let alone bureaucratic institutions to handle. This is even more the case when the questions to be addressed are so intractable and without precedent. Yet the time for rational policy to be developed to guide behavior and prepare for such an eventuality is prior to the discovery of an asteroid actually bound for an impact. The reality we face, however, is that there is about a one in twenty chance that within the next decade or so we may in fact discover such a pending impact. Worse still, from the standpoint of alarming the public, is the much higher likelihood that in completing the inventory of NEOs down to 100 meters, the astronomical community will in fact discover one or more objects destined to pass within several Earth radii. The problem in this case will arise in that it may take many years before the telescopic observations are able to distinguish between this near miss and an impact. During this period of time no one will be able to state with certainty whether or not an impact is coming. This circumstance, with perhaps a 50/50 likelihood of occurrence, will be extremely frustrating to the professionals and alarming to the public.

# Nuke War Outweighs Asteroids

Nuke war outweighs – guaranteed extinction

Toon et. al, 97

[ Owen B. Toon 1 Kevin Zahnle David Morrison NASA Ames Research Center Moffett Field, California Richard P. Turco Department of Atmospheric Sciences and Institute of Geophysics and Planetary Physics University of California, Los Angeles Curt Covey Environmental Programs Lawrence Livermore National Laboratory Livermore, California, “ ENVIRONMENTAL PERTURBATIONS CAUSED BY THE IMPACTS OF ASTEROIDS AND COMETS,” Reviews of Geophysics, 35, 1 / February 1997 pages 41–78 ]

On the other hand, nuclear wars could be worse in some ways than impacts that release comparable or even substantially larger amounts of energy. In a nuclear war the infrastructure of society—the transportation, communications, and energy supplies—would be purposefully targeted for destruction. Much of the ability of society to rally for recovery would be intentionally suppressed. Although even a relatively small impact may have the potential to disrupt crop harvests for a year, such an impact would be unlikely to destroy the world’s economic and transportation infrastructure. It is therefore much more likely that society could cope with the problems following a small impact better than it could adjust to the problems following a nuclear war. For instance, an impact occurring in the southern hemisphere during the late fall of the northern hemisphere might lead to crop loss in the southern hemisphere. However, enough food might still be stored in the northern hemisphere and grown during the next harvest to make up for the agricultural losses in the southern hemisphere, thereby alleviating mass starvation. However, for an impact rivaling the size of the K-T event, global ﬁres may rage that would destroy most structures and therefore make it impossible for portions of society that still have food to help those that do not.

# AT: EMP

No impact to EMP

Fetzer and Dunn, 6

[J.R. Dunn is the author of a landmark three part series on the future strategies of jihad terrorism. Among many other things, he was editor of the International Military Encyclopedia for twelve years, April 21, 2006 “ The EMP Threat: ElectroMagnetic Pulse Warfare,” <http://www.americanthinker.com/2006/04/the_emp_threat_electromagnetic.html>]

In fact, the universal collapse envisioned as a result of a high—altitude EMP strike may be impossible in any case. The situation has never been tested. The Starfish Prime results were an accident, one that has never been repeated. No further tests could be made due to the Comprehensive Test Ban Treaty, which forbade weapons tests in the atmosphere or outer space, going into effect shortly afterward. Much of what we think we know about EMP lies in the realm of theory, with little in the way of hard evidence. Some scientists believe that the effect has been overrated. These include electromagnetic specialist Dr. William A. Radasky, who thinks that disruptions would be minor and temporary. The pulse could very well be attenuated by distance and other factors, some of which may be completely unknown to us at this time. Mountain ranges such as the Rockies and the Sierra Nevadas could provide considerable protection, along with various deep valleys around the country. And in any case, the collapse would be well short of 'universal'. Even if everything went according to plan, Hawaii, Alaska, Puerto Rico, Guam, Gitmo, and all the fleets and overseas bases would still be intact. In the worst case, the U.S. would remain a reigning military power. And with only a handful of suspects, it would not be long until the troops paid a visit to the guilty party.

# AT: Soft Power Add-on

No impact - Soft power is useless

**Fan 7** (Ying, Senior Lecturer in Marketing at Brunel Business School, Brunel University in London, “Soft power: Power of attraction or confusion?”, November 14)

Despite its popularity, the concept soft power remains a power of confusion. The definition is at best loose and vague. Because of such confusion it is not surprising that the concept has been misunderstood, misused and trivialised ( Joffe, 2006a ). Criticisms of soft power centre mainly around three aspects: defi nition, sources and limitations. There may be little or no relationship between the ubiquity of American culture and its actual influence. Hundreds of millions of people around the world wear, listen, eat, drink, watch and dance American, but they do not identify these accoutrements of their daily lives with America ( Joffe, 2006b ). To Purdy (2001) soft power is not a new reality, but rather a new word for the most effi cient form of power. There are limits to what soft power could achieve. In a context dominated by hard power considerations, soft power is meaningless ( Blechman, 2004 ). The dark side of soft power is largely ignored by Nye. Excessive power, either hard or soft, may not be a good thing. In the affairs of nations, too much hard power ends up breeding not submission but resistance. Likewise, big soft power does not bend hearts; it twists minds in resentment and rage ( Joffe, 2006b ).

Nye’s version of soft power that rests on affection and desire is too simplistic and unrealistic. Human feelings are complicated and quite often ambivalent, that is, love and hate co-exist at the same time. Even within the same group, people may like some aspects of American values, but hate others. By the same token, soft power can also rest on fear ( Cheow, 2002 ) or on both affection and fear, depending on the context. Much of China ’ soft power in south-east Asia testifi es to this. Another example is provided by the mixed perception of the United States in China: people generally admire American technological superiority and super brands but detest its policies on Taiwan.

Empirics prove soft power fails

**Greenwald 10** (Abe, associate editor of COMMENTARY, “The Soft-Power Fallacy”, July/August, <http://www.commentarymagazine.com/viewarticle.cfm/the-soft-power-fallacy-15466?page=2>)

Like Francis Fukuyama’s essay “The End of History,” soft-power theory was a creative and appealing attempt to make sense of America’s global purpose. Unlike Fukuyama’s theory, however, which the new global order seemed to support for nearly a decade, Nye’s was basically refuted by world events in its very first year. In the summer of 1990, a massive contingent of Saddam Hussein’s forces invaded Kuwait and effectively annexed it as a province of Iraq. Although months earlier Nye had asserted that “geography, population, and raw materials are becoming somewhat less important,” the fact is that Saddam invaded Kuwait because of its geographic proximity, insubstantial military, and plentiful oil reserves. Despite Nye’s claim that “the definition of power is losing its emphasis on military force,” months of concerted international pressure, including the passage of a UN resolution, failed to persuade Saddam to withdraw. In the end, only overwhelming American military power succeeded in liberating Kuwait. The American show of force also succeeded in establishing the U.S. as the single, unrivaled post–Cold War superpower.

Following the First Gulf War, the 1990s saw brutal acts of aggression in the Balkans: the Bosnian War in 1992 and the Kosovo conflicts beginning in 1998. These raged on despite international negotiations and were quelled only after America took the lead in military actions. It is also worth noting that attempts to internationalize these efforts made them more costly in time, effectiveness, and manpower than if the U.S. had acted unilaterally.

Additionally, the 1990s left little mystery as to how cataclysmic events unfold when the U.S. declines to apply traditional tools of power overseas. In April 1994, Hutu rebels began the indiscriminate killing of Tutsis in Rwanda. As the violence escalated, the United Nations’s peacekeeping forces stood down so as not to violate a UN mandate prohibiting intervention in a country’s internal politics. Washington followed suit, refusing even to consider deploying forces to East-Central Africa. By the time the killing was done, in July of the same year, Hutus had slaughtered between half a million and 1 million Tutsis.

And in the 1990s, Japan’s economy went into its long stall, making the Japanese model of a scaled down military seem rather less relevant.

All this is to say that during the presidency of Bill Clinton, Nye’s “intangible forms of power” proved to hold little sway in matters of statecraft, while modes of traditional power remained as critical as ever in coercing other nations and affirming America’s role as chief protector of the global order.

If the Clinton years posed a challenge for the efficacy of soft power, the post-9/11 age has exposed Nye’s explication of the theory as something akin to academic eccentricity. In his book, Nye mentioned “current issues of transnational interdependence” requiring “collective action and international cooperation.” Among these were “ecological changes (acid rain and global warming), health epidemics such as AIDS, illicit trade in drugs, and terrorism.” Surely a paradigm that places terrorism last on a list of national threats starting with acid rain is due for revision.

For what stronger negation of the soft-power thesis could one imagine than a strike against America largely inspired by what Nye considered a great “soft power resource”: namely, “American values of democracy and human rights”? Yet Ayman al-Zawahiri, al-Qaeda’s second-in-command, had in fact weighed in unequivocally on the matter of Western democracy: “Whoever claims to be a ‘democratic-Muslim,’ or a Muslim who calls for democracy, is like one who says about himself ‘I am a Jewish Muslim,’ or ‘I am a Christian Muslim’—the one worse than the other. He is an apostate infidel.”

With a detestable kind of clarity, Zawahiri’s pronouncement revealed the hollowness at the heart of the soft-power theory. Soft power is a fine policy complement in dealing with parties that approve of American ideals and American dominion. But applied to those that do not, soft power’s attributes become their opposites. For enemies of the United States, the export of American culture is a provocation, not an invitation; self-conscious “example-setting” in areas like nonproliferation is an indication of weakness, not leadership; deference to international bodies is a path to exercising a veto over American action, not a means of forging multilateral cooperation.

# AT: Economy Impacts

Decline doesn’t cause war

Morris Miller, Professor of Administration @ the University of Ottawa, ‘2K

(Interdisciplinary Science Review, v 25 n4 2000 p ingenta connect)

The question may be reformulated. Do wars spring from a popular reaction to a sudden economic crisis that exacerbates poverty and growing disparities in wealth and incomes? Perhaps one could argue, as some scholars do, that it is some dramatic event or sequence of such events leading to the exacerbation of poverty that, in turn, leads to this deplorable denouement. This exogenous factor might act as a catalyst for a violent reaction on the part of the people or on the part of the political leadership who would then possibly be tempted to seek a diversion by finding or, if need be, fabricating an enemy and setting in train the process leading to war. According to a study under- taken by Minxin Pei and Ariel Adesnik of the Carnegie Endowment for International Peace, there would not appear to be any merit in this hypothesis. After studying ninety-three episodes of economic crisis in twenty-two countries in Latin America and Asia in the years since the Second World War they concluded that:19 Much of the conventional wisdom about the political impact of economic crises may be wrong ... The severity of economic crisis – as measured in terms of inflation and negative growth – bore no relationship to the collapse of regimes ... (or, in democratic states, rarely) to an outbreak of violence ... In the cases of dictatorships and semi-democracies, the ruling elites responded to crises by increasing repression (thereby using one form of violence to abort another).

Recent empirics go neg

Barnett, senior managing director of Enterra Solutions LLC, contributing editor/online columnist for Esquire, 8/25/’9

(Thomas P.M, “The New Rules: Security Remains Stable Amid Financial Crisis,” Aprodex, Asset Protection Index, <http://www.aprodex.com/the-new-rules--security-remains-stable-amid-financial-crisis-398-bl.aspx>)

When the global financial crisis struck roughly a year ago, the blogosphere was ablaze with all sorts of scary predictions of, and commentary regarding, ensuing conflict and wars -- a rerun of the Great Depression leading to world war, as it were. Now, as global economic news brightens and recovery -- surprisingly led by China and emerging markets -- is the talk of the day, it's interesting to look back over the past year and realize how globalization's first truly worldwide recession has had virtually no impact whatsoever on the international security landscape.

None of the more than three-dozen ongoing conflicts listed by GlobalSecurity.org can be clearly attributed to the global recession. Indeed, the last new entry (civil conflict between Hamas and Fatah in the Palestine) predates the economic crisis by a year, and three quarters of the chronic struggles began in the last century. Ditto for the 15 low-intensity conflicts listed by Wikipedia (where the latest entry is the Mexican "drug war" begun in 2006). Certainly, the Russia-Georgia conflict last August was specifically timed, but by most accounts the opening ceremony of the Beijing Olympics was the most important external trigger (followed by the U.S. presidential campaign) for that sudden spike in an almost two-decade long struggle between Georgia and its two breakaway regions.

Looking over the various databases, then, we see a most familiar picture: the usual mix of civil conflicts, insurgencies, and liberation-themed terrorist movements. Besides the recent Russia-Georgia dust-up, the only two potential state-on-state wars (North v. South Korea, Israel v. Iran) are both tied to one side acquiring a nuclear weapon capacity -- a process wholly unrelated to global economic trends.

And with the United States effectively tied down by its two ongoing major interventions (Iraq and Afghanistan-bleeding-into-Pakistan), our involvement elsewhere around the planet has been quite modest, both leading up to and following the onset of the economic crisis: e.g., the usual counter-drug efforts in Latin America, the usual military exercises with allies across Asia, mixing it up with pirates off Somalia's coast). Everywhere else we find serious instability we pretty much let it burn, occasionally pressing the Chinese -- unsuccessfully -- to do something. Our new Africa Command, for example, hasn't led us to anything beyond advising and training local forces.

\*\*\*Existential Risk

# Risk of Natural Extinction Low

Low risk of natural extinction—history is on our side.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2011** (“The Concept of Existential Risk,” Draft of a Paper published on ExistentialRisk.com, Available Online at <http://www.existentialrisk.com/concept.html>, Accessed 07-04-2011)

Humanity has survived what we might call natural existential risks for hundreds of thousands of years; thus it is **prima facie unlikely** that any of them will do us in within the next hundred.[2] This conclusion is buttressed when we analyze specific risks from nature, such as asteroid impacts, supervolcanic eruptions, earthquakes, gamma-ray bursts, and so forth: **Empirical impact distributions and scientific models** suggest that the likelihood of extinction because of these kinds of risk is **extremely small** on a time scale of a century or so.[3]

# Risk of Anthropogenic Extinction High

Anthropogenic existential risks are most probable.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2011** (“The Concept of Existential Risk,” Draft of a Paper published on ExistentialRisk.com, Available Online at <http://www.existentialrisk.com/concept.html>, Accessed 07-04-2011)

In contrast, our species is introducing **entirely new kinds of existential risk**—threats we have **no track record of surviving**. Our longevity as a species therefore offers no strong prior grounds for confident optimism. Consideration of specific existential-risk scenarios bears out the suspicion that the great bulk of existential risk in the foreseeable future consists of **anthropogenic existential risks**—that is, those arising from human activity. In particular, most of the biggest existential risks seem to be linked to potential future technological breakthroughs that may radically expand our ability to manipulate the external world or our own biology. As our powers expand, so will **the scale of their potential consequences**—intended and unintended, positive and negative. For example, there appear to be significant existential risks in some of the advanced forms of biotechnology, molecular nanotechnology, and machine intelligence that might be developed in the decades ahead.

# Extinction Is Unlikely For A Long Time

Humanity will survive for between 5,000 and 8 billion years: 95% confidence interval.

Jason G. **Matheny**, Research Associate at the Future of Human Institute at Oxford University, Ph.D. Candidate in Applied Economics at Johns Hopkins University, holds a Master’s in Public Health from the Bloomberg School of Public Health at Johns Hopkins University and an M.B.A. from the Fuqua School of Business at Duke University, **2007** (“Reducing the Risk of Human Extinction,” *Risk Analysis*, Volume 27, Issue 5, October, Available Online at http://jgmatheny.org/matheny\_extinction\_risk.htm, Accessed 07-04-2011)

We have some influence over how long we can delay human extinction. Cosmology dictates the upper limit but leaves **a large field of play**. At its lower limit, humanity could be extinguished as soon as this century by succumbing to near-term extinction risks: nuclear detonations, asteroid or comet impacts, or volcanic eruptions could generate enough atmospheric debris to terminate food production; a nearby supernova or gamma ray burst could sterilize Earth with deadly radiation; greenhouse gas emissions could trigger a positive feedback loop, causing a radical change in climate; a genetically engineered microbe could be unleashed, causing a global plague; or a high-energy physics experiment could go awry, creating a "true vacuum" or strangelets that destroy the planet (Bostrom, 2002 ; Bostrom & Cirkovic, 2007 ; Leslie, 1996 ; Posner, 2004 ; Rees, 2003 ).

Farther out in time are risks from technologies that remain theoretical but might be developed in the next century or centuries. For instance, self-replicating nanotechnologies could destroy the ecosystem; and cognitive enhancements or recursively self-improving computers could exceed normal human ingenuity to create uniquely powerful weapons (Bostrom, 2002 ; Bostrom & Cirkovic, 2007 ; Ikle, 2006 ; Joy, 2000 ; Leslie, 1996 ; Posner, 2004 ; Rees, 2003 ).

Farthest out in time are astronomical risks. In one billion years, the sun will begin its red giant stage, increasing terrestrial temperatures above 1,000 degrees, boiling off our atmosphere, and eventually forming a planetary nebula, making Earth inhospitable to life (Sackmann, Boothroyd, & Kraemer, 1993 ; Ward & Brownlee, 2002 ). If we colonize other solar systems, we could survive longer than our sun, perhaps another 100 trillion years, when all stars begin burning out (Adams & Laughlin, 1997 ). We might survive even longer if we exploit nonstellar energy sources. But it is hard to imagine how humanity will survive beyond the decay of nuclear matter expected in 1032 to 1041 years (Adams & Laughlin, 1997 ).3 Physics seems to support Kafka's remark that "[t]here is infinite hope, but not for us."

While it may be physically possible for humanity or its descendents to flourish for 1041 years, it seems unlikely that humanity will live so long. Homo sapiens have existed for 200,000 years. Our closest relative, homo erectus, existed for around 1.8 million years (Anton, 2003 ). The median duration of mammalian species is around 2.2 million years (Avise et al., 1998 ).

A controversial approach to estimating humanity's life expectancy is to use observation selection theory. The number of homo sapiens who have ever lived is around 100 billion (Haub, 2002 ). Suppose the number of people who have ever or will ever live is 10 trillion. If I think of myself as a random sample drawn from the set of all human beings who have ever or will ever live, then the probability of my being among the first 100 billion of 10 trillion lives is only 1%. It is more probable that I am randomly drawn from a smaller number of lives. For instance, if only 200 billion people have ever or will ever live, the probability of my being among the first 100 billion lives is 50%. The reasoning behind this line of argument is controversial but has survived a number of theoretical challenges (Leslie, 1996 ). Using observation selection theory, Gott (1993) estimated that **humanity would survive an additional 5,000 to 8 million years, with 95% confidence**.

# More Gott Evidence/Prodict

**Humans will live for at least 5,000 more years – Copernican Principle**

**New York Times, 7**

(John Tierney, “A Survival Imperative for Space Colonization” July 17, <http://www.nytimes.com/2007/07/17/science/17tier.html>)

In 1993, J. Richard Gott III computed with scientific certainty that humanity would survive at least 5,100 more years. At the time, I took that as reason to relax, but Dr. Gott has now convinced me I was wrong. He has issued a wake-up call: To ensure our long-term survival, we need to get a colony up and running on Mars within 46 years. If you’re not awakened yet, I understand. It’s only prudent to be skeptical of people who make scientific forecasts about the end of humanity. Dr. Gott, a professor of astrophysics at Princeton, got plenty of grief after he made his original prediction in 1993. But in the ensuing 14 years, his prophetic credentials have strengthened, and not merely because humanity is still around. Dr. Gott has used his technique to successfully forecast the longevity of Broadway plays, newspapers, dogs and, most recently, the tenure in office of hundreds of political leaders around the world. He bases predictions on just one bit of data, how long something has lasted already; and on one assumption, that there is nothing special about the particular moment that you’re observing this phenomenon. This assumption is called the Copernican Principle, after the astronomer who assumed he wasn’t seeing the universe from a special spot in the center. Suppose you want to forecast the political longevity of the leader of a foreign country, and you know nothing about her country except that she has just finished her 39th week in power. What are the odds that she’ll leave office in her 40th week? According to the Copernican Principle, there’s nothing special about this week, so there’s only a 1-in-40 chance, or 2.5 percent, that she’s now in the final week of her tenure. It’s equally unlikely that she’s still at the very beginning of her tenure. If she were just completing the first 2.5 percent of her time in power, that would mean her remaining time would be 39 times as long as the period she’s already served — 1,521 more weeks (a little more than 29 years). So you can now confidently forecast that she will stay in power at least one more week but not as long as 1,521 weeks. The odds of your being wrong are 2.5 percent on the short end and 2.5 percent on the long end — a total of just 5 percent, which means that your forecast has an expected accuracy of 95 percent, the scientific standard for statistical significance. And you can apply this Copernican formula to lots of other phenomena by assuming they’re neither in the first 2.5 percent nor the final 2.5 percent of their life spans. Now, that range is so broad it may not seem terribly useful to you, and Dr. Gott readily concedes that his Copernican formula often is not the ideal method. The best the formula could do regarding [Bill Clinton](http://topics.nytimes.com/top/reference/timestopics/people/c/bill_clinton/index.html?inline=nyt-per), who had been president for 127 days when the 1993 paper in Nature was published, was predict he would serve at least three more days but not more than 13.6 more years. You could have gotten a narrower range by using other information, like actuarial data from previous presidencies, or factoring in the unlikelihood that the Constitution would be changed so he could serve more than two terms. But the beauty of the Copernican formula is that it allows you to make predictions when you don’t have any other information, which is how Dr. Gott managed to predict the tenure of virtually every other nation’s leader that day in 1993 — a total of 313 leaders. If none of those still in power stays in office beyond age 100, Dr. Gott’s accuracy rate will turn out to be almost exactly 95 percent. Some philosophers and experts in probability theory have argued that Dr. Gott is making unwarranted deductions from past life spans, and that it is wrong to assume there is nothing special about the moment we’ve chosen to make a forecast. (See[www.tierneylab.com](http://www.tierneylab.com) for details of the debate.) But last year two philosophers, Bradley Monton and Brian Kierland, analyzed the criticisms and concluded in an article in the Philosophical Quarterly that Dr. Gott had indeed come up with a useful tool for difficult situations — like trying to forecast doomsday without data from other planets. The Copernican formula predicts, based solely on our 200,000-year track record, that the human race is likely to survive at least 5,100 more years but not longer than 7.8 million — roughly the same prediction you’d make based on the longevity of past mammals on Earth, Dr. Gott says.

\*\*\*UN CP/No USFG Key Warrant

# UN CP 1NC

Text: The United Nations should coordinate and provide financial support for a global effort to develop and deploy asteroid detection and planetary defense technologies beyond the Earth’s mesosphere with an astrosociological perspective.

Incorporation of astrosociology will require an international effort led by the UN – an effort by one national could result in a geopolitical power-grab

**Pass 6** (Jim, 09-21, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant “Applied Astrosociology: The New Imperative to Protect Earth and Human Societies”, STAIF, <http://www.astrosociology.com/Library/PDF/Protecting%20Societies.pdf>

Construction of a planetary defense infrastructure (i.e., material culture) involves a global effort, a level of cooperation now possible due to cooperation in other areas. However, some governments may still view planetary defense as a low priority due to more urgent social problems. Developing nations in particular may hold such a view, or they may simply find themselves in a situation in which they are unable to afford a costly contribution to the overall project. Developed nations may need to finance some aspects of the project for these poorer nations. Developing nations may need to find other ways to contribute, such as the provision of land for facilities and personnel to operate them. The obvious fact is that the entire cost to construct a planetary defense system and the outlay of additional funds to operate it on an ongoing basis will escalate to the point of unaffordability for one or even a few nations. Negotiations would become necessary, as all parts of the globe require protection. If viewed as a single project, this effort would include all societies because all represent potential targets. For late detections, a regional response may be necessary in order to execute a drastic response. The best last-minute trajectory for a missile, for example, may require a launch from a developing nation. This capability involves military considerations due to the possible need of placing space weapons in the territories (even if not under the control) of nations with lower levels of military technology and/or potential enemies of democratic nations. Many of the sociopolitical issues unrelated to planetary defense may prove just as difficult to overcome as monetary and technical issues. Many governments will initially evaluate planetary defense as a low priority, especially those developing countries that face practical social problems such as overpopulation, disease, and violence. Still, they require saving as well whether or not they agree to cooperate. Space exploration can lead to planetary unity partly due to the economic incentives associated with doing so, but can also produce other positive effects. Other aspects of space exploration reinforce these trends toward unity and cooperation as well. For example, the cost of large-scale space projects encourages cooperative efforts and a natural movement toward what I have called the human space program. Because such projects are very expensive, running into the billions of dollars, joint efforts make good economic sense.35 However, as White also points out, large-scale projects such as the construction of a planetary defense system can result in negative outcomes such as a totalitarian world government. As we build this new system, we must also keep in mind the values and other societal assets we attempt to save in the first place. Otherwise, the unity gained harms individuals whether we are struck by an asteroid or not. **The United Nations** or new dedicated international body **must become involved in a coordinating effort involving the determination of which nations can afford to assist** (and in what ways) along **with construction efforts to implement the three components of the strategy introduced here**. As we build the new system, the values, norms, and priorities of the member nation-states should receive due consideration in order to achieve a positive outcome for humanity as a whole. Problems may also ensue based on national security issues.36 The impact of a comet or asteroid may harm some nations more than others. Some government leaders of the less affected nations may see this situation as an opportunity to take advantage of their historical nemeses in some way, including the introduction of warfare. Treaties at the international level can help to minimize the risk of such social problems by requiring cooperation and prohibiting conflict under these circumstances. If the impacting object is large enough to threaten humanity on a global scale, then this type of requirement should prove enforceable. However, for a localized effect, enforcement may prove more difficult. Astrosociologists and independent social scientists can provide insights before this situation arises and advice following its aftermath. Political scientists and international relations scholars could prove invaluable.

\*\*\*Extinction Refuge CP

# 1NC Shell

The United States federal government should construct and maintain self-sufficient, remote, permanently occupied refuges meant to protect humanity from extinction events. We’ll clarify.

The counterplan prevents extinction—even if only a few people survive, it ensures humanity will recover.

Jason G. **Matheny**, Research Associate at the Future of Human Institute at Oxford University, Ph.D. Candidate in Applied Economics at Johns Hopkins University, holds a Master’s in Public Health from the Bloomberg School of Public Health at Johns Hopkins University and an M.B.A. from the Fuqua School of Business at Duke University, **2007** (“Reducing the Risk of Human Extinction,” *Risk Analysis*, Volume 27, Issue 5, October, Available Online at http://jgmatheny.org/matheny\_extinction\_risk.htm, Accessed 07-04-2011)

Perhaps more cost effective than building refuges in space would be **building them on Earth**. Elaborate bunkers exist for government leaders to occupy during a nuclear war (McCamley, 2007). And remote facilities are planned to protect crop seeds from "nuclear war, asteroid strikes, and climate change" (Hopkin, 2007). But I know of no self-sufficient, remote, permanently occupied refuge meant to protect humanity from a range of possible extinction events. Hanson (2007) argues that **a refuge permanently housing as few as 100 people would significantly improve the chances of human survival during a range of global catastrophes**. The Americas and Polynesia were originally populated by fewer than 100 founders (Hey, 2005 ; Murray-McIntosh et al., 1998 ). Although it would take thousands of years for 100 people to repopulate Earth, **this would be a small setback compared to extinction**.

# CP Solves Extinction

The counterplan protects humanity against *all* existential threats and is more cost-effective than the plan.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2011** (“Existential Risks FAQ,” Version 1.0, ExistentialRisk.com, Available Online at http://www.existentialrisk.com/faq.html, Accessed 07-04-2011)

A possibly somewhat more **cost-effective project** might be to operate a bunker or refuge that could **enable a small human population to survive a wide range of catastrophic scenarios**—plagues, nuclear winters, supervolcanic eruptions, asteroid impacts, complete collapses of human food production systems, and various “unknown unknowns”. The refuge might be buried deep underground, stocked with supplies to last a decade or more, and designed to be easily defendable. Ideally it would be continually staffed by a quarantined population and stocked with tools that survivors could use in subsistence agriculture upon emerging from the shelter in the aftermath of a civilization-destroying catastrophe.

# CP Better Than Asteroid Program

The CP solves more cost-effectively than asteroid programs.

Jason G. **Matheny**, Research Associate at the Future of Human Institute at Oxford University, Ph.D. Candidate in Applied Economics at Johns Hopkins University, holds a Master’s in Public Health from the Bloomberg School of Public Health at Johns Hopkins University and an M.B.A. from the Fuqua School of Business at Duke University, **2007** (“Reducing the Risk of Human Extinction,” *Risk Analysis*, Volume 27, Issue 5, October, Available Online at http://jgmatheny.org/matheny\_extinction\_risk.htm, Accessed 07-04-2011)

Some extinction risks are probably greater than asteroid impacts, and some risk-reducing projects are probably more cost effective than asteroid defense. A refuge would probably cost less than $20 billion to build and occupy, and would provide a stronger insurance policy against a broader range of extinction risks. Like other forms of catastrophic insurance, the probability of its being needed is low, but its expected value is high.

# They Say: “Not Feasible”

Yes feasible.

Robin **Hanson**, Professor in the Department of Economics at George Mason University, **2007** (“Catastrophe, Social Collapse, and Human Extinction,” Forthcoming Chapter in *Global Catastrophic Risk*, August, Available Online at http://hanson.gmu.edu/collapse.pdf, Accessed 07-04-2011)

If we value future generations of humanity, we may be willing to take extra efforts to prevent the extinction of humanity. For types of disasters where variations in individual ability to resist disruptions are minor, however, there is little point in explicitly preparing for human extinction possibilities. This is because there is almost no chance that an event of this type would put us very near an extinction borderline. The best we could do here would be to try to prevent all large disruptions. Of course there can be non extinction-related reasons to prepare for such disruptions.

On the other hand, there may be types of disasters where variations in resistance abilities can be important. If so, there might be a substantial chance of finding a post-disaster population that is just above, or just below, a threshold for preserving humanity. In this case it is reasonable to wonder what we might do now to change the odds.

The most obvious possibility would be to create refuges with sufficient resources to help preserve a small group of people through a very large disruption, the resulting social collapse, and a transition period to a post-disaster society. Refuges would have to be strong enough to survive the initial disruption. If desperate people trying to survive a social collapse could threaten a refuge’s longterm viability, such as by looting the refuge’s resources, then refuges might need to be isolated, well-defended, or secret enough to survive such threats.

We have actually already developed similar refuges to protect social elites during a nuclear war (McCamley, 2007). Though nuclear sanctuaries may not be designed with other human extinction scenarios in mind, it is probably worth considering how they might be adapted to deal with non-nuclear-war disasters. It is also worth considering whether to create a distinct set of refuges, intended for other kinds of disasters. I imagine secret rooms deep in a mine, well stocked with supplies, with some way to monitor the surface and block entry.

A important issue here is whether refuges could by themselves preserve enough humans to supply enough genetic diversity for a post-disaster society. If not, then refuges would either have to count on opening up at the right moment to help preserve enough people outside the sanctuary, or they would need some sort of robust technology for storing genes and implanting them. Perhaps a sperm bank would suffice.

Developing a robust genetic technology might be a challenging task; devices would have to last until the human population reached sufficient size to hold enough genetic diversity on its own. But the payoff could be to drastically reduce the required post-collapse population, perhaps down to a single fertile female. For the purpose of saving humanity reducing the required population from one thousand down to ten is equivalent to a factor of one hundred in current world population, or a factor of one hundred in the severity of each event. In the example of figure 1, it is the same as reducing the disaster event rate by a factor of fifty.

Refuges could in principle hold many kinds of resources which might ease and speed [end page 11] the restoration of a productive human society. They could preserve libraries, machines, seeds, and much more. But the most important resources would clearly be those that ensure humanity survives. By comparison, on a cosmic scale it is a small matter whether humanity takes one thousand or one hundred thousand years to return to our current level of development. Thus the priority should be resources to support a return to at least a hunter-gatherer society.

It is important to realize that a society rebuilding after a near-extinction crisis would have a vastly smaller scale than our current society; very different types and mixes of capital would be appropriate. Stocking a sanctuary full of the sorts of capital that we find valuable today could be even less useful than the inappropriate medicine, books, or computers often given by first world charities to the third world poor today. Machines would quickly fall into disrepair, and books would impart knowledge that had little practical application.

Instead, one must accept that a very small human population would mostly have to retrace the growth path of our human ancestors; one hundred people cannot support an industrial society today, and perhaps not even a farming society. They might have to start with hunting and gathering, until they could reach a scale where simple farming was feasible. And only when their farming population was large and dense enough could they consider returning to industry.

So it might make sense to stock a refuge with real hunter-gatherers and subsistence farmers, together with the tools they find useful. Of course such people would need to be disciplined enough to wait peacefully in the refuge until the time to emerge was right. Perhaps such people could be rotated periodically from a well protected region where they practiced simple lifestyles, so they could keep their skills fresh. And perhaps we should test our refuge concepts, isolating real people near them for long periods to see how well particular sorts of refuges actually perform at returning their inhabitants to a simple sustainable lifestyle.

# Net-Benefit: Existential Risk Tradeoff DA

Focusing on [x existential risk] trades off with efforts to reduce other existential risks which are more probable—only the counterplan addresses *every* risk.

Nick **Bostrom**, Professor in the Faculty of Philosophy & Oxford Martin School, Director of the Future of Humanity Institute, and Director of the Programme on the Impacts of Future Technology at the University of Oxford, recipient of the 2009 Eugene R. Gannon Award for the Continued Pursuit of Human Advancement, holds a Ph.D. in Philosophy from the London School of Economics, **2011** (“The Concept of Existential Risk,” Draft of a Paper published on ExistentialRisk.com, Available Online at <http://www.existentialrisk.com/concept.html>, Accessed 07-04-2011)

To correct for the good-story bias, one might want to reduce one’s credence in exciting scenarios and upgrade one’s credence in boring outcomes. At the same time, however, one should avoid relying too heavily on a “silliness heuristic,” which penalizes hypotheses merely because similar-sounding ideas have been promoted by people viewed as not respectable—crackpots, radicals, science-fiction aficionados, and other “non-serious” folk. We might find existential-risk concerns gaining traction, only to see the ensuing resources funneled almost exclusively to the study of asteroid hazard, climate change, and a few other such “respectable” risks to the neglect of more speculative risks, such as machine superintelligence, advanced nanotechnology weaponry, future dystopian evolutionary scenarios, simulation-shutdown scenarios, synthetic biology mishaps and misuse, space-colonization races, and global totalitarianism—even though the cumulative existential risks flowing from these and other “silly-seeming” sources may be orders of magnitude greater than those from the more respectable and well-established fields. (Another plausible diversion is that research mainly gets directed at global catastrophic risks that involve little or no existential risk.)

\*\*\*STEM CP

# 1NC Shell

**Text: The United States federal government should incorporate astrosociology into Science, Technology, Engineering, and Mathematics (STEM) national education standards under the No Child Left Behind Act of 2001.**

Current STEM education isn’t sufficient – we still need astrosociological focus

**Pass 7** (Jim, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant, AIAA Space 2007 Conference and Exposition, “Enhancing Space Exploration by Adding Astrosociology to the STEM model,” <http://astrosociology.com/Library/PDF/Contributions/Space%202007%20Articles/Adding%20Astrosociology%20to%20STEM%20Model.pdf>, 18-20 September)WZ

Thus, we must go even further than STEM for the benefit of the United States. We must also pursue utilizing the motivation that space exploration brings in social science classrooms. Making connections between space and the social sciences, the fundamental purpose of astrosociology, will result in the development of well-qualified astrosociologists – an outcome just as important as STEM graduates if one accepts the premise that humanity will migrate to a significant extent beyond the Earth. Astrosociology must be added to the STEM concept for the sake of future progress both in space and on terrestrial soil. The renewed emphasis on STEM subjects and their relationship to our understanding of space exploration and related topics is important, yet this approach is unidimensional. It is unsustainable to ensure the success of human beings in space environments or to study the effects of space on terrestrial societies because these effects involve astrosocial phenomena, the very focus of astrosociology. As the missing perspective, astrosociology will add new insights to the prevailing ideas in the space community. In the process, new fundamental areas of knowledge will begin to take shape based on a formal and ongoing collaboration between the two branches of science. In order to make this possible, we need to educate and train both STEM- oriented students and astrosociologists.

Status quo STEM education is at the expense of astrosociology

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The danger related to the current drive within educational circles to improve on STEM education relates to the assessment among many educators that social science education is somehow less important – or even more extreme, irrelevant to the future of space exploration. It also implies that understanding human behavior and society represents a secondary status to understanding natural and physical phenomena. The pursuit of STEM education at the expense of the social sciences represents an extremely shortsighted and thus risky approach. The development of astrosociology counters such trends, though attitude favoring STEM subjects may also make it more difficult to develop this new field. Along with the development of astrosociology, then, advocates must constantly remind educators and policy makers of all stripes to maintain a proper balance between the natural sciences and the social sciences within the curricula of educational organizations at all levels. Within the space community, advocates should strive for a more equal balance although the space sciences and engineering fields will still dominate.

A. The Status Quo and the Alternative:

By emphasizing the natural sciences, technology, engineering, and mathematics, NASA potentially alienates students interested in outer space but also partial to the social sciences. At the very least, this effort contributes to the prevailing belief (at the macro level) within social science disciplines and related fields that outer space has little to do with human behavior. In reality, space from a social science perspective is all about humankind. For example, space scientists do not study asteroids and comets just because they are out there. They study them in part because one may strike the Earth someday; one large enough to disrupt human societies potentially enough to knock them back to the Stone Age. Planetary defense is an important specialty within astrosociology as the protection of societies and their cultures is required.14 Moreover, findings from space scientists enrich the cultures of societies. Space policy is intertwined with social policy that affects a multitude of social institutions and groups. This social reality – the strong connection between outer space and society – requires addressing.

NASA’s current approach infers that the social sciences are not very important to space exploration. This stance never was realistic throughout the space age, however. The social sciences tie efforts related to STEM and outer space to society. The irony is that an astrosociological approach represents an extremely relevant yet missing perspective.15 Thus, the best approach involves attracting students with interests in all subjects related to space exploration. The alternative to the status quo does not involve the replacement of long-standing tradition with something new. Rather, it involves the addition of astrosociology to the STEM subjects. Of great interest are the dynamic interactions between natural science students and social science students who both emphasize space as their primary interest. When this reaches a large enough scale, the potential outcomes of combined research between the two types of students will surpass what can emerge from strictly a natural science perspective. The same synergy will occur among professional scientists as well.

Now is not the time to discard the social sciences in favor of bolstering the STEM subjects and disciplines. Rather, a well-rounded approach is necessary, just as was always the case. We must not abandon the social sciences precisely because they represent an entire branch of science that comes under indirect attack by educational organizations (i.e., schools) that begin to emphasize science, technology, engineering, and mathematics over understanding human behavior as well, even as new complex patterns and trends will emerge as humanity increases the intensity of, and thus its reliance on, its connection to the cosmos.

Exposure to a well-rounded educational program provides students with exposure to fields and disciplines from the natural sciences, social and behavioral sciences, the humanities, and the arts. Such exposure fairly allows each student to select which field or discipline to pursue. Whenever a student opts to pursue anything related to space, whether a natural science or social science, the overall impact furthers space exploration. This outcome that includes the development of astrosociology possesses implications for improvements in science and technology as well as national security for a particular society. Moreover, the overall body of knowledge and its related literature improves. The traditional bifurcation between the study of outer space issues as a natural science privilege versus the inability to study outer space issues from a social science perspective makes little sense. STEM education at the expense of the social sciences no longer serves human societies well as we need both perspectives to carry out, and understand the effects of, the human exploration of space from Earth (e.g., astronomy or planetary defense) or in space environments (e.g., space settlement, long-duration spaceflight, or space tourism).

# CP key to Student Success

Expanding from STEM to STEMA would create more successful students

**Pass 7** (Jim, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant, AIAA Space 2007 Conference and Exposition, “Enhancing Space Exploration by Adding Astrosociology to the STEM model,” <http://astrosociology.com/Library/PDF/Contributions/Space%202007%20Articles/Adding%20Astrosociology%20to%20STEM%20Model.pdf>, 18-20 September)WZ

It is perfectly acceptable to utilize children’s initial interest in outer space to motivate those who demonstrate both skills and interest in STEM subjects to pursue them as they progress through their levels of educational attainment. And the pursuit of bolstering the rolls of STEM students and successful graduates provides an answer to the dearth of students currently pursuing careers in science, technology, engineering, and mathematics. This problem requires a strong effort to solve. It seems clear that the Department of Education, NASA, and other organizations have responded to this problem in a big way.

In essence, however, this one-sided reaction involves limitations and fails to cater to all students. Not every student favors the STEM subjects nor has the aptitude to become successful in such courses. These students also require a good education to contribute to society in positive ways. Many students demonstrate skills and/or interests more appropriate to the social sciences. Based on earlier arguments, it is reasonable to hypothesize that many social science students would find inspiration and interest in an astrosociological approach to space research. Attempting to convert the social-science-oriented students into STEM-oriented students probably results in a waste of time. At the same time, without the possibility of pursuing astrosociology, their interest in space would most likely dissipate over time in favor of more traditional specializations within the social sciences.

Preparations for living, working, and recreating in outer space must involve a formal collaborative structure between the space community and the social science community. This will involve a new educational approach not now in existence: the formal training of astrosociologists. To accomplish this we must bring space into the social science classroom just as we do for STEM classrooms; that is, to add an “A” to the STEM acronym in the context of studying space exploration issues. Potentially, examples utilizing outer space inspires even those social science students who eventually go into other specialties by keeping them in school. It provides benefits for students beyond aspiring astrosociologists. On the other side of the ledger, an astrosociological perspective adds an exposure to concepts rarely discussed in either STEM-oriented or social science classes. When students learn about astrosocial phenomena, they gain a more comprehensive view of how space exploration relates to their everyday lives.

In addition, our society faces a growing need to study space exploration from a social science perspective. Rather than leaving students who turn down pursuit of the STEM subjects without options, we should motivate them by bringing the wonders of space exploration into the social science classroom.16 We need to assist those who wish to study the various specializations within the field of astrosociology. Is this important? Are there even enough students interested in space but from a social science perspective? These questions receive attention at this juncture. If astrosocial phenomena truly affect social life on Earth and humanity seeks to explore space by venturing out into it, then the relevance of astrosociology seems quite apparent.

Expanding STEM to include astrosociology would increase effectiveness of the program

**Pass 7** (Jim, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant, AIAA Space 2007 Conference and Exposition, “Enhancing Space Exploration by Adding Astrosociology to the STEM model,” <http://astrosociology.com/Library/PDF/Contributions/Space%202007%20Articles/Adding%20Astrosociology%20to%20STEM%20Model.pdf>, 18-20 September)WZ

Space can potentially motivate students to stay in school, and pursue majors that often contribute to continuation of space exploration over the next generation. While STEM subjects receive the greatest attention in this regard for good reasons, including the operation of past space program issues, the future of space exploration will necessarily change when human beings venture into space to live, work, and play on permanent and sustained bases. If this assumption is indeed correct, then any particular society that desires to pursue the exploration of space would benefit itself most if it utilized space to motivate all students regardless of their current interests or intentions. We will need astrosociologists just as much as space scientists and engineers when humans leave the Earth, so NASA will find that it needs a well-rounded workforce comprised of experts in the natural sciences and in the social sciences to work together.

NASA does a fairly good job in motivating students to pursue STEM subjects. However, their effectiveness has limitations. For one thing, some students find the social sciences and humanities more interesting or simply fail to find excitement in STEM subjects without much exposure to an astrosociological approach within their social science programs. As an amendment to its current efforts, rather than one intended to shift natural science students to the social sciences, NASA should pursue the development of astrosociological education in conjunction with its efforts regarding the STEM subjects. It will be a great day when a “social studies” or sociology teacher launches into space for example. In other words, NASA should promote a greater understanding of space from all scientific perspectives. By adding the “A” to the end of the STEM acronym (i.e., STEMA), the focus broadens to include the social sciences which increasingly have something to contribute to space exploration and related issues. This approach should motivate space scientists and engineers while simultaneously adding social science majors who would finally have the option of choosing to study space in the form of astrosociology.

It is time to add a new dimension to the development of astrosociology. It currently lacks a pedagogical component that will prove invaluable in its growth. Astrosociology courses and programs must develop. This would allow for a rush of students and educators to embrace this new field on a much grander scale as its existence in these forms would indicate the legitimacy of astrosociology. While the development of astrosociology can indeed continue without taking this vital step, it will remain limited and ultimately fail due to an insufficient number of astrosociologists who dedicate themselves to this cause. Therefore, it behooves current supporters who are now students to pressure their professors to allow astrosociology into the social science classroom and those who are now professors/educators to advocate the creation of course and curricula in their own departments. In this way, the development of astrosociology will grow through the attraction of new students who will come to call themselves “astrosociologists.” Based on the limited survey presented in this article, this possibility does not seem farfetched at all. In fact, it may well result as the inevitable outcome of the movement to develop this new field. The author predicts that the development of astrosociology as an academic field will become a vital part of the effort to advance the space exploration effort in the twenty-first century and thereafter. This prediction is based on the increasing importance of the human dimension (as well as its growing recognition) and all of the complications that this brings to the space exploration table – and, most directly, this prediction is based on the corresponding imperative to understand these astrosociological issues.

Astrosociology are needed to compliment the science basis of STEM

**Pass 7** (Jim, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant, AIAA Space 2007 Conference and Exposition, “Enhancing Space Exploration by Adding Astrosociology to the STEM model,” <http://astrosociology.com/Library/PDF/Contributions/Space%202007%20Articles/Adding%20Astrosociology%20to%20STEM%20Model.pdf>, 18-20 September)WZ

A. Summary of a Synergistic Effect”

By enhancing space exploration through the addition of astrosociology to the STEM approach to education, both the space community and the social sciences are enhanced. In fact, our overall society benefits as well on a general level. This is something that could not soon occur without the existence of astrosociology. The natural and social sciences comprise two sides of the same coin that represents human space exploration.

In short, then, “developing astrosociology for the space sciences” [and other avenues of research common in the space community] involves the addition of astrosocial knowledge to space-based knowledge to form a more balanced understanding of humanity’s destiny in space. Knowledge relevant to the space sciences and engineering disciplines remain important, of course, but they represent only half of the overall knowledge base...Astrosocial knowledge represents the other side of a figurative coin. A great need exists to recognize each side of this figurative coin and bring both sides together to form the total knowledge needed to understand the full range of ramifications involving space and its important connections to terrestrial societies...This combination of both space knowledge and astrosocial knowledge possesses the potential to produce synergies of knowledge impossible by either knowledge base alone. Our continuing failure to pursue this avenue of research [i.e., astrosociological research] can only result in...[limited] progress, and perhaps avoidable negative circumstances.17

Thus far, we have concentrated heavily on the natural science side and largely neglected the social science side. We have overlooked the complementary aspect of space exploration in favor of concentrating on only one its two elements. Even when we send robotic probes, rovers, or landers to other worlds, we do so in order to further human knowledge. When we send human beings, we add innumerable complications that require input from social scientists that are fully prepared to cope with them.

The traditional pattern of concentrating on STEM subjects overlooks the rich history of sociology and the other social sciences. Countless research findings originally discovered during research aimed at terrestrial societies possess important applications toward social life in space environments that go far beyond the adaptation of findings associated with isolated social groups known as “space analogs.” For example, when considering the space settlements, we must perceive it as the replication of societies in space that includes social groups and institutions as well as cultures. In fact, then, the natural scientists and the social scientists each need one another.18 The one-sided approach common to the past functioning of the space community will prove inadequate to move forward in the future if human beings are to move into space environments.

This overall discussion regarding the need to expose social science students to astrosociology suggests an important question. Are social science students even interested in the relationship between space exploration and society (or social/cultural issues)? After all, their ability to study such issues does not exist in today’s educational system. Further, if there is no interest, then the entire argument of this article may represent a fruitless exercise. At best, it would indicate that extraordinary efforts may be required to interest social science students in space issues.

The pilot study conducted by the author could not address the specific interest in astrosociology among social science majors specifically. Instead, it surveys students who took an Introduction to Sociology class to fulfill their general education requirements – most of them were undeclared majors. But while this preliminary examination of the issue proved imperfect due to issues related to funding, access to students, and the types of students surveyed, it does indeed provide an enlightening glimpse into students’ interest following a semester-long exposure to sociology.

# CP key to SETI

Incorporating astrosociology into STEM would enhance SETI

**Pass 7** (Jim, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant, AIAA Space 2007 Conference and Exposition, “Enhancing Space Exploration by Adding Astrosociology to the STEM model,” <http://astrosociology.com/Library/PDF/Contributions/Space%202007%20Articles/Adding%20Astrosociology%20to%20STEM%20Model.pdf>, 18-20 September)WZ

Another good example of the potential synergy gained by combining the approaches of the space community and the social science community involves the study of astrobiology including the Search for Extraterrestrial Intelligence (SETI). The social, cultural, and psychological ramifications of discovering alien life are too numerous to discuss here, but they would change humanity forever in a great variety of ways. Even the search itself possesses characteristics worthy of study. Past research on this general topic by social scientists does indeed exist, though one cannot characterize this body of work as a well-structured body of knowledge. By placing it under the purview of astrosociology as a formal specialization, the location of this research would be more accessible and the ability to contribute would be enhanced. Similar improvements would occur with the other subjects proposed as astrosociological specializations.

# Students Say Yes

If given the option students would enroll in astrosociological study

**Pass 7** (Jim, Ph.D. in sociology, University of Southern California, Founder of Astrosociology.com & Senior Consultant, AIAA Space 2007 Conference and Exposition, “Enhancing Space Exploration by Adding Astrosociology to the STEM model,” <http://astrosociology.com/Library/PDF/Contributions/Space%202007%20Articles/Adding%20Astrosociology%20to%20STEM%20Model.pdf>, 18-20 September)WZ

During my last three Introduction to Sociology courses at my most recent college, it turned out a fortunate circumstance that I decided to add an optional short answer item to the final exam of my last three classes before leaving the organization. Students had the option of answering this short-answer question or another concerning an aspect of social inequality. Because the proper development of astrosociology requires that it becomes part of curricula at a growing number of colleges and universities, it is important to gauge the interest in the new field among college freshmen and students at other levels of educational attainment.

1. *Frequency Table*

The results shown in Table 3 indicate a strong interest in astrosociology among an admittedly very small population (and thus sample) of general education college students. It is significant that these students were members of an Introduction to Sociology course rather than one that focused on space or technology in some way. This fact makes their interest in the “sociology of space exploration” all the more powerful as most of them were taking sociology to fill their general education requirements. Informally, most indicated to the author that they did not intend to pursue sociology.

The results in Table 3 mimic the general support of NASA’s mission of space exploration found in the general population by major opinion polls, albeit even more strongly than those polls indicate. Potentially, then, many students who may pursue other subfields within social science disciplines would be attracted to astrosociology if it was available to them as a college course. While placing astrosociology in the curricula of academic programs at secondary and post-secondary levels will prove difficult, it will not necessarily prove impossible. One may infer that the example of astrobiology’s development indicates a strong potential for astrosociology.

2. *Short Answers*

As evident by the examples of responses from students provided below, the breakdown into the three categories found in Table Two serves as a rather crude categorization scheme. Students who indicate they would not enroll in an astrosociology course tend to have mixed feelings about their decisions. The survey serves the purpose of an exploratory examination of the hypothesis that a significant number of social science students would enroll in an *Introduction to Astrosociology* course as part of their education (i.e., if the author taught such a class). Again, it does not assess whether or not they would pursue an astrosociology major if it were possible. This would require a much greater commitment and indicate a much greater level of support for astrosociology. The survey of sociology and other social science majors looms as an extremely important project for the future.

# Teacher Union PTX

Teachers Unions support national standards

**Weingarten, 9** – president of the American Federation of Teachers

(Randi, "The Case for National Standards" <http://www.washingtonpost.com/wp-dyn/content/story/2009/02/15/ST2009021502025.html>)

From my office in Washington, I can see beyond the Capitol to Virginia. I can ride a few stops on the Metro and be in Maryland. These three jurisdictions are so close in miles yet have very different standards for what their students should know and be able to do -- just as every state in the union has its own standards. The result is 51 benchmarks of varying content and quality. There are many areas in education around which **we need to build consensus.** A good place to start would be revisiting the issue of national standards. **Abundant evidence** suggests that common, rigorous standards lead to more students reaching higher levels of achievement. The countries that consistently outperform the United States on international assessments all have national standards, with core curriculum, assessments and time for professional development for teachers based on those standards. Here in the United States, students in Massachusetts, which has been recognized for setting high standards, scored on a par with the highest-performing countries in both math and science on a recent international assessment. After Minnesota adopted rigorous math standards, students there ranked fifth in the world on the mathematics portion of that assessment. Academic standards for students in the rest of the country, unfortunately, are a mixed bag.

The American Federation of Teachers is the most powerful lobby in congress—they control the agenda at all times

**Carney, 9** – senior reporter for the Evans-Novak Political Report and Washington Examiner columnist (Timothy P., "Teachers unions say 'jump,' Congress says 'how high?'" <http://www.washingtonexaminer.com/opinion/columns/TimothyCarney/Teachers-unions-say-jump-Congress-says-how-high-40384837.html>)

Teachers unions, through their allies in the Democrat-controlled Congress, are on the verge of demolishing the chief threat to their monopoly—school vouchers for low-income families in the District of Columbia. If they win in the end and kill this program, it will be another triumph for a near-monopoly that has lined the coffers of nearly every member of Congress and deployed an army of lobbyists throughout Washington. When the House passed the $410 billion omnibus appropriations bill this week—funding the normal operations of government for the next seven months—it included a provision that effectively would end the D.C. school voucher program after next school year. While there are legitimate doubts about the educational results of the D.C. voucher program, which provides $7,500 in federal taxpayer money to some low-income district parents to use on private or religious schools, the voucher program is in Congress’s crosshairs because of the lobbying efforts and campaign contributions of the teachers’ unions, which don’t want competition from private schools. Public school teachers, for the most part, are not well paid. Theirs is a noble undertaking, and in places like D.C. they do dangerous and difficult work with inadequate support. But the image of the hard-working self-sacrificing teacher is not the proper symbol for the teachers unions in this country. They are more like huge corporations with high-powered lobbying arms and cozy connections with important politicians. Beltway bandits, defense contractors, influential industries—most of them **pale in their influence** efforts compared to the teachers unions, according to data from the Center for Responsive Politics. Take defense contractors. Lockheed Martin, the top recipient of military contracts most years, spent more on politics than any other defense firm in the 2008 elections. They still spent less than the American Federation of Teachers, which shelled out $2.8 million in the last cycle—with nearly every AFT dime going to Democrats. The top two teachers unions—AFT and the National Education Association—spent more combined, $5.27 million, than the top two defense contractors. **The top five lobbying firms, combined, didn’t equal the AFT and the NEA in federal contributions** in the 2008 cycle. Both of the teachers unions gave more than any oil company, and the NEA and AFT combined gave more than the top four oil companies combined. These contributions give the unions clout, and federal lobbying records show they use this clout. Again, on closer inspection, the teachers unions look an awful lot like those corporate special interests Democrats supposedly oppose. The NEA employs four different lobbying firms in Washington, in addition to their in-house lobbying arm, which includes at least six lobbyists. Over the past two years, the NEA spent $10.7 million on lobbying. Reviewing the filings of the NEA, the AFT, and their K Street hires reveals that lobbying to kill DC vouchers was a priority.

# Ext: Teachers Unions Like CP

Education reform popular among teacher unions

Iannuzzi, 9 – president of New York State United Teachers, the state’s largest union representing over 600,000 professionals in education and healthcare. NYSUT is affiliated with the American Federation of Teachers and the National Education Association (Richard C., "Richard C. Iannuzzi: Teachers unions embracing reform" <http://www.buffalonews.com/149/story/626941.html>)

Reform is a challenge teachers unions embrace. Yes, that’s right. The record **clearly demonstrates** the commitment of teachers unions to improving public education. Union leaders understand we have a responsibility to make schools work, especially in our cities where the achievement gap and all its ramifications threaten the vibrancy of local economies. This deeply held belief in reform is why NYSUT was an early advocate for smaller classes, higher academic standards, strict discipline, quality early childhood education programs and the professional development necessary to provide every child with the most qualified teachers possible. Obama recently pushed for even more reform — rewarding teacher excellence, holding teachers more accountable and promoting innovation, such as charter schools. Rather than considering those subjects taboo, we have been speaking of the same things. Dozens of teachers unions in New York have negotiated innovative compensation models — from stipends for those who earn national certification to New York City’s bold experiment in school-based performance pay. NYSUT proudly represents teachers in more than a dozen charter schools, including five here in Buffalo. Charter schools can provide opportunities for innovation and experimentation. We also believe charters must be accountable for the tax money they receive and transparent in how they spend it, and urge caution so that a proliferation of charters does not undermine full support for traditional public schools. Under the leadership of Randi Weingarten, the American Federation of Teachers has launched a $1 million innovation fund to implement sustainable reform efforts developed by union members. And local unions in Dunkirk and Fredonia have begun taking part in a National Education Association- funded program to develop “learning communities” that focus on ending the achievement gap.

# Ext. Teachers key to the Agenda

Liberal education lobbies overwhelm conservative opposition and build pol cap

Kurtz, 8 – adjunct fellow of the Hudson Institute and a Senior Fellow at the Ethics and Public Policy Center

(Stanley, “Conservatives Dropped the Ball,” The Corner, a blog of The National Review, 2/5/2008, <http://corner.nationalreview.com/post/?q=NmMxMGMxYzc5YjdiNGRiZmE4YmVkN2JmNWRmNDA3ZTA>=)

The NEA and the higher education lobby are **massive**, and **far more influential** on the Hill than most people realize. Yet when it comes to higher education, for example, there are simply **no conservative** lobbying organizations to counter them. Conservatives **rarely even show up** for most legislative battles over education, and when they do, they are vastly outspent and outgunned. And again, such education battles as the Bush administration has chosen to fight intentionally avoid precisely the "culture war" issues that might make a real difference.

The Bush administration’s attitude was that Bill Bennett/Lynn Cheney-type culture war issues sap political capital that could more profitably be put toward the war effort or social security reform. This was a huge mistake. Fighting the education culture war would have accumulated political capital. When it comes to the left-leaning craziness of the education system, the public is with us. The Lawrence Summers dispute, for example, was a disaster for the academy in the public eye. Linking the Democrats with their crazy leftist pals in the academy is the best way to beat them. The public is with us on this. The problem is that we haven’t developed any institutional way of harnessing public antipathy to educational bias.

What we need is a mass-membership organization, modeled on, say, People for the American Way, able to rally folks who want to do something about our education system — or perhaps separate organizations, one for K-12 and one for higher education. Without an large, broad-based lobby group, we can’t effectively counter-balance the massive teacher-professor-based education lobbies. Democrats are **completely in the pocket of these liberal lobby groups**, and even Republicans legislators have little reason to oppose them and plenty of reason to fear them.

\*\*\*Politics Links/Link Turns

# Plan Unpopular

AFF WILL BE SEEN AS A “SKY IS FALLING” SCENARIO – SAPS CAPITAL.

**DEARING 11**. [Matthew, MA in Physics @ Cornell, former intern @ Argonne National Laboratory, “Protecting the planet requires heroes, money, and citizen scientists” Dynamic Patterns Research 4/12 -- <http://research.dynamicpatterns.com/2011/04/12/protecting-the-planet-requires-heroes-money-and-citizen-scientists/>]

Many of us while growing up and listening to our bedtime stories learned to not freak out and run screaming through the streets if we thought that the “sky is falling.” As little chickens, we were taught at an early age that it was best to be brave, calm, and rational, else be considered a crazed lunatic. This childhood behavioral bias infiltrated adulthood in the relationship between professional astronomers, policy-makers and national budget-number crunchers. When a scientist expresses probabilistic concerns about the impending doom of our planet from a cataclysmic change of a major impact event, say, in the next 100, 1,000, or 10,000 years, it requires just too much risk of political capital and tax-payer dollars to divert significant budget resources to something that might only be a concern for our uber-great grandchildren. The simultaneous efforts of two Hollywood studios in the late nineties of the last century tried to get something stirring in our cultural awareness with their mega-disaster flicks, Armageddon and Deep Impact. These features did bring us through the box office (which was certainly their primary goal!), but they did not push us en masse to the round table to prepare for the ultimate defensive plan for our planet. Combating Earth-bound asteroids, or “near-earth objects” (NEOs), is an unsolved problem, and one that citizen scientists largely ignore because it’s assumed that this issue must be only approached via the domain that has access to the massive amounts of taxpayer dollars and the international collaborations between those nations who can liberally spend all of that money. It’s this requirement of essentially unlimited funds that is the sticking point to making serious progress on defending against an event that may, or may not, happen in the upcoming budget cycle.

# Plan Unpopular

NO RISK OF TURNS – NO POLITICAL SUPPORT FOR ASTEROIDS POLICY – ONLY RISK OF BACKLASH.

**DEARING 11**. [Matthew, MA in Physics @ Cornell, former intern @ Argonne National Laboratory, “Protecting the planet requires heroes, money, and citizen scientists” Dynamic Patterns Research 4/12 -- <http://research.dynamicpatterns.com/2011/04/12/protecting-the-planet-requires-heroes-money-and-citizen-scientists/>]

There are many issues that NASA must juggle with here, including political, financial, and scientific. Who is willing to risk one’s political capital to champion the destruction of once-in-an-epoch giant fireballs in the sky, albeit one that can destroy our civilization as we know it? How much of taxpayer dollars can be appropriated to a once-in-an-epoch event, albeit one that can destroy our civilization as we know it? And, with deflection technology really already at hand, how professionally interesting is it to track and monitor orbiting rocks, since a Nobel Prize doesn’t target too many rocks these days? The bottom line is that the political will and the money are not available from the United States federal government, so the financing of advancing technology–well in advance of pending doom–is not really an option right now, and will likely continue to not be an option for some time. Methods of averting potentially impacting objects have already been proposed, and should be reasonable to implement without too much of a technological leap, if any, although the funding factor will always be an application killer. In fact, according the the task force’s minutes, NASA should stay out of the direct defensive activities, and leave that to those who know how to defend, like the Air Force. Of course, the United States is already over-criticized for being the police force of the world, so why should it now have to be the defender of the planet and of all civilization?

# Plan Unpopular

**Asteroid exploration unpopular – no public support**

**Thompson 11** (Loren, Chief Financial Officer – Lexington Institute, “Human Spaceflight”, April, <http://www.lexingtoninstitute.org/library/resources/documents/Defense/HumanSpaceflight-Mars.pdf>)

This all makes sense from a budgetary and scientific perspective. What’s missing is a grasp of the rationale required to sustain political support across multiple administrations. While exploration of the Moon’s far side or nearby asteroids may have major scientific benefits, those benefits are unlikely to be appreciated by politicians struggling to reconcile record deficits. NASA’s current research plans do not connect well with the policy agendas of either major political party, and the flexible path will not change that. To justify investments of hundreds of billions of dollars in human spaceflight over the next 20 years while entitlements are being pared and taxes are increasing, NASA must offer a justification for its efforts commensurate with the sacrifices required. Mars is the only objective of sufficient interest or importance that can fill that role. Thus, the framework of missions undertaken pursuant to the flexible-path approach must always be linked to the ultimate goal of putting human beings on the Martian surface, and the investments made must be justified mainly on that basis. The American public can be convinced to support a costly series of steps leading to a worthwhile objective, but trips to the Moon and near-Earth objects aren’t likely to generate sustained political support during a period of severe fiscal stress.

# Plan Popular

Even in light of budget deficits- space exploration policies are bipartisan- spun as maintaining leadership

**Wolf, 10** (7/15 -- Frank, Rep. Frank Wolf (R-Va.) is the senior Republican on the House Appropriations Subcommittee on Commerce, Justice and Science, “ Adoption of NASA compromise means continued leadership in space exploration”, <http://thehill.com/blogs/congress-blog/technology/109109-adoption-of-nasa-compromise-means-continued-leadership-in-space-exploration-rep-frank-wolf//sb>)

**In a rare victory for bipartisanship and the legislative branch, Congress has rallied behind an important compromise plan to ensure continued American leadership in space**. Six months after the release of the president’s budget — which effectively mothballed NASA’s exploration program — **the Senate and House have sent a clear signal to the White House that such cuts are unacceptable**. Last month, I joined Reps. Dutch Ruppersberger (D-Md.), John Culberson (R-Texas), Gene Green (D-Texas) and 58 other bipartisan members representing 18 states on a letter to President Obama detailing a compromise plan centering on the immediate development of a “heavy lift rocket” and crew capsule capable of exploring beyond low Earth orbit, something the U.S. has not done since the Apollo era. Our compromise proposal — which was embraced by the Senate Commerce Committee in its NASA authorization bill — ensures that NASA will have an exploration rocket available within six years. Our plan also capitalizes on the nearly $10 billion already invested in the development of the next-generation rocket, guaranteeing that taxpayers' previous investments were not made in vain. Importantly, it protects our defense industrial base and keeps our skilled space workforce employed, making sure we don’t lose their critical skill sets. I applaud the Senate Commerce Committee for reporting out a NASA authorization bill that embraces our compromise proposal on exploration. I hope the House Science Committee will similarly adopt this compromise and consider its authorization bill. As ranking member on the House Appropriations Subcommittee on Commerce, Justice and Science, I believe it’s important for the authorizers to signal their support so that we can enshrine this new policy in the fiscal year 2011 appropriations bill. This issue is particularly important for me because NASA has been a critical source of inspiration, innovation and national pride for Americans over the last 50 years. Our achievements in exploration and manned spaceflight have rallied our nation in a way that no other federal program — aside from our armed services — can. I believe that manned spaceflight and exploration is one of the last remaining fields in which the U.S. maintains an undeniable competitive advantage over other nations. Our space program is a critical security and economic asset. Countless Americans have dedicated their lives — and in some cases have given their lives — to earn our current leadership in space. Our achievements in space have been hard earned. We simply cannot afford to abandon our position in space, as the White House plan proposed. With the adoption of this important compromise, I am increasingly confident of continued American leadership in space.

# Plan Popular

Turn – Plan is popular – bipart support.

Foust, 3

[Jeff, editor and publisher of The Space Review. He also operates the Spacetoday.net web site, “ The gaps in NASA’s support,” http://www.thespacereview.com/article/41/2]

It’s long been assumed that support for NASA in the United States is widespread. From a political standpoint, NASA enjoys a degree of bipartisan support (or, perhaps more accurately at times, bipartisan neglect) not seen in many other government agencies. A typical NASA program is less likely to become a political football for one party or the other than programs at the Defense Department, EPA, or even the Department of Education. Along the same lines, NASA appears to have widespread support from the American people as a whole. While there is a fraction of the public is always critical of the space agency (a fraction that tends to fluctuate depending on NASA’s publicized successes or failures), it’s never seemed obvious that this opposition to NASA is polarized along political, racial, income, or other lines.