# R2 GTown

# 1NC

# Sunshades

[CP TEXT: United States federal government should develop and deploy sufficient space sunshades.]

We’ll clarify.

That solves global warming at the source, even if we’re past the tipping point

**TGO ‘9**

(The Green Optimistic, “Reducing Global Warming,” http://www.greenoptimistic.com/2009/03/02/reducing-global-warming-with-a-huge-space-mounted-mirror-shade/)

Humans have always wanted to feel themselves in control of everything until things got out of control. The current global warming issue is the most serious problem we have ever faced, and this is because our greed for energy got out of our sense and control, even if there were important economic yields that could have stopped or slowed it down. / Now, as scientists say we are on a point of no return with global warming, they are also giving us solutions that could patch the problem and bring us to the pre-industrial climate. / Dr. Roger Angel, from the University of Arizona, theoretically demonstrated that if we threw some trillions of mirrors (better said refracting lenses) in outer space, within a 100,000 square miles area, just one million miles above the Earth, between us and the Sun, the global warming would lower significantly and all current problems will be solved.

# LOST

Battle over LOST coming – first priority for Congress during the lame duck – Obama will push

Dan **Joling**, August 17th, 2012, **8/17** (writer, Juneau Empire, “Murkowski hopeful on passing the Law of the Sea treaty,” <http://juneauempire.com/dan-joling/2012-08-17/murkowski-hopeful-passing-law-sea-treaty#.UEGIEdYia3F> >:)

ANCHORAGE — Melting summer sea ice is opening up the Arctic Ocean to commercial opportunities but the United States could miss them if it doesn’t sign the Law of the Sea treaty, according to U.S. Sen. Lisa Murkowski. The Alaska Republican hopes the Senate will vote to sign the treaty during the lame duck session following the November election. The treaty sets up a system for resolving disputes in international waters. It has been around since the Reagan administration, and 162 countries have signed on. “This is a treaty that I believe very strongly will contribute not only to our national security, but will allow us a level of certainly in accessing our resources in the north,” Murkowski said Wednesday. The Constitution requires two-thirds of the Senate — 67 votes — to ratify a treaty. The treaty recognizes sovereign rights over a country’s “exclusive economic zone” — the area covering its continental shelf out to 200 nautical miles. It recognizes rights beyond that zone if the country can provide evidence to substantiate its claims. That’s exactly what could happen off Alaska’s northern shore, Murkowski said. Outer continental shelf mapping indicates the United States could claim an area the size of California, she said. “I don’t want us, as an Arctic nation, to abandon those opportunities, and we would be doing that if we fail to ratify the Law of the Sea treaty,” Murkowski said. The treaty has support from the president, most Senate Democrats, the U.S. Chamber of Commerce, and the military. “Anybody with a star on their shoulder has sat before the Foreign Relations Committee and testified about why it’s so important, so critical, to this nation,” she said. She has worked with Sen. John Kerry, D-Mass., to educate fellow senators on the pact’s importance. Proponents faced a setback in June, she said, when Sens. Rob Portman, R-Ohio, and Kelly Ayotte, R-N.H., said they had concerns about the breadth and ambiguity of the treaty and that it was not in the national interest at that time. Their decision meant opponents had [have] enough votes to block ratification unless some senators change their minds. In the upcoming months, Murkowski said, representatives from shipping, telecommunications, petroleum and even tourism interests will make the case for the treaty. She said opponents are not worried U.S. interests could be exposed to international litigation. Instead, she said, they see a loss of U.S sovereignty if the United Nations is involved. “There are some colleagues — if the United Nations is in the title of any treaty, it’s an automatic no,” Murkowski said. “But the reality is the treaty has been amended or adapted from the time President Reagan was in office, and had concerns about it, to address some of the issues that have been raised.” The chance of treaty approval in November or December, she said, will depend on whether special interests such as the U.S. Chamber will push the measure as a priority over other legislation such as automatic deficit reduction or tax cut extension. “The concern is, we have these advocates, but they’re going have to prioritize what they’re going to be pushing for hardest,” Murkowski said.

Transportation investment drains pol cap – Ideology, election year, Congressional Gridlock

**Freemark ‘12**

(Yonah – Master of Science in Transportation from the Massachusetts Institute of Technology; Bachelor of Arts in Architecture, Department of Civil and Environmental Engineering, Yale University with Distinction. Also a freelance journalist who has been published in Planning Magazine; Next American City Magazine; Dissent; The Atlantic Cities; Next American City Online; and The Infrastructurist – He created and continues to write for the website The Transport Politic – The Transport Politic – “On Infrastructure, Hopes for Progress This Year Look Glum” – January 25th, 2012 – <http://www.thetransportpolitic.com/2012/01/25/on-infrastructure-hopes-for-progress-this-year-look-glum/>)

President Obama barely mentions the need for improvements in the nation’s capital stock in his State of the Union. The contributions of the Obama Administration to the investment in improved transportation alternatives have been significant, but it was clear from the President’s State of the Union address last night that 2012 will be a year of diminished expectations in the face of a general election and a tough Congressional opposition. Mr. Obama’s address, whatever its merits from a populist perspective, nonetheless failed to propose dramatic reforms to encourage new spending on transportation projects, in contrast to previous years. While the Administration has in some ways radically reformed the way Washington goes about selecting capital improvements, bringing a new emphasis on livability and underdeveloped modes like high-speed rail, there was little indication in the speech of an effort to expand such policy choices. All that we heard was a rather meek suggestion to transform a part of the money made available from the pullout from the Afghanistan and Iraq conflicts — a sort of war dividend whose size is undefined — to “do some nation-building right here at home.” If these suggestions fell flat for the pro-investment audience, they were reflective of the reality of working in the context of a deeply divided political system in which such once-universally supported policies as increased roads funding have become practically impossible to pursue. Mr. Obama pushed hard, we shouldn’t forget, for a huge, transformational transportation bill in early 2011, only to be rebuffed by intransigence in the GOP-led House of Representatives and only wavering support in the Democratic Senate. For the first term at least, the Administration’s transportation initiatives appear to have been pushed aside. Even so, it remains to be seen how the Administration will approach the development of a transportation reauthorization program. Such legislation remains on the Congressional agenda after three years of delays (the law expires on March 31st). There is so far no long-term solution to the continued inability of fuel tax revenues to cover the growing national need for upgraded or expanded mobility infrastructure. But if it were to pass, a new multi-year transportation bill would be the most significant single piece of legislation passed by the Congress in 2012. The prospect of agreement between the two parties on this issue, however, seems far-fetched. That is, if we are to assume that the goal is to complete a new and improved spending bill, rather than simply further extensions of the existing legislation. The House could consider this month a bill that would fund new highways and transit for several more years by expanding domestic production of heavily carbon-emitting fossil fuels, a terrible plan that would produce few new revenues and encourage more ecological destruction. Members of the Senate, meanwhile, have for months been claiming they were “looking” for the missing $12 or 13 billion to complete its new transportation package but have so far come up with bupkis. The near-term thus likely consists of either continued extensions of the current law or a bipartisan bargain that fails to do much more than replicate the existing law, perhaps with a few bureaucratic reforms.

Obama push key – convinces stray Republicans

**Bloomberg**, 20**12** (some… company, I guess, “Watch These Global Hotspots for 2012: View,” <http://www.bloomberg.com/news/2012-01-02/after-tumult-of-2011-here-are-some-global-hotspots-to-watch-in-2012-view.html> >:)

The Arctic: This is not so much a hotspot as a cold spot, but it’s getting warmer. And as the planet’s northern icecap melts, it is becoming a cockpit of international competition. Tussles over newly accessible oil, other resources and suddenly navigable waterways may bring out the testiness even in such perennially agreeable countries as Denmark and Canada. Arctic states other than the U.S. are preparing their claims as signatories to the United Nations Convention on the Law of the Sea, which determines who has the right to benefit from the riches of any ocean. Die-hard conservatives in Congress have blocked U.S. approval of the law, falsely claiming that it would constrain the military -- arguments that the military, among others, rejects. A push by President Barack Obama, could probably win approval for the law in the Senate, thereby helping to safeguard the U.S. stake in the Arctic race and its role in keeping the peace there.

Ratification by 2012 is necessary for Arctic seabed mining

Josh **Rogin**, May 23rd, 20**12** (writer, Foreign Policy, “Clinton: Ratify Law of the Sea treaty this year,” <http://thecable.foreignpolicy.com/posts/2012/05/23/clinton_ratify_law_of_the_sea_treaty_this_year> >:)

The U.S. Senate should ratify the Law of the Sea Treaty before the end of the year because it is in Amerca's economic and national security interests, Secretary of State Hillary Clinton will testify today. [card continues – ot available on req] She will argue that the United States benefits from the treaty's maritime freedom of navigation provisions and she will maintain that American business will benefit from the treaty's provisions governing mining rights along U.S. coastlines. "Off the north shore of Alaska, our continental shelf could extend 600 miles into the Arctic," she will say. Clinton will argue that U.S. companies are ready to participate in deep seabed mining but that the United States needs to be a party to the treaty so that American businesses can take advantage of mining opportunities outside the country's exclusive economic zone.

Arctic seabed drilling and mining solves methane release through methane hydrate extraction

Malcolm **Light**, May 27th, 20**12** (Ph.D @ UCL, “A Proposal for the Prevention of Arctic Methane Induced Catastrophic Global Climate Change by Extraction of Methane from beneath the Permafrost/ Arctic Methane Hydrates and its Storage and Sale as a Subsidized "Green Gas" Energy Source,” <http://arctic-news.blogspot.com/2012/05/proposal-to-extract-store-and-sell.html> >:)

After 2015, when the Arctic Ocean becomes navigable (Figure 5 above, Carana 2012b) it will be possible to set up a whole series of drilling platforms adjacent to, but at least 1 km away from the high volume methane eruption zones and to directionally drill inclined wells down to intersect the free methane below the sealing methane hydrate permafrost cap within the underlying fault network (Figure 18 above). High volume methane extraction from below the subsea methane hydrates using directional drilling from platforms situated in the stable areas between the talik/fault zones will reverse the methane and seawater flow in the taliks and shut down the uncontrolled methane sea water eruptions (Figure18 above). The controlled access of globally warmed sea water drawn down through the taliks to the base of the methane hydrate - permafrost cap will gradually destabilize the underlying methane hydrate and allows complete extraction of all the gas from the methane hydrate reserve (Figure18 above). The methane extraction boreholes can be progressively opened at shallower and shallower levels as the subterranean methane hydrate decomposes allowing the complete extraction of the sub permafrost reserve (Figure18 above). The methane and seawater will be produced to the surface where the separated methane will be processed in Floating Liquefied Natural Gas (FLNG) facilities and stored in LNG tankers for sale to customers as a subsidised green alternative to coal and oil for power generation, air and ground transport, for home heating and cooking and the manufacture of hydrogen, fertilizers, fabrics, glass, steel, plastics, paint and other products. Where the trapped methane is sufficiently geopressured within the fault system network underlying the Arctic subsea permafrost and is partially dissolved in the water (Light, 1985; Tyler, Light and Ewing, 1984; Ewing, Light and Tyler, 1984) it may be possible to coproduce it with the seawater which would then be disposed of after the methane had be separated from it for storage (Jackson, Light and Ayers, 1987; Anderson et al., 1984; Randolph and Rogers, 1984; Chesney et al., 1982). Many methane eruption zones occur along the narrow fault bound channels separating the complex island archipelago of Arctic Canada (Figure 6 and 9). In these regions drilling rigs could be located on shore or offshore and drill inclined wells to intersect the free methane zones at depth beneath the methane hydrates, while the atmospheric methane clouds could be partly eliminated by using a beamed interfering radio transmission system (Lucy Project) (Light 2011a). A similar set of onshore drilling rigs could tap subpermafrost methane along the east coast of Novaya Zemlya (Figure 6 below and 9 above).

Extinction – outweighs global nuclear war

**Ryskin ‘3** (Gregory Ryskin, Department of Chemical Engineering, Northwestern University, “Methane-driven oceanic eruptions and mass extinctions,” Geology, 31(9), September 2003, <http://pangea.stanford.edu/research/Oceans/GES205/methaneGeology.pdf>)

METASTABILITY AND ERUPTION A liquid subject to gravity and completely or partially saturated with dissolved gas is, thermodynamically, in a metastable state. Consider for clarity the case when the concentration of the dissolved gas is only slightly below saturation throughout, and thus increases downward in accordance with Henry’s law. Then locally there is no tendency for the dissolved gas to exsolve (to form bubbles), in spite of the fact that nuclei are abundant in seawater. (Exsolution would lead to a slight increase in free energy: below saturation, the chemical potential of the gas species is lower in solution than in the free gas phase.) At the same time, the free energy of the system as a whole would be greatly reduced if most of the dissolved gas were to somehow escape from solution and collect above the liquid. (This free energy reduction is due to the fast decrease of the chemical potential of gas with a drop in pressure.) Thus, the system is in a metastable state, albeit an unusual one. Strictly speaking, this state is not an equilibrium one even locally: the increase of the solute concentration with depth causes a diffusion flux directed upward, which, given sufficient time, could bring the system into the above state of minimum free energy. However, the continuous supply of methane by the rising bubbles from the seafloor ensures that the concentration profile will remain nonuniform, slowly approaching the saturation one. Even if that supply were to cease, the diffusion time scales are so long that this path toward the global energy minimum can be ignored. A very fast transition from this metastable state can be triggered by disturbances that displace fluid a finite distance in the vertical direction. Such disturbances may result from an earthquake, a seafloor volcano, convection currents due to geothermal heating, or an internal gravity wave. Consider a parcel of fluid that is displaced upward, and is now subject to lower hydrostatic pressure, to which corresponds a lower solubility value. As a result, the fluid in the parcel is now supersaturated with the dissolved gas, which must begin to exsolve, forming tiny gas bubbles. (If the fluid in its original position was only partially saturated, exsolution will begin after the parcel has risen through some significant distance, so in this case the initial disturbance must be sufficiently large.) The volume of the ascending parcel of fluid increases due to the formation of bubbles, making it more buoyant and accelerating its rise; this leads to further reduction in the ambient pressure, further exsolution of gas, and further increase in the volume of the parcel. This self-accelerating motion entrains the surrounding fluid; exsolution of the gas in the latter reinforces the motion. The result is a violent eruption (Kling et al., 1987; Zhang, 1996). From the initial eruption site, hydrodynamic disturbances propagate in all directions (via turbulent entrainment and/or internal gravity waves), triggering eruptions at other sites. Similarly to transitions from other metastable states (e.g., boiling of a superheated liquid), the eruption should spread quickly throughout the region of the ocean where the water column is saturated, or partially saturated, with gas. In spite of the low solubility of methane in seawater, the total possible increase in the buoyancy of the parcel can be large. Consider a parcel that started its rise at 4 km depth, where solubility of methane is ;4.3 3 1023. Then, if the parcel had a volume of 18 cm3 (1 mol of water) and was saturated with methane, it contained 4.3 3 1023 mol of dissolved methane. By the time this parcel has risen to the surface, essentially all the methane in the parcel has exsolved (solubility is ;2 3 1025 at the surface). At the surface conditions (T ø 25 8C, P 5 1 bar), 1 mol of any gas occupies 25 3 103 cm3, so the total volume of methane in the parcel is ;108 cm3, and the volume of the parcel, which now contains a mist of water droplets in gaseous methane, is 126 cm3. That is, the volume of the parcel has increased by a factor of seven. Concurrent exsolution of other dissolved gases (e.g., carbon dioxide CO2, hydrogen sulfide H2S) will add to the effect. A rather similar process is responsible for the most violent, explosive volcanic eruptions (called Plinian), such as eruptions of Mount Vesuvius in A.D. 79 or Mount St. Helens in 1980. These eruptions are driven by exsolution of gases (primarily water vapor) dissolved in the liquid magma. In Lake Nyos (Cameroon), CO2 of magmatic origin enters the water column from the bottom, at a depth of ;200 m. In 1986, the lake erupted, creating a gas-water fountain ;120 m in height (Zhang, 1996), and releasing a lethal cloud of CO2. A water surge washed up the shore to a height of ;25 m. The eruption continued for several hours (Kling et al., 1987). OCEANIC ERUPTION AS A CAUSE OF MASS EXTINCTION The consequences of a methane-driven oceanic eruption for marine and terrestrial life are likely to be catastrophic. Figuratively speaking, the erupting region ‘‘boils over,’’ ejecting a large amount of methane and other gases (e.g., CO2, H2S) into the atmosphere, and flooding large areas of land. Whereas pure methane is lighter than air, methane loaded with water droplets is much heavier, and thus spreads over the land, mixing with air in the process (and losing water as rain). The air-methane mixture is explosive at methane concentrations between 5% and 15%; as such mixtures form in different locations near the ground and are ignited by lightning, explosions 2 and conflagrations destroy most of the terrestrial life, and also produce great amounts of smoke and of carbon dioxide. Firestorms carry smoke and dust into the upper atmosphere, where they may remain for several years (Turco et al., 1991); the resulting darkness and global cooling may provide an additional kill mechanism. Conversely, carbon dioxide and the remaining methane create the greenhouse effect, which may lead to global warming. The outcome of the competition between the cooling and the warming tendencies is difficult to predict (Turco et al., 1991; Pierrehumbert, 2002). Upon release of a significant portion of the dissolved methane, the ocean settles down, and the entire sequence of events (i.e., development of anoxia, accumulation of dissolved methane, the metastable state, eruption) begins anew. No external cause is required to bring about a methane-driven eruption—its mechanism is self-contained, and implies that eruptions are likely to occur repeatedly at the same location. Because methane is isotopically light, its fast release must result in a negative carbon isotope excursion in the geological record. Knowing the magnitude of the excursion, one can estimate the amount of methane that could have produced it. Such calculations (prompted by the methane-hydrate-dissociation model, but equally applicable here) have been performed for several global events in the geological record; the results range from ;1018 to 1019 g of released methane (e.g., Katz et al., 1999; Kennedy et al., 2001; de Wit et al., 2002). These are very large amounts: the total carbon content of today’s terrestrial biomass is ;2 3 1018 g. Nevertheless, relatively small regions of the deep ocean could contain such amounts of dissolved methane; e.g., the Black Sea alone (volume ;0.4 3 1023 of the ocean total; maximum depth only 2.2 km) could hold, at saturation, ;0.5 3 1018 g. A similar region of the deep ocean could contain much more (the amount grows quadratically with depth3). Released in a geological instant (weeks, perhaps), 1018 to 1019 g of methane could destroy the terrestrial life almost entirely. Combustion and explosion of 0.75 3 1019 g of methane would liberate energy equivalent to 108 Mt of TNT,; 10,000 times greater than the world’s stockpile of nuclear weapons, implicated in the nuclear winter scenario (Turco et al., 1991).

# Cap

Aff’s capitalist

**Sheppard, ‘90**

E Sheppard, "Transportation in a capitalist space-economy: transportation demand, circulation time, and transportation innovations," 1990, <http://www.envplan.com/abstract.cgi?id=a221007>/

Transportation, as the service of moving commodities between places, plays a unique role in a fully competitive capitalist space-economy. The commodity of transportation is consumed as a part of virtually every economic transaction, linking the production and consumption of a commodity; demand for transportation is derived from spatial configurations rather than being fixed by socially necessary techniques and real wages; and the circulation time taken in transportation is a deduction from capitalists' profits. The impact of circulation time on profits may be calculated precisely. The derived nature of the demand for transportation adds a level of uncertainty to the impact of cost-reducing technical change on profit rates. Given this, cost-reducing and time-reducing technical change in the transportation commodity is one of the few ways of ensur[es]ing an increased rate of profit for capitalis[m]ts, ceteris paribus. The public nature of transportation improvements and the high investments in fixed capital that are required help to explain the central role of the state in capitalism in the improvement of transportation and thus in underwriting capital accumulation.

Extinction

Ljubodrag Simonovic, Ph.D., Philosophy; M.A., Law; published author of seven books, 2007, A New World is Possible, “Basis of contemporary critical theory of capitalism.”

The final stage of a mortal combat between mankind and capitalism is in progress. A specificity of capitalism is that, in contrast to "classical" barbarism (which is of destructive, murderous and plundering nature), it annihilates life by creating a "new world" – a "technical civilization" and an adequate, dehumanized and denaturalized man. Capitalism has eradicated man from his (natural) environment and has cut off the roots through which he had drawn life-creating force. Cities are "gardens" of capitalism where degenerated creatures "grow". Dog excrement, gasoline and sewerage stench, glaring advertisements and police car rotating lights that howl through the night - this is the environment of the "free world" man. By destroying the natural environment capitalism creates increasingly extreme climatic conditions in which man is struggling harder and harder to survive – and creates artificial living conditions accessible solely to the richest layer of population, which cause definitive degeneration of man as a natural being. "Humanization of life" is being limited to creation of micro-climatic conditions, of special capitalistic incubators - completely commercialized artificial living conditions to which degenerated people are appropriate. The most dramatic truth is: capitalism can survive the death of man as a human and biological being. For capitalism a "traditional man" is merely a temporary means of its own reproduction. "Consumer-man" represents a transitional phase in the capitalism-caused process of mutation of man towards the "highest" form of capitalistic man: a robot-man. "Terminators" and other robotized freaks which are products of the Hollywood entertainment industry which creates a "vision of the future" degenerated in a capitalist manner, incarnate creative powers, alienated from man, which become vehicles for destruction of man and life. A new "super race" of robotized humanoids is being created, which should clash with "traditional mankind", meaning with people capable of loving, thinking, daydreaming, fighting for freedom and survival - and impose their rule over the Earth. Instead of the new world, the "new man" is being created – who has been reduced to a level of humanity which cannot jeopardize the ruling order. Science and technique have become the basic lever of capital for the destruction of the world and the creation of "technical civilization". It is not only about destruction achieved by the use of technical means. It is about technicization of social institutions, of interpersonal relations, of the human body. Increasing transformation of nature into a surrogate of "nature", increasing dehumanization of the society and increasing denaturalization of man are direct consequences of capital's effort, within an increasingly merciless global economic war, to achieve complete commercialization of both natural and the social environment. The optimism of the Enlightenment could hardly be unreservedly supported nowadays, the notion of Marx that man imposes on himself only such tasks as he can solve, particularly the optimism based on the myth of the "omnipotence" of science and technique. The race for profits has already caused irreparable and still unpredictable damage to both man and his environment. By the creation of "consumer society", which means through the transition of capitalism into a phase of pure destruction, such a qualitative rise in destruction of nature and mankind has been performed that life on the planet is literally facing a "countdown". Instead of the "withering away" (Engels) of institutions of the capitalist society, the withering away of life is taking place. / The thesis of conservative bourgeois theoreticians, according to which the history of mankind ends with capitalism, becomes more and more convincing. Unless it is prevented, capitalism will, already by the beginning of the third millennium, finish off what remains of the world. Scientists are a human form in which capitalism instrumentalizes natural forces in order to control men and nature. They have been reduced to specialty-idiots who, in a "technical world", where everything operates by "pressing a button" and where "everything is under control", see an ideal world that should be longed for, and in a machine-man the "culmination of progress". Scientists, for whom "obtaining expertise" is paid for with their humanity, perceive people as enemies and machines as "friends". The same way profit and not man is essential to capitalists, "progress" and not man is essential to scientists - progress being another name for profit, and "profit" being another name for destruction. "The technical intelligentsia" are mutilated people not able to express their humanity. Fear of people transforms into hatred of people. They consciously deprive themselves of all those features that make them men, and they escape into a technical world where they can "experiment" with machines, people, the living world.… The power of science and technique becomes the power of manipulation and dest

ruction. For them the "technical world" becomes the "natural" world and the highest esthetic challenge, like Eiffel's tower, this capitalistic Tyrannosaurus, which symbolizes domination of "technical civilization" over man. It becomes more and more obvious that capitalism creates an increasingly deep social and ecological crisis that it cannot control. The transition of capitalism is going on, from the stage of "controlled" into a stage of uncontrolled chaos which is the ultimate "answer" of the ruling order to its own incapacity to manage the increasingly dramatic existential crisis – out of which either the tearing down of capitalism and the creating of the new world, or the destruction of mankind and life on Earth, can be generated. The consequences of capitalism cannot be controlled by means of social institutions, for those have also become tools of capitalist corporations and are being used to achieve their interests. Men are deprived of basic human rights: the right to live, to labor, to a healthy environment, family, happiness, a future... A process of depersonalization by the capitalist governance shows no responsibility for its own actions. Invisible and impossible to seize, the spirit of capitalism, which becomes the fatal force of destiny, rules the world. Multinational corporations destroy the international legal system, democratic institutions, the "social state"... The political arena becomes a political circus, politicians become capital's court jesters. Public disputes on essential social issues are being replaced with fabricated affairs. "Rule of law" becomes an ideological mask of capitalist tyranny. Eventually, the political sphere becomes a vehicle of the ruling class used for depoliticization of citizens and extermination of trust in democratic institutions and hope for the possibility of creating a rational social order that would be an incarnation of the guiding principles of the French Revolution - upon which modern humanism is based. It turned out that (Western) democracy is a political form of the rule of capital over man. Multinational corporations destroy the emancipating legacy of civil society, and the institutions that should offer a possibility for expressi5on of the citizens' political will become the means for achieving their interests instead. The possibilities for the political articulation of increasing citizens' discontent through institutions are diminishing. A declining number of issues determining the destiny of men are being raised in "representative bodies". A declining number of people take an active part in the elections. Instead of being a political subject, the citizen becomes a consumer of political programs. Everything occurs in accordance with the principles of market economics, within which good advertising is of utmost importance for the sale of products. "Money does not stink!" becomes the basic political principle. Politics becomes an industry for production of "democratic" falsehoods and illusions. The more the crisis of capitalism develops, accompanied by the increasing discontent of people – which unavoidably generates the need for creation of the new world, for this is an existential imperative – the more aggressive are the efforts of the ruling class to prevent its disintegration. The most important task of the governing politics is to make it impossible that the objective possibilities for the change of the existing world become real potential for changes, through the change-oriented practice of the oppressed. Therefore, destruction of (critical) mind and "pacification" of the oppressed through idiotization become the most important task of the governing propaganda machinery. Degenerated capitalist rulers of the world develop increasingly horrible mechanisms for physical and mental destruction of people. Governing politics is limited to technique for the manipulation of the oppressed by which the emancipating legacy of civil society is being annihilated while an increasingly aggressive relationship between races, nations, religions, genders is being developed... Artificially provoked and controlled conflicts between people are being imposed, in which trust in man and change-oriented energy should burn out. "General suspects" are being labeled so as to be accountable for the causes of discontent and at which anger of citizens deprived of their rights should be vented. In this manner a critical and change-oriented relation towards the world and any class awareness are being annihilated, while contemporary fascism is being created. Production of fear, used to prepare the public for the use of the means of mass destruction (including atomic and neutron bombs) by the "bad guys" around the globe, becomes the most important task of the ruling propaganda machinery. The capitalist perpetuum mobile is in action: capitalism generates increasing discontent which is transformed, by means of politics limited to the technique of redirection of people's discontent toward the accomplishment of anti-human political and economic goals, into a driving power for repression and destruction. The governing regime tries to accomplish total criminalizing of the society, which means that chaos is created – controlled by that very way of life based on the totalizing principle of "Big fish devours small fish!"- within which all efforts to create a human world are being degenerated. Criminalizing of the society becomes the most important form of integration of the oppressed into a spiritual and existential orbit of capitalism and a way of dealing with the libertarian (class) struggle. The specifics of the capitalist criminalizing of the society go toward the expectation that it should eliminate a population "surplus", in other words, the "non usable labor force". Biological destruction of the oppressed becomes the most efficient way of controlling them. This method was "successfully" used by the American administration with Indians in "reservations" all over the USA: methanol and blankets infected with smallpox once played the role now assigned to AIDS, cigarettes, drugs, poisoned food...The faster the operating of capital, the less space remains for humanity. Capitalism destroys the family and all other forms of social life and produces the lonely man, for whom it becomes increasingly difficult to accept responsibility and to oppose the capitalist craze. This is a psychological moment of extraordinary importance for the ruling order. The growing misfortune becomes a generator of the growing evil into which the average citizen (petit bourgeois) masochistically blends so as to avoid responsibility for the annihilation of the world - in which process he, actively or passively, participates. No one raises the issue in public any more of man's responsibility for the established global "development" – for this responsibility implies the right to freedom and life. Therefore, the concept of "future happiness" was replaced by the fear for life as the main behavioral motivation factor. Capitalistically degenerated man has lost faith that he can do anything in the social area, so he tries to barricade himself within his own atomized hopelessness and to create his own micro-world. "Freedom" of the slaves of capitalism is limited to the possibility of purchasing an increasing variety of ever more destructive ways to "escape" from everyday life offered by the entertainment industry. Capitalism generates the pathological man that accepts destruction as way of life - the petit bourgeois is a man degenerated in a capitalist way. He has become a victim of capitalist nothingness to such an extent that he finds relief from the everyday agony he experiences in a vision of an ultimate and spectacular annihilation of mankind: instinct for life transforms into instinct for destruction. Capitalism as a totalitarian order crushes the emancipating legacy of civil society which opens a possibility for creation of the new world - and it produces forms of political struggle that have a destructive nature. Terrorism is a capitalistically degenerated form of the fight against capitalism – destructive violence that uses capitalist means and methods - and only contributes to the intensification of the process of destruction. It does not long for creation of the new world, but for annihilation of the existing world. This is the essential difference between revolutionary struggle and terrorist actions. Fanaticism, and not a visionary conscious based on reason and freedom, dominates terrorist violence. Fanaticism is a consequence of an increasingly merciless destruction of the world and people performed by capitalist monopolies. A typical example is so-called "Muslim extremism": it is an unavoidable consequence of the more and more obvious Western effort to crush the Muslims and take full control over oil deposits. At the same time, the "fight against terrorism" is a new ideological mask of American imperialism which is analogous to the "fight against Judaic bolshevism", a mask of the Nazi Drang nach Osten, annihilation of Jews and Slavs and conquering of Lebensraum for German capital. "Fight against terrorism" becomes a pretext for introduction of global terror by the most powerful capitalist corporations. Those who terrorize the world in the form of the "fight against terrorism" try to crush all those who threaten their efforts to transform the entire world into their own concentration camp. The offered "protection" from terrorism is of a mafia nature: those who do not accept the iron embrace of the "global policeman" will be exposed to the worst American terror. "Global terrorism" becomes the "main danger that threatens mankind" - this is being constantly repeated by servants of the American politics around the globe. From its position toward terrorism one can view the real outreach and the real objectives of the American politics: terrorism is neither ideological nor alignment-related, but of a global and anti-existential nature. Ruling oligarchies of the most developed capitalist countries are "solving" the increasingly deep existential crisis within their respective societies by shifting it onto the shoulders of the poor of the world. The survival of capitalism is directly conditioned by the robbing and destruction of the entire world. Contemporary imperialism (which has been named "globalism" by Coca Cola intellectuals), unlike its earlier historical forms that were exploitative (Rob!) and genocidal (Kill!) in nature, is of an ecocidal nature (Annihilate!). NATO, IMF and other "international organizations" are only a vehicle the West uses for carrying out its ecocide terrorism and the genocide politics based on it. A new fascism is being established, based on total global capitalist terror: each part of the planet, and each segment of life become means for capitalist reproduction - which means that life itself becomes terror over man and the destruction of humanity. The always more intensive destruction of life leads toward a radicalization of the genocide politics: destruction of an increasingly large number of people becomes a precondition for the survival of an ever-smaller number of people. Within that context a theory of the "golden billion" has been established which represents a strategic landmark for the political practice of the most developed capitalist countries. This ecocide capitalist craze generates a growing fear for survival and consequently, based on this fear, establishes conditions for radicalization of political decisions and political action. The use of atomic and neutron bombs, artificial viruses (such as HIV) and other lethal means becomes a legitimate "defense" tool. In almost all reports produced by the Western "experts", "overpopulation" of the planet is "the greatest danger for survival of mankind". Fear for survival is being redirected toward nations of the world that "excessively procreate" thus jeopardizing the survival of all. The solution is being imposed by itself: destruction of the billions of "superfluous" is essential for the survival of mankind. Those who unsparingly destroy nature and exterminate peoples become "saviors of mankind". The West has ample experience with destruction of nations: extermination of the North American Indians by American capitalism, and the Chinese and the Australian Aborigines by British imperialism - show the Western "traditions" of elimination of the "surplus" of humanity. At the same time, based on the American "new world order", "globalism" provides conditions for establishing new "national" genocide plutocracies that have the task of destroying the "excessive population" in their respective territory, by applying of economic and other measures. Further development of capitalism will be paid for by billions of innocent people, by a growing number of wildlife species that are facing extinction, by the entire living world... Eventually, it all serves to enable several million of the mentally degenerated "rich" to continue "enjoying" the material wealth created for them from the ashes and blood, tolerance for which is being provided by the use of police, mafia and military tyranny, and the illusions created by the entertainment industry. Fanatics of capitalism are the worst sort of terrorists: they are destroying life on Earth. The economic logic of monopolist capitalism, which is based upon the notion of "Big fish devours small fish!", has become the ruling political rationale that determines relations between states. What the Nazis did not achieve with weapons and concentration camps, the Western capitalist corporations accomplished with money and economic extortion: the transformation of former "Eastern block" countries into their own "living space", while transforming their citizens into contemporary (Coca Cola) slaves. The ruling European political circles identify Europe with the "European Union" in the same way as the Nazi ideologists declared Europe "the new European order". It is exactly those who advocate Europe as a community of equal nations and who insist on its emancipating heritage - who are the most bitter enemies of the "European Union" as a vehicle for the largest European corporations toward their destruction of the emancipating heritage of European nations. The so called "European Union" is being built upon an illusion that joining the "Union" guarantees all European nations "prosperity and a better life". It should be remembered here that the main goal proclaimed by the Nazi "new European order" was to make "all European nations happy"! The "European Union" is an anti-human and destructive order based upon the ruling principles of monopolist capitalism, "Big fish devours small fish!" and "Money does not stink!"; its ruling political sphere does not provide opportunity for expression of the citizens' political will but represents a political form of the rule of capital over people; the entire institutional, normative and propaganda area of that order is directed toward destruction of the cultural and libertarian self-conscious of people and toward their integration into a spiritual orbit of capitalism at the level of the idiotized labor-consumer "mass". The "European Union" is not a "democratic community of nations", but a form of integration of the European multinational corporations in their fight against the American corporations - which use the American state as a vehicle for the achievement of their interest at the global level. The "European Union" is not based upon the emancipating traditions of European nations, but upon the imperialist traditions of European capitalism. It is not a humanistic goal but a vehicle of the most powerful capitalist corporations for the achievement, by economic and political "measures", of the very same goals that Hitler was expected to achieve for German capital - by military means. It is a transitional phase in "European development" that leads toward the creation of a new (ecocide) fascist order. Appropriately, this violent, capitalistically established "integration of European nations" cause nationalism and racism to thrive in response to people's deprivation of basic human and civil rights - which is an introduction to new increasingly dramatic clashes that will develop based on the prevalent logic impose by monopolist capitalism, and also based on the increasingly contaminated natural environment and on the biological deterioration of European nations. The ecocide capitalist terrorism unavoidably generates nationalism which is no longer based on the struggle to obtain and preserve a job or a living standard, but on the struggle for survival. It becomes more and more obvious that "the uniting of Europe", instead of developing optimism and an atmosphere of tolerance, which would correspond to the "humanist ideals" referred to by politicians, the citizens' fear of the future and intolerance are growing. "Humanist speeches" cannot conceal the growing crime, unemployment, falling apart of the "welfare state" and, along with it, of social protection, devastation of environment, drug abuse, violence, suicides, fanaticism, extremism, the flourishing of Satanist sects and of fascism, the breaking up of the family, the growing number of parentless children, human-trafficking and child-trafficking aimed at sexual abuse or the taking of their lives to "obtain" organs (in England alone more than 40,000 underage children "disappear" annually), the spreading of AIDS and other diseases that would decimate the poor, loneliness that has achieved epidemic dimensions... The "United Europe" generates racism, similar to that developed in the USA. East European and Balkan peoples are getting the status of "people with no culture", which means "lesser creatures". The languages spoken by the Gastarbeiter population are not being perceived as part of the European cultural heritage, but become a motive for discrimination. As a mass phenomenon, migrant labourers keep their children from learning their own mother tongue in order to mask their origin and avoid humiliation. Bearing in mind that an insignificant number of children of migrant labor achieve college and university educations, it becomes clear that depriving them of their mother tongue represents obliteration of their cultural being, through which act they are predestined to be the "dirty labour force" predestined to perform the hardest and the most dangerous jobs. Within the "European Union" one can clearly discern the racist pyramid of power based upon economic, political and military supremacy: Germany, France and England are on the top, Italy, Spain, the Netherlands, Belgium... are bellow them, the Balkan peoples are located at the bottom the pyramid. In the "United Europe", the place reserved for them is the one Afro-Americans occupy in the United States of America. On the "road toward Europe" the Balkan nations will lose their own historical (cultural) self-conscious and libertarian dignity in order to become a garbage collector labour force, while the Balkans become the septic tank of Europe. The Balkan peoples are commanded to renounce the libertarian myths that are the basis of their historical and libertarian self-conscious, while at the same time, they are expected to cling to the myth of "Europe" as a "community of free nations": libertarian myths are being replaced by colonial ones. The "uniting of Europe" in accordance with the American model, which means to be based upon the interests of multinational corporations and their struggle for supremacy, leads towards annihilation of "nationalism" which translates into annihilation of the cultural heritage of European nations and their right to make sovereign political decisions.

Vote neg as an abandonment of belief in capitalism

Adrian Johnston, Ph.D., Assistant Professor of Philosophy, University of New Mexico, 2004, Psychoanalysis, Culture and Society, Volume 9 // Issue 3

Perhaps the absence of a detailed practical roadmap in Žižek’s political writings isn’t a major shortcoming. Maybe, at least for the time being, the most important task is simply the negativity of the critical struggle, the effort to cure an intellectual constipation resulting from capitalist ideology and thereby truly to open up the space for imagining authentic alternatives to the prevailing state of the situation. Another definition of materialism offered by Žižek is that it amounts to accepting the internal inherence of what fantasmatically appears as an external deadlock or hindrance 127 (with fantasy itself being defined as the false externalization of something within the subject, namely, the illusory projection of an inner obstacle 128). From this perspective, seeing through ideological fantasies by learning how to think again outside the confines of current restrictions has, in and of itself, the potential to operate as a form of real revolutionary practice (rather than remaining just an instance of negative/critical intellectual reflection). Why is this the case? Recalling the earlier analysis of commodity fetishism, the social efficacy of money as the universal medium of exchange (and the entire political economy grounded upon it) ultimately relies upon nothing 93 more than a kind of “magic,” that is, the belief in money’s social efficacy by those using it in the processes of exchange. Since the value of currency is, at bottom, reducible to the belief that it has the value attributed to it (and that everyone believes that everyone else believes this as well), derailing capitalism by destroying its essential financial substance is, in a certain respect, as easy as dissolving the mere belief in this substance’s powers. The “external” obstacle of the capitalist system exists exclusively on the condition that subjects, whether consciously or unconsciously, “internally” believe in it—capitalism’s life-blood, money, is simply a fetishistic crystallization of a belief in others’ belief in the socioperformative force emanating from this same material.

# Econ

Collapse inevitable – diminishing returns from innovations – partitioned collapse solves extinction

Deborah Mackenzie 08 – BBC Correspondant. Quotes Joe Tainter - an archaeologist at the University of Utah, Salt Lake City, and author of the 1988 book The Collapse of Complex Societies, and Yaneer Bar-Yam, head of the New England Complex Systems Institute in Cambridge, Massachusetts 4/5/2008 (“Are WE doomed?” Ebsco)

The very nature of civilisation may make its demise inevitable, says Debora MacKenzie DOOMSDAY. The end of civilisation. Literature and film abound with tales of plague, famine and wars which ravage the planet, leaving a few survivors scratching out a primitive existence amid the ruins. Every civilisation in history has collapsed, after all. Why should ours be any different? Doomsday scenarios typically feature a knockout blow: a massive asteroid, all-out nuclear war or a catastrophic pandemic. Yet there is another chilling possibility: what if the very nature of civilisation means that ours, like all the others, is destined to collapse sooner or later? A few researchers have been making such claims for years. Disturbingly, recent insights from fields such as complexity theory suggest that they are right. It appears that once a society develops beyond a certain level of complexity it becomes increasingly fragile. Eventually, it reaches a point at which even a relatively minor disturbance can bring everything crashing down. Some say we have already reached this point, and that it is time to start thinking about how we might manage collapse. Others insist it is not yet too late, and that we can - we must - act now to keep disaster at bay. History is not on our side. Think of Sumeria, of ancient Egypt and of the Maya. In his 2005 best-seller, Jared Diamond of the University of California, Los Angeles, blamed environmental mismanagement for the fall of the Mayan civilisation and others, and warned that we might be heading the same way unless we choose to stop destroying our environmental support systems. Lester Brown of the Earth Policy Institute in Washington DC agrees. He has that governments must pay more attention to vital environmental resources. "It's not about saving the planet. It's about saving civilisation," he says. Others think our problems run deeper. From the moment our ancestors started to settle down and build cities, we have had to find solutions to the problems that success brings. "For the past 10,000 years, problem solving has produced increasing complexity in human societies," says Joseph Tainter, an archaeologist at the University of Utah, Salt Lake City, and author of the 1988 book The Collapse of Complex Societies. If crops fail because rain is patchy, build irrigation canals. When they silt up, organise dredging crews. When the bigger crop yields lead to a bigger population, build more canals. When there are too many for ad hoc repairs, install a management bureaucracy, and tax people to pay for it. When they complain, invent tax inspectors and a system to record the sums paid. That much the Sumerians knew. [Diminishing returns](http://web.ebscohost.com.ezproxy.cul.columbia.edu/ehost/detail?vid=17&hid=12&sid=053d6c1f-93b9-4e78-af50-0ce75a2d2b94%40sessionmgr4&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#toc) There is, however, a price to be paid. Every extra layer of organisation imposes a cost in terms of energy, the common currency of all human efforts, from building canals to educating scribes. And increasing complexity, Tainter realised, produces diminishing returns. The extra food produced by each extra hour of labour - or joule of energy invested per farmed hectare - diminishes as that investment mounts. We see the same thing today in a declining number of patents per dollar invested in research as that research investment mounts. This law of diminishing returns appears everywhere, Tainter says. To keep growing, societies must keep solving problems as they arise. Yet each problem solved means more complexity. Success generates a larger population, more kinds of specialists, more resources to manage, more information to juggle - and, ultimately, less bang for your buck. Eventually, says Tainter, the point is reached when all the energy and resources available to a society are required just to maintain its existing level of complexity. Then when the climate changes or barbarians invade, overstretched institutions break down and civil order collapses. What emerges is a less complex society, which is organised on a smaller scale or has been taken over by another group. Tainter sees diminishing returns as the underlying reason for the collapse of all ancient civilisations, from the early Chinese dynasties to the Greek city state of Mycenae. These civilisations relied on the solar energy that could be harvested from food, fodder and wood, and from wind. When this had been stretched to its limit, things fell apart. Western industrial civilisation has become bigger and more complex than any before it by exploiting new sources of energy, notably coal and oil, but these are limited. There are increasing signs of diminishing returns: the energy required to get is mounting and although global is still increasing, constant innovation is needed to cope with environmental degradation and evolving - the yield boosts per unit of investment in innovation are shrinking. "Since problems are inevitable," Tainter warns, "this process is in part ineluctable." Is Tainter right? An analysis of complex systems has led Yaneer Bar-Yam, head of the New England Complex Systems Institute in Cambridge, Massachusetts, to the same conclusion that Tainter reached from studying history. Social organisations become steadily more complex as they are required to deal both with environmental problems and with challenges from neighbouring societies that are also becoming more complex, Bar-Yam says. This eventually leads to a fundamental shift in the way the society is organised. "To run a hierarchy, managers cannot be less complex than the system they are managing," Bar-Yam says. As complexity increases, societies add ever more layers of management but, ultimately in a hierarchy, one individual has to try and get their head around the whole thing, and this starts to become impossible. At that point, hierarchies give way to networks in which decision-making is distributed. We are at this point. This shift to decentralised networks has led to a widespread belief that modern society is more resilient than the old hierarchical systems. "I don't foresee a collapse in society because of increased complexity," says futurologist and industry consultant Ray Hammond."Our strength is in our highly distributed decision making." This, he says, makes modern western societies more resilient than those like the old Soviet Union, in which decision making was centralised. Things are not that simple, says Thomas Homer-Dixon, a political scientist at the University of Toronto, Canada, and author of the 2006 book The Upside of Down. "Initially, increasing connectedness and diversity helps: if one village has a crop failure, it can get food from another village that didn't." As connections increase, though, networked systems become increasingly tightly coupled. This means the impacts of failures can propagate: the more closely those two villages come to depend on each other, the more both will suffer if either has a problem."Complexity leads to higher vulnerability in some ways," says Bar-Yam. "This is not widely understood." The reason is that as networks become ever tighter, they start to transmit shocks rather than absorb them. "The intricate networks that tightly connect us together - and move people, materials, information, money and energy - amplify and transmit any shock," says Homer-Dixon. "A financial crisis, a terrorist attack or a disease outbreak has almost instant destabilising effects, from one side of the world to the other." For instance, in 2003 large areas of North America and Europe suffered when apparently insignificant nodes of their respective electricity grids failed. And this year China suffered a similar blackout after heavy snow hit power lines. Tightly coupled networks like these create the potential for propagating failure across many critical industries, says Charles Perrow of Yale University, a leading authority on industrial accidents and disasters. [Credit crunch](http://web.ebscohost.com.ezproxy.cul.columbia.edu/ehost/detail?vid=17&hid=12&sid=053d6c1f-93b9-4e78-af50-0ce75a2d2b94%40sessionmgr4&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#toc) Perrow says interconnectedness in the global production system has now reached the point where "a breakdown anywhere increasingly means a breakdown everywhere". This is especially true of the world's financial systems, where the coupling is very tight. "Now wehave a debt crisis with the biggest player, the US. The consequences could be enormous." "A networked society behaves like a multicellular organism," says Bar-Yam, "random damage is like lopping a chunk off a sheep." Whether or not the sheep survives depends on which chunk is lost. And while we are pretty sure which chunks a sheep needs, it isn't clear - it may not even be predictable - which chunks of our densely networked civilisation are critical, until it's too late. "When we do the analysis, almost any part is critical if you lose enough of it," says Bar-Yam. "Now that we can ask questions of such systems in more sophisticated ways, we are discovering that they can be very vulnerable. That means civilisation is very vulnerable." So what can we do? "The key issue is really whether we respond successfully in the face of the new vulnerabilities we have," Bar-Yam says. That means making sure our "global sheep" does not get injured in the first place - something that may be hard to guarantee as the climate shifts and the world's fuel and mineral resources dwindle. Scientists in other fields are also warning that complex systems are prone to collapse. Similar ideas have emerged from the study of natural cycles in ecosystems, based on the work of ecologist Buzz Holling, now at the University of Florida, Gainesville. Some ecosystems become steadily more complex over time: as a patch of new forest grows and matures, specialist species may replace more generalist species, biomass builds up and the trees, beetles and bacteria form an increasingly rigid and ever more tightly coupled system. "It becomes an extremely efficient system for remaining constant in the face of the normal range of conditions," says Homer-Dixon. But unusual conditions - an insect outbreak, fire or drought - can trigger dramatic changes as the impact cascades through the system.The end result may be the collapse of the old ecosystem and its replacement by a newer, simpler one. Globalisation is resulting in the same tight coupling and fine-tuning of our systems to a narrow range of conditions, he says. Redundancy is being systematically eliminated as companies maximise profits. Some products are produced by only one factory worldwide. Financially, it makes sense, as mass production maximises efficiency. Unfortunately, it also minimises resilience. "We need to be more selective about increasing the connectivity and speed of our critical systems," says Homer-Dixon. "Sometimes the costs outweigh the benefits." Is there an alternative? Could we heed these warnings and start carefully climbing back down the complexity ladder? Tainter knows of only one civilisation that managed to decline but not fall. "After the Byzantine empire lost most of its territory to the Arabs, they simplified their entire society. Cities mostly disappeared, literacy and numeracy declined, their economy became less monetised, and they switched from professional army to peasant militia." Pulling off the same trick will be harder for our more advanced society. Nevertheless, Homer-Dixon thinks we should be taking action now. "First, we need to encourage distributed and decentralised production of vital goods like energy and food," he says. "Second, we need to remember that slack isn't always waste. A manufacturing company with a large inventory may lose some money on warehousing, but it can keep running even if its suppliers are temporarily out of action." The electricity industry in the US has already started identifying hubs in the grid with no redundancy available and is putting some back in, Homer-Dixon points out. Governments could encourage other sectors to follow suit. The trouble is that in a world of fierce competition, private companies will always increase efficiency unless governments subsidise inefficiency in the public interest. Homer-Dixon doubts we can stave off collapse completely. He points to what he calls "tectonic" stresses that will shove our rigid, tightly coupled system outside the range of conditions it is becoming ever more finely tuned to. These include population growth, the growing divide between the world's rich and poor, financial instability, weapons proliferation, disappearing forests and fisheries, and climate change. In imposing new complex solutions we will run into the problem of diminishing returns - just as we are running out of cheap and plentiful energy. "This is the fundamental challenge humankind faces. We need to allow for the healthy breakdown in natural function in our societies in a way that doesn't produce catastrophic collapse, but instead leads to healthy renewal," Homer-Dixon says. This is what happens in forests, which are a patchy mix of old growth and newer areas created by disease or fire. If the ecosystem in one patch collapses, it is recolonised and renewed by younger forest elsewhere. We must allow partial breakdown here and there, followed by renewal, he says, rather than trying so hard to avert breakdown by increasing complexity that any resulting crisis is actually worse. Lester Brown thinks we are fast running out of time. "The world can no longer afford to waste a day. We need a Great Mobilisation, as we had in wartime," he says. "There has been tremendous progress in just the past few years. For the first time, I am starting to see how an alternative economy might emerge. But it's now a race between tipping points - which will come first, a switch to sustainable technology, or collapse?" Tainter is not convinced that even new technology will save civilisation in the long run. "I sometimes think of this as a 'faith-based' approach to the future," he says. Even a society reinvigorated by cheap new energy sources will eventually face the problem of diminishing returns once more. Innovation itself might be subject to diminishing returns, or perhaps absolute limits. Studies of the way by Luis Bettencourt of the Los Alamos National Laboratory, New Mexico, support this idea. His team's work suggests that an ever-faster rate of innovation is required to keep cities growing and prevent stagnation or collapse, and in the long run this cannot be sustainable. The stakes are high. Historically, collapse always led to a fall in population. "Today's population levels depend on fossil fuels and industrial agriculture," says Tainter. "Take those away and there would be a reduction in the Earth's population that is too gruesome to think about." If industrialised civilisation does fall, the urban masses - half the world's population - will be most vulnerable. Much of our hard-won knowledge could be lost, too. "The people with the least to lose are subsistence farmers," Bar-Yam observes, and for some who survive, conditions might actually improve. Perhaps the meek really will inherit the Earth.

Collapse stops wars – forced refocus

**Bennett and Nordstrom**, Department of Political Science Professors at Pennsylvania State, **2k** [Scott and Timothy, “Foreign Policy Substitutability and Internal Economic Problems in Enduring Rivalries,” Journal of Conflict Resolution, February, Ebsco]

In this analysis, we focus on using economic conditions to understand when rivalries are likely to escalate or end. Rivalries are an appropriate set of cases to use when examining substitutability both because leaders in rival states have clearly substitutable choices and because rivalries are a set of cases in which externalization is a particularly plausible policy option.7 In particular, when confronted with domestic problems, leaders in a rivalry have the clear alternatives of escalating the conflict with the rival to divert attention or to work to settle the rivalry as a means of freeing up a substantial amount of resources that can be directed toward solving internal problems. In the case of the diversion option, rivals provide logical, believable actors for leaders to target; the presence of a clear rival may offer unstable elites a particularly inviting target for hostile statements or actual conflict as necessary. The public and relevant elites already consider the rival a threat or else the rivalry would not have continued for an extended period; the presence of disputed issues also provides a casus belli with the rival that is always present. Rivals also may provide a target where the possible costs and risks of externalization are relatively controlled. If the goal is diversion, leaders willwant to divert attention without provoking an actual (and expensive)war. Over the course of many confrontations, rival states may learn to anticipate response patterns, leading to safer disputes or at least to leaders believing that they can control the risks of conflict when they initiate a new confrontation. In sum, rivals provide good targets for domestically challenged political leaders. This leads to our first hypothesis, which is as follows: *Hypothesis 1*: Poor economic conditions lead to diversionary actions against the rival. Conflict settlement is also a distinct route to dealing with internal problems that leaders in rivalries may pursue when faced with internal problems. Military competition between states requires large amounts of resources, and rivals require even more attention. Leaders may choose to negotiate a settlement that ends a rivalry to free up important resources that may be reallocated to the domestic economy. In a “guns versus butter” world of economic trade-offs, when a state can no longer afford to pay the expenses associated with competition in a rivalry, it is quite rational for leaders to reduce costs by ending a rivalry. This gain (a peace dividend) could be achieved at any time by ending a rivalry. However, such a gain is likely to be most important and attractive to leaders when internal conditions are bad and the leader is seeking ways to alleviate active problems. Support for policy change away from continued rivalry is more likely to develop when the economic situation sours and elites and masses are looking for ways to improve a worsening situation. It is at these times that the pressure to cut military investment will be greatest and that state leaders will be forced to recognize the difficulty of continuing to pay for a rivalry. Among other things, this argument also encompasses the view that the cold war ended because the Union of Soviet Socialist Republics could no longer compete economically with the United States. *Hypothesis 2*: Poor economic conditions increase the probability of rivalry termination. Hypotheses 1 and 2 posit opposite behaviors in response to a single cause (internal economic problems). As such, they demand a research design that can account for substitutability between them.

Economic upswings cause wars – impact’s extinction

Chase-**Dunn** and Podobnik, assistant professor of sociology, 99 (Christoper, D irector of the Institute for Research on World-Systems, , Assistant Professor in the Department of Sociology at U of California, and Bruce, Anthropology at Lewis and Clark College, The Future of Global Conflict, ed. Bornschier and Chase-Dunn, pg 43)

While the onset of a period of hegemonic rivalry is in itself disturbing, the picture becomes even grimmer when the influence of long-term economic cycles is taken into account. As an extensive body of research documents (see especially Van Duijn, 1983), the 50 to 60 year business cycle known as the Kondratieff wave (K-wave) has been in synchronous operation on an international scale for at least the last two centuries. Utilizing data gathering by Levy (1983) on war severity, Goldstein (1988) demonstrates that there is a corresponding 50 to 60 year cycle in the number of battle deaths per year for the period 1495-1975. Beyond merely showing that the K-wave and the war cycle are linked in a systematic fashion, Goldstein’s research suggests that severe core wars are much more likely to occur late in the upswing phase of the K-wave. This finding is interpreted as showing that, while states always desire to go to war, they can afford to do so only when economic growth is providing them with sufficient resources. Modelski and Thompson (1996) present a more complex interpretation of the systemic relationship between economic and war cycles, but it closely resembles Goldstein’s hypothesis. In their analysis, a first economic upswing generates the economic resources required by an ascending core state to make a bid for hegemony; a second period of economic growth follows a period of global war and the establishment of a new period of hegemony. Here, again, specific economic upswings are associated with an increased likelihood of the outbreak of core war. It is widely accepted that the current K-wave, which entered a downturn around 1967-73, is probably now in the process of beginning a new upturn which will reach its apex around 2025. It is also widely accepted that by this period US hegemony, already unraveling, will have been definitively eroded. This convergence of a plateauing economic cycle with a period of political multicentricity within the core should, if history truly does repeat itself, result in the outbreak of full-scale warfare between the declining hegemon and the ascending core powers. Although both Goldstein (1991) and Modelski and Thompson (1996) assert that such a global war can (somehow) be avoided, other theorists consider that the possibility of such a core war is sufficiently high that serious steps should be taken to ensure that such collective suicide does not occur .

Upswing wars outweigh – they’re 21 times as deadly

**Goldstein, ‘88** - Joshua S. Goldstein, Professor of International Relations, American University, 1988, Long Cycles, pp. 244-248

The connection between economic phase periods and wars is investigated in several ways. Levy’s “great power wars” (class 2, above) are categorized (table 11.4) according to the economic phase period in which the war “mainly” fell (see definitions above, p. 239). Thirty-one wars occurred during upswings, twenty-seven during downswings, and six seriously overlapped phase periods (see also table 11.5, column 7). Thus hardly any more wars occurred on the upswing phases than the downswings. But in total battle fatalities (severity), except for the 1575—94 upswing, there is a clear alternation between upswing and downswing phases. More severe wars occurred during upswing phases. I have tabulated six war indicators by phase period (table 11 .5).26 The first indicator (col. 3) derives from the list of fatalities (table 11.4), here expressed as an average annual fatality rate in each phase.27 This indicator is also displayed as a bar chart in figure 11.3. With the exception of the (low-fatality) upswing of 1575—94, fatalities follow the pattern of upswings and downswings throughout the 481-year span of the data. Up through 1892, the average annual fatality rate was six times higher on upswings than on downswings; if the twentieth century is included, it is twenty-one times higher on upswings than downswings. Categorizing the same fatality data “strictly” by phase period (col. 4),28 in conjunction with the method just discussed, points to sensitivities to the exact dating of turning points. Not surprisingly, the main effect is on the twentieth century’s two world wars, each overlapping one to two years into an adjacent phase. The results also show the weakest correlation to be in the period 1495—1620. Nonetheless, the fatality rate on upswings is still more than four times higher than on downswings for both 1495—1892 and 1495—1975. The greater severity of war on long wave upswings, then, is a very strong and consistent correlation.29

Growth collapses the environment – causes extinction

Speth, ‘08 – Rhodes Scholar @ Oxford University, Chairman of Council on Environmental Quality for Executive Office, Founder of World Recourses Institute (Think-Tank), Led the Western Hemisphere Dialogue on Environment and Development, Administrator of United Nations Development Program, Dean of Yale School of Forestry and Environmental Studies, Leader of the President’s Task Force on Global Recourses and the Environment, Holds multiple awards—National Wildlife Federation’s Recourse Defense Award and Lifetime Achievement Award of Environmental Law Institute, and Blue Planet Prize, James, “The Bridge at the Edge of the World”, pages 1-9

The remarkable charts that introduce this book reveal the story of humanity’s impact on the natural earth.' The pattern is clear: if we could speed up time, it would seem as if the global economy is crashing against the earth—the Great Collision. And like the crash of an aster- oid, the damage is enormous. For all the material blessings economic progress has provided, for all the disease and destitution avoided, for all the glories that shine in the best of our civilization, the costs to the natural world, the costs to the glories of nature, have been huge and must be counted in the balance as tragic loss. Half the world ’s tropical and temperate forests are now gone.’ The rate of deforestation in the tropics continues at about an acre a second.’ About half the wetlands and a third of the mangroves are gone.‘ An estimated 90 percent of the large predator fish are gone, and 75 percent of marine fisheries are now overfished or fished to capacity.’ Twenty percent of the corals are gone, and another 20 percent severely threatened. Species are disappearing at rates about a thousand times faster than normal.’ The planet has not seen such a spasm of extinction in sixty-ﬁve million years, since the dinosaurs disappeared.” Over half the agricultural land in drier regions suffers from some degree of deterioration and desertification.° Persistent toxic chemicals can now be found by the dozens in essentially each and every one of us.” Human impacts are now large relative to natural systems. The earth’s stratospheric ozone layer was severely depleted before the change was discovered. Human activities have pushed atmospheric carbon diox- ide up by more than a third and have started in earnest the dangerous process of warming the planet and disrupting climate. Everywhere earth’s ice ﬁelds are melting." Industrial processes are fixing nitrogen, making it biologically active, at a rate equal to nature’s; one result is the development of more than two hundred dead zones in the oceans due to overfertilization.” Human actions already consume or destroy each year about 40 percent of nature ’s photosynthetic output, leaving too little for other species." Freshwater withdrawals doubled globally between 1960 and 2000, and are now over half of accessible runoff." The following rivers no longer reach the oceans in the dry season: the Colorado, Yellow, Ganges, and Nile, among others." Societies are now traveling together in the midst of this unfolding calamity down a path that links two worlds. Behind is the world we have lost, ahead the world we are making. It is difficult to appreciate the abundance of wild nature in the world we have lost. In America we can think of the pre-Columbian world of 1491, of Lewis and Clark, and of John James Audubon. It is a world where nature is large and we are not. It is a world of majestic old-growth forests stretching from the Atlantic to the Mississippi, of oceans brimming with fish, of clear skies literally darkened by passing ﬂocks of birds. As William MacLeish notes in T he Day beﬁnre Amer- ica, in 1602 an Englishman wrote in his journal that the ﬁsh schooled so thickly he thought their backs were the sea bottom. Bison once roamed east to Florida. There were jaguars in the Southeast, griz- zly bear in the Midwest, and wolves, elk and mountain lions in New England.“ Audubon described the breathtaking multitudes of the passenger pi- geon migration, as well as the rapacity of their wild and human preda- tors: “Few pigeons were to be seen before sunset; but a great number of persons, with horses and wagons, guns and ammunition, had already established encampments. . . . Suddenly, there burst forth a general cry of ‘Here they come!’ The noise which they made, though yet distant, reminded me of a hard gale at sea. . . . As the birds arrived, and passed over me, I felt a current of air that surprised me. Thousands were soon knocked down by polemen. The current of birds, however, still kept increasing. . . . The pigeons, coming in by thousands, alighted every- where, one above another, until solid masses . . . were formed on every tree, in all directions. . . . The uproar continues . . . the whole night. . . . Toward the approach of day, the noise rather subsided. . . . The howlings of the wolves now reached our ears; and the foxes, lynxes, cougars, bears, raccoons, opossums, and pole-cats were seen sneaking off from the spot. Whilst eagles and hawks, of different species, accom- panied by a crowd of vultures, came to supplant them, and enjoy their share of the spoil. It was then that the authors of all this devastation began their entry amongst the dead, the dying, and the mangled. The pigeons were picked up and piled in heaps, until each had as many as he could possibly dispose of, when the hogs were let loose to feed on the remainder.”" The last passenger pigeon on earth expired in a zoo in Cincinnati in 1914. Some decades later, forester and philosopher Aldo Leopold offered these words at a ceremony on this passing: “We grieve because no living man will see again the onrushing phalanx of victorious birds, sweeping a path for spring across the March skies, chasing the defeated winter from all the woods and prairies. . . . Men still live who, in their youth, remember pigeons. Trees still live who, in their youth, were shaken by a living wind. . . . There will always be pigeons in books and in museums, but these are eﬂigies and images, dead to all hard- ships and to all delights. Book-pigeons cannot dive out of a cloud to make the deer run for cover, or clap their wings in thunderous ap- plause of mast-laden woods. Book-pigeons cannot breakfast on new- mown wheat in Minnesota and dine on blueberries in Canada. They know no urge of seasons; they feel no kiss of sun, no lash of wind and weather.” ‘8 Human societies are moving, rapidly now, between the two worlds. The movement began slowly, but now we are hurtling toward the world directly ahead. The old world, nature’s world, continues, of course, but we are steadily closing it down, roping it off. It ﬂourishes in our art and literature and in our imaginations. But it is disappearing. Economic historian Angus Maddison reports that in the year 1000 there were only about 270 million people on earth—fewer than today’s U.S. population. Global economic output was only about $120 billion. Eight hundred years later, the man-made world was still small. By 1820, populations had risen to about a billion people with an output of only $690 billion. Over this eight hundred years, per capita income increased by only a couple of hundred dollars a year. But shortly thereafter the take-off began. By 2000, populations had swelled by an additional ﬁve billion, and, astoundingly, economic output had grown to exceed forty trillion dollars.” The acceleration continues. The size of the world economy doubled since 1960, and then doubled again. World economic activity is projected to quadruple again by midcentury. Historian R. McNeill has stressed the phenomenal expansion of the human enterprise in the twentieth century. It was in the twentieth century, and especially since World War II, that human society truly left the moorings of its past and launched itself on the planet with unprecedented force. McNeill observes that this exponential century “shattered the constraints and rough stability of old economic, demo- graphic, and energy regimes.” “In environmental history,” he writes, “the twentieth century qualifies as a peculiar century because of the screeching acceleration of so many of the processes that bring eco- logical change.”Z° We live now in a full world, dramatically unlike the world of 1900, or even that of 1950. Physicists have a precise concept of momentum. To them momentum is mass times velocity, and velocity is not ust speed but also direction. Today the world economy has gathered tremendous momentum—it is both huge in size and growing fast. But what is its direction? I am seated in my study as I write this, looking at a stack of books about two feet high. They share a common theme, and it is not a happy one to contemplate. We can see this theme immediately in their titles.” By a conservative jurist: Richard A. Posner, Catastrophe: Risk and Response By the president of the Royal Society in the United Kingdom: Martin Rees, Our Final Hour: How Yerror, Error and Environmental Disaster Threaten Human/cind’s Future By a leading American scholar: Jared Diamond, Collapse: I-low Societies Choose to Fail or Succeed By a British scientist: James Lovelock, The Revenge ofGaia.' Why the Earth Is Fighting Bad: and How We Can Still Save Humanity By an American expert: James Howard Kunstler, The Long Emergency: Surviving the End of Oil, Climate Change, and Other Converging Catastrophes of the Twang-first Century By a U.S. expert on conﬂict: Michael T. Klare, Resource Wars: The New Landscape of Global Conflict By an Australian diplomat and historian: Colin Mason, The 2q3o Spi/re: The Countdown to Global Catastrophe That is but a sample of the “collapse” books now on the market. Each of these authors sees the world on a path to some type of col- lapse, catastrophe, or breakdown, and they each see climate change and other environmental crises as leading ingredients of a devil’s brew that also includes such stresses as population pressures, peak oil and other energy supply problems, economic and political instabilities, ter- rorism, nuclear proliferation, the risks of various twenty-ﬁrst-century technologies, and similar threats. Some think a bright future is still possible if we change our ways in time; others see a new dark ages as the likely outcome. For Sir Martin Rees, “the odds are no better than ﬁfty-ﬁfty that our present civilization on earth will survive to the end of the present century.””2 Personally, I cannot imagine that the risks are so great, but Rees is a thoughtful individual. In any case, it would be foolish to dismiss these authors. They provide a stark warning of what could happen. The escalating processes of climate disruption, biotic impoverish- ment, and toxiﬁcation that continue despite decades of warnings and earnest effort constitute a severe indictment, but an indictment of what exactly? If we want to reverse today's destructive trends, forestall fur- ther and greater losses, and leave a bountiful world for our children and grandchildren, we must return to fundamentals and seek to understand both the underlying forces driving such destructive trends and the economic and political system that gives these forces free rein. Then we can ask what can be done to change the system. The underlying drivers of today’s environmental deterioration have been clearly identiﬁed. They range from immediate forces like the enormous growth in human population and the dominant technolo- gies deployed in the economy to deeper ones like the values that shape our behavior and determine what we consider important in life. Most basically, we know that environmental deterioration is driven by the economic activity of human beings. About half of today’s world popu- lation lives in abject poverty or close to it, with per capita incomes of less than two dollars a day. The struggle of the poor to survive cre- ates a range of environmental impacts where the poor themselves are often the primary victims—for example, the deterioration of arid and semiarid lands due to the press of increasing numbers of people who have no other option. But the much larger and more threatening impacts stem from the economic activity of those of us participating in the modern, increas- ingly prosperous world economy. This activity is consuming vast quantities of resources from the environment and returning to the en- vironment vast quantities of waste products. The damages are already huge and are on a path to be ruinous in the future. So, a fundamental question facing societies today—perhaps the fundamental question—is how can the operating instructions for the modern world economy be changed so that economic activity both protects and restores the natural world? With increasingly few exceptions, modern capitalism is the operat- ing system of the world economy. I use “modern capitalism” here in a broad sense as an actual, existing system of political economy, not as an idealized model. Capitalism as we know it today encompasses the core economic concept of private employers hiring workers to produce products and services that the employers own and then sell with the intention of making a proﬁt. But it also includes competitive markets, the price mechanism, the modern corporation as its principal institu- tion, the consumer society and the materialistic values that sustain it, and the administrative state actively promoting economic strength and growth for a variety of reasons. Inherent in the dynamics of capitalism is a powerful drive to earn proﬁts, invest them, innovate, and thus grow the economy, typically at exponential rates, with the result that the capitalist era has in fact been characterized by a remarkable exponential expansion of the world economy. The capitalist operating system, whatever its shortcomings, is very good at generating growth. These features of capitalism, as they are constituted today, work together to produce an economic and political reality that is highly destructive of the environment. An unquestioning society-wide commitment to economic growth at almost any cost; enormous investment in technologies designed with little regard for the environment; powerful corporate interests whose overriding objective is to grow by generating profit, including profit from avoiding the environmental costs they create; markets that systematically fail to recognize environmental costs unless corrected by government; government that is subservient to corporate interests and the growth imperative; rampant consumerism spurred by a worshipping of novelty and by sophisticated advertising; economic activity so large in scale that its impacts alter the fundamental biophysical operations of the planet—all combine to deliver an ever-growing world economy that is undermining the planet’s ability to sustain life.

# Highways

Heg is unsustainable – emerging powers, wealth transfer, and nonstate actors

US National Intel Council Report, ‘08

(National Intelligence Council, U.S. National Intelligence Agency Mid-Term and Long-Term Thinking, Global Trends 2025: A Transformed World, p.vi)

The international system—as constructed following the Second World War—will be almost unrecognizable by 2025 owing to the rise of emerging powers, a globalizing economy, an historic transfer of relative wealth and economic power from West to East, and the growing influence of nonstate actors. By 2025, the international system will be a global multipolar one with gaps in national power continuing to narrow between developed and developing countries. Concurrent with the shift in power among nation-states, the relative power of various nonstate actors—including businesses, tribes, religious organizations, and criminal networks—is increasing. The players are changing, but so too are the scope and breadth of transnational issues important for continued global prosperity. Aging populations in the developed world; growing energy, food, and water constraints; and worries about climate change will limit and diminish what will still be an historically unprecedented age of prosperity. Historically, emerging multipolar systems have been more unstable than bipolar or unipolar ones. Despite the recent financial volatility—which could end up accelerating many ongoing trends—we do not believe that we are headed toward a complete breakdown of the international system, as occurred in 1914-1918 when an earlier phase of globalization came to a halt. However, the next 20 years of transition to a new system are fraught with risks. Strategic rivalries are most likely to revolve around trade, investments, and technological innovation and acquisition, but we cannot rule out a 19th century-like scenario of arms races, territorial expansion, and military rivalries. This is a story with no clear outcome, as illustrated by a series of vignettes we use to map out divergent futures. Although the United States is likely to remain the single most powerful actor, the United States’ relative strength—even in the military realm—will decline and US leverage will become more constrained. At the same time, the extent to which other actors—both state and nonstate—will be willing or able to shoulder increased burdens is unclear. Policymakers and publics will have to cope with a growing demand for multilateral cooperation when the international system will be stressed by the incomplete transition from the old to a still-forming new order. Economic Growth Fueling Rise of Emerging Players In terms of size, speed, and directional flow, the transfer of global wealth and economic power now under way—roughly from West to East—is without precedent in modern history. This shift derives from two sources. First, increases in oil and commodity prices have generated windfall profits for the Gulf states and Russia. Second, lower costs combined with government policies have shifted the locus of manufacturing and some service industries to Asia. Growth projections for Brazil, Russia, India, and China (the BRICs) indicate they will collectively match the original G-7’s share of global GDP by 2040-2050. China is poised to have more impact on the world over the next 20 years than any other country. If current trends persist, by 2025 China will have the world’s second largest economy and will be a leading military power. It also could be the largest importer of natural resources and the biggest polluter. India probably will continue to enjoy relatively rapid economic growth and will strive for a multipolar world in which New Delhi is one of the poles. China and India must decide the extent to which they are willing and capable of playing increasing global roles and how each will relate to the other. Russia has the potential to be richer, more powerful, and more self-assured in 2025 if it invests in human capital, expands and diversifies its economy, and integrates with global markets. On the other hand, Russia could experience a significant decline if it fails to take these steps and oil and gas prices remain in the $50-70 per barrel range. No other countries are projected to rise to the level of China, India, or Russia, and none is likely to match their individual global clout. We expect, however, to see the political and economic power of other countries—such as Indonesia, Iran, and Turkey—increase. For the most part, China, India, and Russia are not following the Western liberal model for selfdevelopment but instead are using a different model, “state capitalism.” State capitalism is a loose term used to describe a system of economic management that gives a prominent role to the state. Other rising powers—South Korea, Taiwan, and Singapore—also used state capitalism to develop their economies. However, the impact of Russia, and particularly China, following this path is potentially much greater owing to their size and approach to “democratization.” We remain optimistic about the long-term prospects for greater democratization, even though advances are likely to be slow and globalization is subjecting many recently democratized countries to increasing social and economic pressures with the potential to undermine liberal institutions.

Unipolar system creates recalcitrant power backlash which leads to proliferation and war

Monteiro 12- Professor of Political Science at Yale, PhD in Political Science from UChicago

(Nuno, “Unrest Assured: Why Unipolarity is Not Peaceful,” MIT Press Journals, International Security Vol. 36, No. 3, Pages 9-40)

In an international system with more than one great power, recalcitrant mi-nor powers would, in principle, be able to balance externally by finding a great power sponsor.70 In unipolarity, however, no such sponsors exist.71 Only major powers are available, but because their survival is already guaranteed, they are likely to accommodate the unipole. And even if some do not, they are unlikely to meet a recalcitrant minor power’s security needs given that they possess only limited power-projection capabilities.72 As such, recalcitrant minor pow-ers must defend themselves, which puts them in a position of extreme self-help. There are four characteristics common to states in this position: (1) anarchy,(2) uncertainty about other states’ intentions, (3) insufficient capabilities to de-ter a great power, and (4) no potential great power sponsor with whom to forma balancing coalition. The first two characteristics are common to all states in all types of polarity. The third is part of the rough-and-tumble of minor power sin any system. The fourth, however, is unique to recalcitrant minor powers in unipolarity. This dire situation places recalcitrant minor powers at risk for as long as they lack the capability to defend themselves. They depend on the goodwill of the unipole and must worry that the unipole will shift to a strategy of offensive dominance or disengagement. Recalcitrant minor powers will therefore attempt to bolster their capabilities through internal balancing. To deter an eventual attack by the unipole and bolster their chances of sur-vival in the event deterrence fails, recalcitrant minor powers will attempt to re-inforce their conventional defenses, develop the most effective asymmetric strategies possible, and, most likely in the nuclear age, try to acquire the ulti-mate deterrent—survivable nuclear weapons.73 In so doing, they seek to become major powers.

Extinction

Asal and Beardsley 09 (Victor, Department of Political Science, State University of New York, Albany, and Kyle, Department of Political Science, Emory University, Winning with the Bomb, <http://belfercenter.ksg.harvard.edu/files/uploads/Beardsley-Asal_Winning_with_the_Bomb.pdf>)

Conclusion Why do states proliferate? Nuclear weapons and the programs necessary to create them are expensive. They are dangerous. Other countries may attack a state while it is trying to create a nuclear arsenal and there is always the risk of a catastrophic accident. They may help generate existential threats by encouraging first strike incentives amongst a state's opponents. This paper has explored the incentives that make nuclear weapons attractive to a wide range of states despite their costly and dangerous nature. We have found that nuclear weapons provide more than prestige, they provide leverage. They are useful in coercive diplomacy, and this must be central to any explanation of why states acquire them. Since 9 August 1945 no state has used a nuclear weapon against another state, but we find evidence that the possession of nuclear weapons helps states to succeed in their confrontations with other states even when they do not “use” them. Conflict with nuclear actors carries with it a potential danger that conflict with other states simply does not have. Even though the probability of full escalation is presumably low, the evidence confirms that the immense damage from the possibility of such escalation is enough to make an opponent eager to offer concessions. Asymmetric crises allow nuclear states to use their leverage to good effect. When crises involve a severe threat – and nuclear use is not completely ruled out – the advantage that nuclear actors have is substantial. Nuclear weapons help states win concessions quickly in 25 salient conflicts. Consistent with the other papers in this issue and the editors’ introduction (Gartzke and Kroenig this issue), we report that nuclear weapons confer tangible benefits to the possessors. These benefits imply that there should be a general level of demand for nuclear weapons, which means that explanations for why so few states have actually proliferated should focus more on the supply side, as applied by Matthew Kroenig (this issue) and Matthew Fuhrmann (this issue). The findings here importantly suggest an additional reason why “proliferation begets proliferation,” in the words of George Shultz (Shultz 1984, 18). If both parties to a crisis have nuclear weapons, the advantage is effectively cancelled out. When states develop nuclear weapons, doing so may encourage their rivals to also proliferate for fear of being exploited by the shifting bargaining positions. And once the rivals proliferate, the initial proliferator no longer has much bargaining advantage. On the one hand, this dynamic adds some restraint to initial proliferation within a rivalry relationship: states fear that their arsenal will encourage their rivals to pursue nuclear weapons, which will leave them no better off (Davis 1993; Cirincione 2007). On the other hand, once proliferation has occurred, all other states that are likely to experience coercive bargaining with the new nuclear state will also want nuclear weapons. The rate of proliferation has the potential to accelerate because the desire to posses the “equalizer” will increase as the number of nuclear powers slowly rises. Our theoretical framework and empirical findings are complementary to Gartzke and Jo (this issue), who posit and find that nuclear states enjoy greater influence in the international realm. An interesting dynamic emerges when comparing the results to Rauchhaus (this issue), who finds that nuclear weapons in asymmetric dyads tend to increase the propensity for escalation. We have argued that nuclear weapons improve the bargaining leverage of the 26 possessors and tested that proposition directly. It is important to note that the factors that shape conflict initiation and escalation are not necessarily the same factors that most shape the outcome of the conflict. Even so, one explanation for why a stronger bargaining position does not necessarily produce less escalation is that escalation is a function of decisions by both sides, and even though the opponent of a nuclear state is more willing to back down, the nuclear state should be more willing to raise its demands and push for a harder bargain in order to maximize the benefits from the nuclear weapons. Nuclear weapons appear to need ever-greater shares of their bargains in order to be satisfied, which helps to explain both their proclivity to win and their proclivity toward aggressive coercive diplomacy. An important implication in light of these findings is thus that even though nuclear weapon states tend to fare better at the end of their crises, this does not necessarily mean that the weapons are a net benefit for peace and stability.

# Seaports

No resource wars

Allouche, 11 - Research Fellow at the Institute of Development Studies at the University of Sussex (Jeremy,. "The sustainability and resilience of global water and food systems: Political analysis of the interplay between security, resource scarcity, political systems and global trade" Food Policy, Volume 36, Supplement 1, January 2011, Science Direct)

Water/food resources, war and conflict The question of resource scarcity has led to many debates on whether scarcity (whether of food or water) will lead to conflict and war. The underlining reasoning behind most of these discourses over food and water wars comes from the Malthusian belief that there is an imbalance between the economic availability of natural resources and population growth since while food production grows linearly, population increases exponentially. Following this reasoning, neo-Malthusians claim that finite natural resources place a strict limit on the growth of human population and aggregate consumption; if these limits are exceeded, social breakdown, conflict and wars result. Nonetheless, it seems that most empirical studies do not support any of these neo-Malthusian arguments. Technological change **and greater inputs of capital** have **dramatically increased labour productivity in agriculture.** More generally, the neo-Malthusian view has suffered because during the last two centuries **humankind has breached many resource barriers that seemed unchallengeable**. Lessons from history: alarmist scenarios, resource wars and international relations In a so-called age of uncertainty, a number of alarmist scenarios have linked the increasing use of water resources and food insecurity with wars. The idea of water wars (perhaps more than food wars) is a dominant discourse in the media (see for example Smith, 2009), NGOs (International Alert, 2007) and within international organizations (UNEP, 2007). In 2007, UN Secretary General Ban Ki-moon declared that ‘water scarcity threatens economic and social gains and is a potent fuel for wars and conflict’ (Lewis, 2007). Of course, this type of discourse has an **instrumental purpose**; security and conflict are here used for raising water/food as key policy priorities at the international level. In the Middle East, presidents, prime ministers and foreign ministers have also used this bellicose rhetoric. Boutrous Boutros-Gali said; ‘the next war in the Middle East will be over water, not politics’ (Boutros Boutros-Gali in Butts, 1997, p. 65). The question is not whether the sharing of transboundary water sparks political tension and alarmist declaration, but rather to what extent water has been a principal factor in international conflicts. The evidence seems quite weak. Whether by president Sadat in Egypt or King Hussein in Jordan, none **of these declarations have been followed up by military action**. The governance of transboundary water has gained increased attention these last decades. This has a direct impact on the global food system as water allocation agreements determine the amount of water that can used for irrigated agriculture. The likelihood of conflicts over water is an important parameter to consider in assessing the stability, sustainability and resilience of global food systems. None **of the** various and extensive databases on the causes of war show water as a casus belli. Using the International Crisis Behavior (ICB) data set and supplementary data from the University of Alabama on water conflicts, Hewitt, Wolf and Hammer found only seven disputes where water seems to have been at least a partial cause for conflict (Wolf, 1998, p. 251). In fact, about 80% of the incidents relating to water were limited purely to governmental rhetoric intended for the electorate (Otchet, 2001, p. 18). As shown in The Basins At Risk (BAR) water event database, **more than two-thirds of over 1800 water-related ‘events’ fall on the ‘cooperative’ scale** (Yoffe et al., 2003). Indeed, if one takes into account a much longer period, the following figures clearly demonstrate this argument. According to studies by the United Nations Food and Agriculture Organization (FAO), organized political bodies signed between the year 805 and 1984 more than 3600 water-related treaties, and approximately 300 treaties dealing with water management or allocations in international basins have been negotiated since 1945 ([FAO, 1978] and [FAO, 1984]). The fear around water wars have been driven by a Malthusian outlook which equates scarcity with violence, conflict and war. There is however **no direct correlation between water scarcity and transboundary conflict**. Most specialists now tend to agree that the major issue is not scarcity per se but rather the allocation of water resources between the different riparian states (see for example [Allouche, 2005], [Allouche, 2007] and [Rouyer, 2000]). Water rich countries have been involved in a number of disputes with other relatively water rich countries (see for example India/Pakistan or Brazil/Argentina). The perception of each state’s estimated water needs really constitutes the core issue in transboundary water relations. Indeed, whether this scarcity exists or not in reality, perceptions of the amount of available water shapes people’s attitude towards the environment (Ohlsson, 1999). In fact, some water experts have argued that scarcity drives the process of co-operation among riparians ([Dinar and Dinar, 2005] and [Brochmann and Gleditsch, 2006]). In terms of international relations, the threat of water wars due to increasing scarcity **does not make much sense in the light of the recent** historical record. Overall, the water war rationale expects conflict to occur over water, and appears to suggest that violence is a viable means of securing national water supplies, an argument which is highly contestable. The debates over the likely impacts of climate change have again popularised the idea of water wars. The argument runs that climate change will precipitate worsening ecological conditions contributing to resource scarcities, social breakdown, institutional failure, mass migrations and in turn cause greater political instability and conflict ([Brauch, 2002] and [Pervis and Busby, 2004]). In a report for the US Department of Defense, Schwartz and Randall (2003) speculate about the consequences of a worst-case climate change scenario arguing that water shortages will lead to aggressive wars (Schwartz and Randall, 2003, p. 15). Despite growing concern that climate change will lead to instability and violent conflict, **the evidence base to substantiate the connections is thin** ([Barnett and Adger, 2007] and [Kevane and Gray, 2008]).

**No resource wars—reject their method**

**Barnett 2009** (Thomas, visiting scholar at U Tennessee's Howard Baker Center, The Daily Sentinel, "Threat of great power war recedes" http://www.gjsentinel.com/opin/content/news/opinion/stories/2009/03/21/barnett\_power\_war.html?cxtype=rss&cxsvc=7&cxcat=9)

Why do I so casually dismiss “resource wars” as a strategic planning principle? Remember when Cold Warriors predicted we’d fight the Soviets across the “arc of crisis” for precious resources? Well, back then, both sides lived within miniature versions of today’s global economy. In that bifurcated world economy, zero-sum resource wars were entirely plausible. That bifurcated world no longer exists, as evidenced by the recent financial contagion. In globalization, demand determines power more than supply. Don’t believe me? Imagine a world where there’s no Chinese demand for U.S. debt or no U.S. demand for Chinese exports. Dreaming up future “resource wars” to obviate our military’s necessary adjustment to this era’s security tasks will not render them moot. Indeed, like Somalia’s recent pirate epidemic, they invariably attract the collaborative efforts of other great powers, like China and India, which have no choice but to defend their growing economic networks.

# 2NC

# Sunshades

Human nature

Brian **Green**, June 12th, 20**12** (writer, the moral mindfield, “Is Geoengineering Now Inevitable, or is the Only Solution to a Technological Problem More Technology?” <http://moralmindfield.wordpress.com/2012/06/12/is-geoengineering-now-inevitable-or-is-the-only-solution-to-a-technological-problem-more-technology/> >:)

We are then, stuck in a catch 22. We have begun to inadvertently change the planetary environment. If we choose to seize this new power, any error could cause immense damage. But if we choose not to control this power we are still responsible for the damage done because we chose not to gain the power to prevent the disaster. Which do we choose? Given the choice to be powerful or powerless humans will always choose the power. We hate being at the mercy of externalities. Perhaps a less neurotic species could do it, but not us. It is one of the reasons we are jealous of God – we are subject to the world’s whims; we are at God’s mercy, and we hate it. We don’t want to be at the mercy of anything. And this excludes us from grace as well. The trade is very asymmetrical. If we control everything, then not only are we no longer unblameworthy, but we are also ungraceworthy. There will no longer be blessing or good luck, just good engineering. (Or perhaps we must learn to see good engineering as grace.)

Technological culture

Dane **Scott**, 20**12** (director, Mansfield Center’s Ethics and Public Affairs Program, assistant professor of ethics @ College of Forest, “Geoengineering and Environmental Ethics,” http://www.nature.com/scitable/knowledge/library/geoengineering-and-environmental-ethics-80061230 >:)

For the environmental critics of technological culture, geoengineering is more than a bad idea — it is an expression of a mistaken philosophy and dysfunctional culture. The fact that geoengineering proposals are starting to rise into consideration, on this view, must seem tragically predictable. That is, the technological fix of geoengineering is the inevitable response of a culture where accelerating technological power multiplied by increasing human desires has created a tremendous force.

China and US weather mod now should’ve triggered the impact – and, no tech for military use of weather

Ajey **Lele**, October 12th, 20**09** (writer @ Institute for Defense Studies and Analyses, “China’s Experiments with Weather Modification; A Cause for Concern,” http://www.idsa.in/idsastrategiccomments/ChinasExperimentswithWeatherModification\_ALele\_121009 >:)

China’s weather modification actions during the October 1 National Day Parade or earlier during the Olympics did not cause any damage or injury to other states, nor were there any militaristic intentions behind them. However, when such techniques are used for military gains they fall into the category of ‘Weather Weapons’. Weather modification techniques could be used for changing the direction of cyclonic storms, create snow storms, flash floods and even forest fires in enemy territory. There are reports that countries like the United States are conducting experiments to control the characteristics of the ionosphere which could allow them to control enemy communications. However, there are significant technological limitations in employing such ‘weapons’ with precision. But it appears that China is working towards overcoming such limitations. Today, apart from China many other countries including the United States are conducting research on weather modification. It needs to be understood that weather modification is a dual use technique; it would be extremely difficult to identify the intentions of the state undertaking such experimentations. The need for including issues related to weather modification in the ‘security lexicon’ has not been felt so far. The Chinese investment in this technology and its successful demonstration during the 2008 Olympics and the 60th National Day Parade raise some concerns. There is no guarantee that China would desist from using weather modification techniques in conflict situations to gain a military advantage. Even during peacetime, such techniques can be used to create artificial drought or floods to affect the economy of the adversary. In particular, states bordering China need to be careful. The weather knows no borders and weather patterns in a neighbouring state can be affected by experiments conducted on own territory. China thus needs to clear suspicions that have been aroused by its weather modification actions. To begin with it could sign and ratify the ENMOD Convention.

Weather mod tech now – only question is whether it’s used for military or ecological purposes – CP solves weather wars by focusing on environment

Dr. Nick **Begich and** Jeane **Manning**, February 4th, 20**06** (former president, Anchorage Council of Education, “The Military’s Pandora’s Box,” http://newyorkskywatch.com/2009/03/31/new-york-skywatch-march-30-2009 >:)

Avalanches of energy dislodged by such radio waves could hit us hard. Their work suggests that technicians could control global weather by sending relatively small ’signals’ into the Van Allen belts (radiation belts around Earth). Thus Tesla’s resonance effects can control enormous energies by tiny triggering signals. The Begich/ Manning book asks whether that knowledge will be used by war-oriented or biosphere-oriented scientists. The military has had about twenty years to work on weather warfare methods, which it euphemistically calls weather modification. For example, rainmaking technology was taken for a few test rides in Vietnam. The U.S. Department of Defense sampled lightning and hurricane manipulation studies in Project Skyfire and Project Stormfury. And they looked at some complicated technologies that would give big effects. Angels Don’t Play This HAARP cites an expert who says the military studied both lasers and chemicals which they figured could damage the ozone layer over an enemy. Looking at ways to cause earthquakes, as well as to detect them, was part of the project named Prime Argus, decades ago. The money for that came from the Defense Advanced Research Projects Agency (DARPA, now under the acronym ARPA.) In 1994 the Air Force revealed its Spacecast 2020 master plan which includes weather control. Scientists have experimented with weather control since the 1940’s, but Spacecast 2020 noted that “using environmental modification techniques to destroy, damage or injure another state are prohibited.” Having said that, the Air Force claimed that advances in technology “compels a reexamination of this sensitive and potentially risky topic.”

Even if other nations start to geo-engineer, the result is cooperation – checks the impact

David **Victor**, October 15th, 20**08** (Stanford University and Council on Foreign Relations professor at the School of International Relations and Pacific Studies and co-director of the School's new Laboratory on International Law “On the Regulation of Geoengineering” http://www.kysq.org/docs/322.pdf)

Such a scenario needs attention and careful assessment through techniques such as war games. For the countries not engaged in geoengineering, the best response to unilateral geoengineering might be a sharp increase in their own geoengineering effort. Such a breakout would make it easier to gain credible information on risks and also easier to re-establish norms. Unlike an arms race—in which breakout has the effect of making an adversary feel less secure, thus breeding further expenditure on weapons and rattling of sabres—a breakout in geoengineering could be stabilizing, because its transparent endpoint is to re-assert collective control over the technology. And once a unilateral geoengineer sees other countries engaged in similar efforts they will need to do less geoengineering on their own. But once the process of geoengineering begins—whether unilateral or collective—it is likely the world will be unable to stop. For whatever the ills of global climate change, it is probably even more dangerous to let the climate experience the even more rapid warming that would follow the dismantling of geoengineering systems.

Geo-engineering works – increasing the albedo through sunshade deployment solves – their evidence assumes more complex geo-engineering projects

David G. **Victor et al**, March/April 20**09** (Professor @ Stanford Law School, Director of Stanford's Program on Energy and Sustainable Development, Adjunct Senior Fellow at the Council on Foreign Relations, “The geoengineering option,” http://iis-db.stanford.edu/pubs/22456/The\_Geoengineering\_Option.pdf >:)

The world's slow progress in cutting carbon dioxide emissions and the looming danger that the climate could take a sudden turn for the worse require policymakers to take a closer look at emergency strategies for curbing the effects of global warming. These strategies, often called "geoengineering," envision deploying systems on a planetary scale, such as launching reflective particles into the atmosphere or positioning sunshades to cool the earth. These strategies could cool the planet, but they would not stop the buildup of carbon dioxide or lessen all its harmful impacts. For this reason, geoengineering has been widely shunned by those committed to reducing emissions. Serious research on geoengineering is still in its infancy, and it has not received the attention it deserves from politicians. The time has come to take it seriously. Geoengineering could provide a useful defense for the planet -- an emergency shield that could be deployed if surprisingly nasty climatic shifts put vital ecosystems and billions of people at risk. Actually raising the shield, however, would be a political choice. One nation's emergency can be another's opportunity, and it is unlikely that all countries will have similar assessments of how to balance the ills of unchecked climate change with the risk that geoengineering could do more harm than good. Governments should immediately begin to undertake serious research on geoengineering and help create international norms governing its use. THE RAINMAKERS Geoengineering is not a new idea. In 1965, when President Lyndon Johnson received the first-ever U.S. presidential briefing on the dangers of climate change, the only remedy prescribed to counter the effects of global warming was geoengineering. That advice reflected the scientific culture of the time, which imagined that engineering could fix almost any problem. By the late 1940s, both the United States and the Soviet Union had begun exploring strategies for modifying the weather to gain battlefield advantage. Many schemes focused on "seeding" clouds with substances that would coax them to drop more rain. Despite offering no clear advantage to the military, "weather makers" were routinely employed (rarely with much effect) to squeeze more rain from clouds for thirsty crops. Starting in 1962, U.S. government researchers for Project Stormfury tried to make tropical hurricanes less intense through cloud seeding, but with no clear success. Military experts also dreamed of using nuclear explosions and other interventions to create a more advantageous climate. These applications were frightening enough that in 1976 the United Nations adopted the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques to bar such projects. By the 1970s, after a string of failures, the idea of weather modification for war and farming had largely faded away. Today's proposals for geoengineering are more likely to have an impact because the interventions needed for global-scale geoengineering are much less subtle than those that sought to influence local weather patterns. The earth's climate is largely driven by the fine balance between the light energy with which the sun bathes the earth and the heat that the earth radiates back to space. On average, about 70 percent of the earth's incoming sunlight is absorbed by the atmosphere and the planet's surface; the remainder is reflected back into space. Increasing the reflectivity of the planet (known as the albedo) by about one percentage point could have an effect on the climate system large enough to offset the gross increase in warming that is likely over the next century as a result of a doubling of the amount of carbon dioxide in the atmosphere. Making such tweaks is much more straightforward than causing rain or fog at a particular location in the ways that the weather makers of the late 1940s and 1950s dreamed of doing.

# LOST

[\_] Any risk of methane release controls your impact calculus – it’s the most probable and only empirical extinction event, and accesses an invisible threshold

**Dorritie ‘7** (Dan Dorritie, paleontologist, studies mass extinction events, M.A. Geology, University of California—Davis, “Preface,” Killer in our Midst, 2007, http://www.killerinourmidst.com/)

Deep beneath the surface of the sea, buried in the oxygen-depleted muds that have accumulated over the ages on the underwater margins of the continents, lies a vast store of natural gas that probably well exceeds, in its carbon equivalence, the entire supply of all other oil, gas, and coal on the planet. Most of this immense store of natural gas, largely comprised of methane, lies trapped in icy cages called hydrates. Below these hydrates is a huge quantity of methane as free gas bubbles, blocked from release by the hydrate, and temperature and pressure conditions above. Still more methane, as hydrate, is found in the permanently frozen (permafrost) regions that surround the poles. Methane is a much more powerful greenhouse gas than carbon dioxide, the gas which is currently warming our globe, even though methane remains in the atmosphere for a much shorter time. If released abruptly, seafloor methane has the potential to deliver a stunning jolt of heat to the planet's already increasing temperatures. Even if released more gradually, seafloor methane will inevitably compound the problem of global warming. But abruptly or gradually, as we warm the planet by our dumping of carbon dioixde into the atmosphere, the seafloor will also warm, and its methane will inevitably be released. This book is about the release of that methane, and, in particular, about the possibility of methane catastrophe.Methane catastrophes have occurred several times in Earth's history, and when they have occurred, they have sometimes caused abrupt changes in the history of life, and at least one significant extinction. That extinction, at the end of the Permian Period 250 million years ago,is the greatest in the history of life. More than 90% of the then-existing species perished, and the course of life on Earth was altered forever. If a methane catastrophe were to happen in the near future, it is likely that not only would a considerable percentage of existing plants and animals be killed off, but a large percentage of the human population as well, as a result of the climate change and significantly more hostile environmental conditions. Yet we may well be heading toward such a catastrophe, produced by our warming of the planet. Just how rapidly seafloor methane will be released depends on numerous factors that are quite difficult to assess. It is possible that seafloor methane will be released so slowly that it will only have a relatively minor warming effect on Earth's climate. On the other hand, because the coming methane release will be the result of our warming of the planet via the burning of fossil and other acrbon fuels, it could happen much more quickly. Indeed, it seems that we are currently pumping the greenhouse gas carbon dioxide into the atmosphere at a much faster -- perhaps tens to hundreds of times faster -- rate than has ever before naturally occurred in the last half billion years or so of the Earth's history. The catastrophic warming we are causing is -- to the best of our knowledge -- unprecedented since the early days of our planet, billions of years ago. Such warming could well lead to methane catastrophe. The onset of a methane catastrophe would be abrupt because it could be initiated by a major submarine landslide, which can happen in a matter of days or even hours, or by the venting of vast quantities of seafloor methane over a period of decades. These events can take place in what is essentially a geological eyeblink. Additional slumping and/or venting can continue for centuries to millennia. The amount of methane that can be released is indeed massive. Estimates of the amount of seafloor methane generally range from about 5000 billion metric tons to around 20,000 billion metric tons (a metric ton is equal to 1.1 imperial tons, the standard ton used in the United States), though they usually range around 10,000 billion metric tons. This amount of methane contains about 7500 billion metric tons of carbon, vastly more than all the estimated carbon in all fossil fuels: petroleum, coal, and natural gas. There is a simple way to put 10,000 billion metric tons of methane into perspective: it contains about ten times the amount of carbon (largely in the form of carbon dioxide) as does the entire atmosphere. Moreover, though methane entering the atmosphere is quickly oxidized, it is oxidized to carbon dioxide, so the problem of its warming ability will remain with us for thousands of years into the future. A methane catastrophe, therefore, is an abrupt surge of greenhouse gas that could rival or exceed the carbon dioxide warming of the planet. It could potentially overwhelm the natural heat regulatory system of the Earth, which operates in a much more gradual way, and on a much more protracted time scale. The quantity of methane that could be released is so massive there would be no remedial action that people would be able to take to mitigate it except in the most superficial way. Once a methane catastrophe were to begin, there would be major consequences for the planet and its inhabitants, human and other, and we would be able to do little except wait it out. Methane, in a very real sense, is the joker in the deck of global warming. As with the current increase in atmospheric carbon dioxide, a large methane release will undoubtedly contribute to an increase in acid rain, and, through its impact on global warming, a further rise of sea level, increased desertification, increased heavy precipitation, and extreme weather events. The slowing of ocean circulation or its actual stagnation because of greater planetary warmth are also possibilities. Such a slowing would paradoxically produce a decreased transport of warm water to the coasts of northeastern North America and northernmost Europe, making for much colder winters. In addition, the destabilization of methane within seafloor sediments can send 20 meter (60 foot) high tsunamis crashing into nearby coastlines. A methane catastrophe can have other major consequences in addition to sudden global warming. It can accelerate the slow but deadly acidification of the surface ocean (down to about 100 meters, or about 300 feet), which is now occurring as a result of the increase of carbon dioxide in the atmosphere and ocean. The methane can combine with dissolved oceanic oxygen, depleting the deeper part of the ocean (that is, the ocean below about 100 meters) of oxygen, and killing off the oxygen-using (aerobic) organisms at those depths. As acidification penetrates the deep ocean, even organisms that do not use oxygen (anaerobes) will be affected. Then there are the worst case scenarios. With the warming of the world ocean, its chemical balance and biological composition will change. The ocean will become stratified, with mixing between its surface and the deep ocean becoming increasingly restricted. If the deep ocean becomes fully anoxic (devoid of oxygen), it will also become toxic, as the remaining anaerobic organisms pump out the deadly gas hydrogen sulfide. In sufficient quantities, that gas could escape oceanic confinement to poison the atmosphere and, combining with the iron in the blood's hemoglobin, kill terrestrial organisms, including us. But the composition of the atmosphere could also change in a second way, because the amount of free oxygen depends on two things: the actual production of oxygen (by the ocean's photosynthetic plankton and terrestrial green plants) and the delivery of large amounts of carbon (as part of a "rain" of organic debris from organisms closer to the surface) to the ocean's bottom. This carbon, if not removed from the global carbon cycle by sinking and eventual burial in the ocean floor, will combine with oxygen and lower its concentration in the atmosphere. Once oceanic anoxia kills off aerobic marine organisms (those which require oxygen to live), the natural regulatory system for carbon will be sent into a tailspin. The amount of organic debris produced in surface waters will likely be reduced, the amount that rapidly descends to the ocean floor will be reduced, and the proportion that gets decomposed on the way to the bottom will be significantly reduced. Exactly how this will play out is unclear, because certain of these changes will operate to slow the removal of carbon from the global carbon cycle (which will act to decrease the amount of oxygen in the atmosphere), while others will enhance it (increasing atmospheric oxygen). When a similar disruption of the marine ecosystem occurred at the end of the Permian, a quarter of a billion years ago, atmospheric oxygen dropped to a fraction (about 2/5ths) of its previous level. But increased oxygen could be just as bad: oxygen ions (sometimes referred to as free radicals) can inflict genetic damage to DNA, causing mutations and cancer. We are certainly on the verge of releasing a huge amount of permafrost andseafloor methane within a very short time; we may also be on the brink of methane catastrophe. By our own actions -- by our continuing and increasing use of carbon fuels -- we are slowly but inexorably creating the conditions during which a such a methane release, catastrophic or more gradual, could occur. We probably have time to prevent a catastrophe, but there is a certain non-negligiblepossibility that we have already crossed -- or will shortly cross -- an invisible threshold that will render a methane catastrophe inevitable and unstoppable. Major anthropogenic global warming by carbon dioxide and possible methane catastrophe will be events more cataclysmic than any that can befall Earth, except for an impact with a giant asteroid or comet, or a stellar explosion in our neighborhood of the Milky Way. These other events, however, are quite rare and unlikely in our immediate future. Major anthropogenic global warming by carbon dioxide and possible methane catastrophe, by contrast, are highly likely and much more immediate. More importantly, unlike those other possible cataclysms, both are preventable -- probably -- if we take them seriously, begin to understand them, and -- most difficult of all -- begin to take steps to avert them. It has become fashionable to dismiss predictions of catastrophe, partly because they have become so common. Many of us have become jaded, what with one such prediction after another. We used to hear a good deal about nuclear holocaust, or nuclear winter, but as those threats seem to have faded in the public consciousness, there are others which have replaced it. We now hear of doomsday asteroids, the ozone hole, SARS (severe acute respiratory syndrome), bird flu, global warming, and the obliteration of species. The number of threats seems to be increasing. And, actually, that number is increasing. Prior to this epoch in human history, people simply did not have the ability to impact our planet in potentially catastrophic ways. Unfortunately, we now do have that ability. The ozone hole is a simple example. Never before was humanity on the verge of destroying this gaseous umbrella which protects us (and all other organisms that live at or near the surface of the Earth) from deadly ultraviolet light. Humanity simply didn't have that kind of power. But the advent of chloro-flouro-carbon (CFC) refrigerants gave us that ability, and the ozone layer sustained significant damage before the problem began to be addressed. Luckily, this is a problem for which there is a ready solution, and by banning the production of these ozone-harming chemicals, we have begun to bring the problem under control. The problem of carbon dioxide emissions, consequent global warming, and the prospect of a major seafloor methane release, however, will not be addressed so easily. We currently have no technology to trap and hold large quantities of carbon dioxide, and we are not likely to have such a technology for many decades in the future -- if indeed we ever will. Some of the excess carbon dioxide we produce is in fact currently slipping beyond our potential grasp, entering the oceans at the astounding rate of about a million metric tons (a metric ton = 1.1 standard ton) per hour, and increasing the acidity of seawater. There is, in addition, great resistance in a world economy driven and dominated by fossil fuels to shifting the energy base of that economy. Enormous corporate profits and personal fortunes, and the success of political efforts on their behalf, are also at stake. Slowing the stampede to catastrophically higher global temperatures and ocean destruction will require substantial international effort. Even so, should we today stop spewing carbon dioxide into the atmosphere, global temperatures will continue to increase for some time into the future. Despite our aversion to warnings of imminent catastrophe, our problem may be that we are not alarmed enough. Because of the delayed consequences of our dumping carbon dioxide into the atmosphere, the major effects of global warming will only be starting just as the world supply of oil is well on its way to depletion (about 2050). But already startling environmental changes -- the early, "minor" effects of global warming -- are occurring on Earth: ·With the exception of 1996, the years from 1995 to 2004 constitute 9 of the 10 warmest years since systematic record keeping began in 1861. ·The year 2005 was the warmest year since records have been kept. The next warmest years, in order, are, 1998, 2002, 2003, and 2004. ·Globally, glaciers have retreated, on average, almost some 15% since 1850. Glacial retreat has been recorded in Tibet, Alaska, Peru, the Alps, Kenya, Antarctica. ·Alaskan temperatures have risen about 2.8°C (5°F) in the past few decades. ·In the past several decades, about 40% of Arctic Ocean sea ice has disappeared. (Some researchers now believe, however, that at least part of this sea ice loss may be due to changing wind patterns over the North Pole, but these wind changes, themselves, may be due to a warming climate.) ·Between 1965 and 1995, the amount of melt water from the Arctic region going into the North Atlantic was about 20,000 cubic kilometers (about 4800 cubic miles), the equivalent of the fresh water in all of the Great Lakes combined (Superior, Huron, Erie, and Ontario) with the exception of Lake Michigan. Preliminary calculations indicate that an additional 18,000 cubic kilometers (4300 cubic miles) or so could shut down ocean circulation in the North Atlantic. That shutdown could occur in two decades or less, though most scientists believe it will take much longer. The Intergovernmental Panel on Climate Change, comprised of thousands of climate scientists worldwide, puts the likely slowing at about 25% by 2100. ·Trade winds across the equatorial Pacific have slowed because of higher humidity, and are projected to do so even more as time passes. The increase in humidity is the result of increased evaporation, traceable to global warming. This slowing of Pacific winds will also slow the ocean surface currents that the winds push along. Some scientists fear that at some point "the switch will be tripped" and nutrient-rich bottom water will no longer rise to the surface in the eastern Pacific (a "permanent El Niño" situation which did exist about three million years ago). These waters feed the plankton which feed the anchovies in one of the world's greatest fisheries. Much of the anchovy harvest is dried, ground up, and added to chicken feed, of which it is a major protein constituent. If the switch does trip, good-bye to inexpensive chicken. ·Upper ocean temperatures have risen between 0.5 and 1.0°C (0.9 to 1.8°F) since 1960. Deeper water has also warmed, but not by as much. The total amount of energy that has gone into the oceans as a consequence of global warming, however, is staggering: enough to run the state of California for 200,000 years. ·In addition to significant retreats of the glaciers on Greenland's margins, as of 2005 Greenland's massive ice sheet is melting at more than twice the rate it was in the previous three years. Glaciologists report that portions of the sheet which were solid ice just a few years ago are now riddled with meltwater caverns. ·The deep waters of the Southern Ocean (that which encircles Antarctica) have become significantly colder and less salty than they were just ten years ago. This is presumably due to the melting of Southern Ocean sea ice and parts of the Antarctic ice cap. Deep ocean waters have been previously presumed to be fairly isolated from climate warming but the data obtained from depths of four to five kilometers (more than two to three miles) now suggests otherwise. Such changes could significantly impact global ocean circulation. ·The Southern Ocean, which may absorb more carbon dioxide than any other region of the global ocean, as of more than twenty-five years ago ceased to absorb additional carbon dioxide. In fact, its ability to absorb carbon dioxide seems to be declining -- even as atmospheric levels of that gas are reaching ever higher levels -- most likely due to increased wind speed over that part of the global ocean. The higher wind speed in turn has been attributed to both global warming and the destruction of the Antarctic ozone layer. Because oceans eventually absorb most of the carbon dioxide that goes into the atmosphere, the declining ability of the Southern Ocean to absorb carbon dioxide is a particularly ominous development. ·Huge expanses of floating ice around Antarctica have collapsed into fragments in just weeks, after existing for tens of thousands of years. In addition, the ice that currently covers West Antarctica, known as the West Antarctic Ice Sheet (WAIS), which was quite recently (as of 2001) judged by the UN's Intergovernmental Panel on Climate Change (IPCC) as unlikely to collapse before the end of this century, or even for the next millennium, may now be starting to disintegrate, according to the head of the British Antarctic Survey. If this ice sheet does collapse, global sea level will rise by about 5 meters (16 feet). ·While global daytime temperatures, on average, increased only about 0.33°C (0.6°F) between 1979 and 2003, nighttime temperatures have risen more than 1°C (1.8°F). These environmental changes have had significant biological effects: ·In the eastern North Atlantic, warm-water phytoplankton (marine organisms that photosynthesize, produce oxygen, and constitute the bottom of the food chain) has moved north 1000 km (600 miles) over the past 40 years. ·In 2004, almost a quarter of a million breeding pairs of seabirds in islands north of Scotland failed to produce more than a few dozen offspring. Their reproductive failure is most likely due to the North Atlantic phytoplankton changes, and the consequent breakdown of the marine food chain. Many of the affected birds migrate back and forth between the Scottish islands and areas around the Southern Ocean (off Antarctica) over the course of the year. Starved in the north, they will never make it back to the south. Similar changes have been observed off the West Coast of the United States in 2005. ·Krill, small (about 5 cm/2 inches in length), shrimplike creatures which are a main food source for seals, whales, and penguins in the Southern Ocean, have declined in places to just 20% of their previous number in just 30 years. ·Grass now survives the winter in places on the Antarctic Peninsula, the warmest part of that frigid continent. When grass last was able to survive Antarctic winters is unknown. ·In the 17 year period from 1987 to 2003, the number and size of major wildfires in the western U. S. has increased dramatically. Compared to the 17 year period stretching from 1970 to 1986, the number of major wildfires has increased fourfold, and the area burned by major fires has increased sixfold. All of the presumed causes for this increase -- the earlier melting of snow, increased summer temperatures, an extended fire season, and an increase in the area of high-altitude forests which is vulnerable to such fires -- can be traced to global warming. ·The small increase in global nighttime temperatures indicated above (1°C/1.8°F), is sufficient to have reduced the biomass (the total mass of roots, stems, leaves, and grain) of rice, humankind's most important crop, by 10%. Rice is the primary foodstuff for more than half of the population of the world. With the warming, the release of methane has begun to follow: ·The Western Siberian Peat Bog, comprising an area of a million square kilometers (about 385,000 square miles, roughly the combined size of France and Germany), has begun to melt. This area is underlain by permafrost (permanently frozen ground that has existed since the Ice Age) perhaps a kilometer (about 3000 feet) deep. The permafrost contains an enormous amount of methane hydrate, possibly as much as a quarter of the total inventory of continental methane. As this permafrost warms and melts -- an irreversible process -- methane is released. This melting may add a quantity of methane to the atmosphere roughly equivalent to that released by all other natural and agricultural sources, increasing global warming by 10 to 25%. ·Already, methane emissions from certain areas of Siberian permafrost is proceeding much more rapidly than previously estimated. These extensive areas, characterized by Ice Age deposits of wind-blown dust (called loess) with high carbon and very high ice (50 to 90%) contents, are bubbling out methane at a rate five times higher than earlier presumed. Overall, these "yedoma" regions are contributing an additional 10 to 63% the total rate of methane release from the wetlands of the north. These are only the early effects, ripples from the storm which is to come. Remedial action is still possible, but the likelihood of catastrophe becomes more certain with each passing year.

# 1NR

Probability – growth makes miscalculation much more likely

**Boehmer, ‘10** (Charles R., Associate Professor of Political Science at the University of Texas El Paso, “Economic Growth and violent international conflict: 1875-1999,” Defence and Peace Economics, Volume 21, Issue 3, June)

The point here is to make it clear that war need not be a result of economic growth but that when growth does contribute to interstate violence it does so by serving as a catalyst of willingness against a backdrop of opportunities. Chinese leaders may be less likely to back away from violent interstate conflict if a crisis occurs during a period of economic growth than they would before economic growth, and this risk is higher for China because its major power status and region provide more opportunities relative to most other states. Based on the rationale above, I do not predict that economic growth makes it more likely that states will initiate militarized conflicts with other states, or that it increases their overall conflict propensity. Economic growth appears dangerous in those situations where states are already involved in a conflict by making it more likely that a state will reciprocate or escalate conflicts. Considering that war is a suboptimal outcome (Gartzke, 1999), states would not risk escalating conflicts to violence or war if they have reason to believe that they may lose. Hubris may lead states into conflicts that turn deadly by providing an increased willingness to fight or even distorting and inflating leaders’ perception of state strength. States often march off to war thinking that the war will be short and that their side will prevail (Blainey, 1988); I suspect economic growth increases this resolve to stand against challenges from other states and to escalate crises.

Probably some more collapse inevitable cards