## T

#### Restrictions are a limitation that prohibits an action.  It excludes terms for acting

**Court of Appeals 12** STATE OF WASHINGTON DEPARTMENT OF HEALTH, THE COURT OF APPEALS OF THE STATE OF WASHINGTON, DIVISION I, RANDALL KINCHELOE Appellant. vs. Respondent, BRIEF OF APPELLANT, <http://www.courts.wa.gov/content/Briefs/a01/686429%20Appellant%20Randall%20Kincheloe's.pdf>  
                  
3. The ordinary definition of the term "restrictions" also does not include the reporting and monitoring or supervising terms and conditions that are included in the 2001 Stipulation. Black's Law Dictionary, 'fifth edition,(1979) defines "restriction" as; A limitation often imposed in a deed or lease respecting the use to which the property may be put.¶ The term "restrict' is also cross referenced with the term "restrain." Restrain is defined as;¶ To limit, confine, abridge, narrow down, restrict, obstruct, impede, hinder, stay, destroy. To prohibit from action; to put compulsion on; to restrict; to hold or press back. To keep in check; to hold back from acting, proceeding, or advancing, either by physical or moral force, or by interposing obstacle, to repress or suppress, to curb.¶

**“On” means directly targeted at and focused on production**

**Oxford Dictionary** online, **12**The World’s most trusted Dictionary, http:~/~/oxforddictionaries.com/definition/american\_english/[com/definition/american\_english/on](http://opencaselist.paperlessdebate.com/xwiki/bin/create/%2F%2Foxforddictionaries/com%2Fdefinition%2Famerican_english%2Fon?parent=Emory.Pesce%2DSigalos+Neg)

5.  having (the thing mentioned) as a *target, aim, or focus*: *five*air raids *on the city,* thousands marching *on Washington* ,*her*eyes were fixed *on his dark profile*

**Anti-dumping tarrifs aren’t a restriction on anything, they make TRADE more expensive. At the very best they restrict TRADE, not ENERGY PRODUCTION.**

Vote neg—

**Limits- regulations explode the topic- there are an infinite number of regulations on energy production alone- adding trade justifies things like removing the embargo on Cuba to import oil.**

Precision

Sinha 6

<http://www.indiankanoon.org/doc/437310/> Supreme Court of India Union Of India & Ors vs M/S. Asian Food Industries on 7 November, 2006 Author: S.B. Sinha Bench: S Sinha, Mark, E Katju CASE NO.: Writ Petition (civil) 4695 of 2006 PETITIONER: Union of India & Ors. RESPONDENT: M/s. Asian Food Industries DATE OF JUDGMENT: 07/11/2006 BENCH: S.B. Sinha & Markandey Katju JUDGMENT: J U D G M E N T [Arising out of S.L.P. (Civil) No. 17008 of 2006] WITH CIVIL APPEAL NO. 4696 OF 2006 [Arising out of S.L.P. (Civil) No. 17558 of 2006] S.B. SINHA, J : We may, however, notice that this Court in State of U.P. and Others v. M/s. Hindustan Aluminium Corpn. and others [AIR 1979 SC 1459] stated the law thus:

"It appears that a distinction between regulation and restriction or prohibition has always been drawn, ever since Municipal Corporation of the City of Toronto v. Virgo. Regulation promotes the freedom or the facility which is required to be regulated in the interest of all concerned, whereas prohibition obstructs or shuts off, or denies it to those to whom it is applied. The Oxford English Dictionary does not define regulate to include prohibition so that if it had been the intention to prohibit the supply, distribution, consumption or use of energy, the legislature would not have contented itself with the use of the word regulating without using the word prohibiting or some such word, to bring out that effect."

## K

#### Excessive consumption makes extinction inevitable- social and environmental factors build positive feedbacks create a cascade of destruction. **We should reject the politics of technological production-** only social reorganization away from consumption can save the planet

Ehrenfeld ‘5,

(David, Dept. of Ecology, Evolution, and Natural Resources @ Rutgers University, “The Environmental Limits to Globalization”, *Conservation Biology* Vol. 19 No. 2 April 2005)

The known effects of globalization on the environment are numerous and highly significant. Many others are undoubtedly unknown. Given these circumstances, the first question that suggests itself is: Will globalization, as we see it now, remain a permanent state of affairs (Rees 2002; Ehrenfeld 2003a)? The principal environmental side effects of globalization—climate change, resource exhaustion (particularly cheap energy), damage to agroecosystems, and the spread of exotic species, including pathogens (plant, animal, and human)—are sufficient to make this economic system unstable and short-lived. The socioeconomic consequences of globalization are likely to do the same. In my book *The Arrogance of Humanism* (1981), I claimed that our ability to manage global systems, which depends on our being able to predict the results of the things we do, or even to understand the systems we have created, has been greatly exaggerated. Much of our alleged control is science fiction; it doesn’t work because of theoretical limits that we ignore at our peril. We live in a dream world in which reality testing is something we must never, never do, lest we awake. In 1984 Charles Perrow explored the reasons why we have trouble predicting what so many of our own created systems will do, and why they surprise us so unpleasantly while we think we are managing them. In his book *Normal Accidents*, which does not concern globalization, he listed the critical characteristics of some of today’s complex systems. They are highly interlinked, so a change in one part can affect many others, even those that seem quite distant. Results of some processes feed back on themselves in unexpected ways. The controls of the system often interact with each other unpredictably. We have only indirect ways of finding out what is happening inside the system. And we have an incomplete understanding of some of the system’s processes. His example of such a system is a nuclear power plant, and this, he explained, is why system-wide accidents in nuclear plants cannot be predicted or eliminated by system design. I would argue that globalization is a similar system, also subject to catastrophic accidents, many of them environmental—events that we cannot define until after they have occurred, and perhaps not even then. The comparatively few commentators who have predicted the collapse of globalization have generally given social reasons to support their arguments. These deserve some consideration here, if only because the environmental and social consequences of globalization interact so strongly with each other. In 1998, the British political economist John Gray, giving scant attention to environmental factors, nevertheless came to the conclusion that globalization is unstable and will be short-lived. He said, “There is nothing in today’s global market that buffers it against the social strains arising from highly uneven economic development within and between the world’s diverse societies.” The result, Gray states, is that “The combination of [an] unceasing stream of new technologies, unfettered market competition and weak or fractured social institutions” has weakened both sovereign states and multinational corporations in their ability to control important events. Note that Gray claims that not only nations but also multinational corporations, which are widely touted as controlling the world, are being weakened by globalization. This idea may come as a surprise, considering the growth of multinationals in the past few decades, but I believe it is true. Neither governments nor giant corporations are even remotely capable of controlling the environmental or social forces released by globalization, without first controlling globalization itself. Two of the social critics of globalization with the most dire predictions about its doom are themselves masters of the process. The late Sir James Goldsmith, billionaire financier, wrote in 1994, It must surely be a mistake to adopt an economic policy which makes you rich if you eliminate your national workforce and transfer production abroad, and which bankrupts you if you continue to employ your own people.... It is the poor in the rich countries who will subsidize the rich in the poor countries. This will have a serious impact on the social cohesion of nations. Another free-trade billionaire, George Soros, said much the same thing in 1995: “The collapse of the global marketplace would be a traumatic event with unimaginable consequences. Yet I find it easier to imagine than the continuation of the present regime.” How much more powerful these statements are if we factor in the environment! As globalization collapses, what will happen to people, biodiversity, and ecosystems? With respect to people, the gift of prophecy is not required to answer this question. What will happen depends on where you are and how you live. Many citizens of the Third World are still comparatively self-sufficient; an unknown number of these will survive the breakdown of globalization and its attendant chaos. In the developed world, there are also people with resources of self-sufficiency and a growing understanding of the nature of our social and environmental problems, which may help them bridge the years of crisis. Some species are adaptable; some are not. For the non- human residents of Earth, not all news will be bad. Who would have predicted that wild turkeys (Meleagris gallopavo), one of the wiliest and most evasive of woodland birds, extinct in New Jersey 50 years ago, would now be found in every county of this the most densely populated state, and even, occasionally, in adjacent Manhattan? Who would have predicted that black bears (Ursus americanus), also virtually extinct in the state in the mid-twentieth century, would now number in the thousands (Ehrenfeld 2001)? Of course these recoveries are unusual—rare bright spots in a darker landscape. Finally, a few ecological systems may survive in a comparatively undamaged state; most will be stressed to the breaking point, directly or indirectly, by many environmental and social factors interacting unpredictably. Lady Luck, as always, will have much to say. In his book *The Collapse of Complex Societies,* the archaeologist Joseph Tainter (1988) notes that collapse, which has happened to all past empires, inevitably results in human systems of lower complexity and less specialization, less centralized control, lower economic activity, less information flow, lower population levels, less trade, and less redistribution of resources. All of these changes are inimical to globalization. This less-complex, less-globalized condition is probably what human societies will be like when the dust settles. I do not think, however, that we can make such specific predictions about the ultimate state of the environment after globalization, because we have never experienced anything like this exceptionally rapid, global environmental damage before. History and science have little to tell us in this situation. The end of the current economic system and the transition to a postglobalized state is and will be accompanied by a desperate last raid on resources and a chaotic flurry of environmental destruction whose results cannot possibly be told in advance. All one can say is that the surviving species, ecosystems, and resources will be greatly impoverished compared with what we have now, and our descendants will not thank us for having adopted, however briefly, an economic system that consumed their inheritance and damaged their planet so wantonly. Environment is a true bottom line—concern for its condition must trump all purely economic growth strategies if both the developed and developing nations are to survive and prosper. Awareness of the environmental limits that globalized industrial society denies or ignores should not, however, bring us to an extreme position of environmental determinism. Those whose preoccupations with modern civilization’s very real social problems cause them to reject or minimize the environmental constraints discussed here ( Hollander 2003) are guilty of seeing only half the picture. Environmental scientists sometimes fall into the same error. It is tempting to see the salvation of civilization and environment solely in terms of technological improvements in efficiency of energy extraction and use, control of pollution, conservation of water, and regulation of environmentally harmful activities. But such needed developments will not be sufficient—or may not even occur— without corresponding social change, including an end to human population growth and the glorification of consumption, along with the elimination of economic mechanisms that increase the gap between rich and poor. The environmental and social problems inherent in globalization are completely interrelated—any attempt to treat them as separate entities is unlikely to succeed

in easing the transition to a postglobalized world. Integrated change that combines environmental awareness, technological innovation, and an altered world view is the only answer to the life-threatening problems exacerbated by globalization (Ehrenfeld 2003b). If such integrated change occurs in time, it will likely happen partly by our own design and partly as an unplanned response to the constraints imposed by social unrest, disease, and the economics of scarcity. With respect to the planned component of change, we are facing, as eloquently described by Rees (2002), “the ultimate challenge to human intelligence and self-awareness, those vital qualities we humans claim as uniquely our own. *Homo sapiens* will either. . .become fully human or wink out ignominiously, a guttering candle in a violent storm of our own making.” If change does not come quickly, our global civilization will join Tainter’s (1988) list as the latest and most dramatic example of collapsed complex societies. Is there anything that could slow globalization quickly, before it collapses disastrously of its own environmental and social weight? It is still not too late to curtail the use of energy, reinvigorate local and regional communities while restoring a culture of concern for each other, reduce nonessential global trade and especially global finance (Daly & Cobb 1989), do more to control introductions of exotic species (including pathogens), and accelerate the growth of sustainable agriculture. Many of the needed technologies are already in place. It is true that some of the damage to our environment—species extinctions, loss of crop and domestic animal varieties, many exotic species introductions, and some climatic change— will be beyond repair. Nevertheless, the opportunity to help our society move past globalization in an orderly way, while there is time, is worth our most creative and passionate efforts. The citizens of the United States and other nations have to understand that our global economic system has placed both our environment and our society in peril, a peril as great as that posed by any war of the twentieth century. This understanding, and the actions that follow, must come not only from enlightened leadership, but also from grassroots consciousness raising. It is still possible to reclaim the planet from a self-destructive economic system that is bringing us all down together, and this can be a task that bridges the divide between conservatives and liberals. The crisis is here, now. What we have to do has become obvious. Globalization can be scaled back to manageable proportions only in the context of an altered world view that rejects materialism even as it restores a sense of communal obligation. In this way, alone, can we achieve real homeland security, not just in the United States, but also in other nations, whose fates have become so thoroughly entwined with ours within the global environment we share.

#### Wind power massively increases consumption while erasing the question “consumption of what” – abstract reveling in consumption re-produces unequal neoliberal social relations and risks environmental crises

Byrne & Toly 6

(Josh, director of the Center for Energy and Environmental Policy and distinguished professor of energy and climate policy at the University of Delaware, Noah, Associate Professor of Urban Studies and Politics & International Relations, Director of Urban Studies Program at Wheaton, “Energy as a Social Project: Recovering a Discourse”, pgs. 1-32 in Transforming Power: Energy, Environment, and Society in Conflict, eds. Josh Byrne, Noah Toly, and Leigh Glover)

What are the characteristics of this success? One envied feature is the remarkable decline in the price of wind-generated electricity, from $0.46 per kWh in 1980 to $0.03 to $0.07 per kWh today (Sawin, 2004), very close to conventionally-fueled utility generating costs in many countries, even before environmental impacts are included. Jubilant over wind’s winning market performance, advocates of sustainable energy foresee a new era that is ecologically much greener and, yet, in which electricity remains (comparatively) cheap. Lester Brown (2003: 159) notes that wind satisfies seemingly equally weighted criteria of environmental benefit, social gain, and economic efficiency: Wind is...clean. Wind energy does not produce sulfur dioxide emissions or nitrous oxides to cause acid rain. Nor are there any emissions of health-threatening mercury that come from coal-fired power plants. No mountains are leveled, no streams are polluted, and there are no deaths from black lung disease. Wind does not disrupt the earth’s climate...[I]t is inexhaustible...[and] cheap. This would certainly satisfy the canon of economic rationalism. It is also consistent with the ideology of modern consumerism. Its politics bestow sovereignty on consumers not unlike the formula of Pareto optimality, a situation in which additional consumption of a good or service is warranted until it cannot improve the circumstance of one person (or group) without decreasing the welfare of another person (or group).17 How would one know “better off” from “worse off” in the wind-rich sustainable energy era? Interestingly, proponents seem to apply a logic that leaves valuation of “better” and “worse” devoid of explicit content. In a manner reminiscent of modern economic thinking, cheap-and-green enthusiasts appear willing to set wind to the task of making “whatever”—whether that is the manufacture of low-cost teeth whitening toothpaste or lower cost SUVs. In economic accounting, all of these applications potentially make some in society “better off” (if one accepts that economic growth and higher incomes are signs of improvement). Possible detrimental side effects or externalities (an economic term for potential harm) could be rehabilitated by the possession of more purchasing power, which could enable society to invent environmentally friendly toothpaste and make affordable, energy-efficient SUVs. Sustainable energy in this construct cooperates in the abstraction of consumption and production. Consumption- of-what, -by-whom, and -for-what-purpose, and, relatedly, production-of-what, -by-whom, and -for-what-purpose are not issues. The construct altogether ignores the possibility that “more-is-better” consumption- production relations may actually reinforce middle class ideology and capitalist political economy, as well as contribute to environmental crises such as climate change. In the celebration of its coming market victory, the cheap-and-green wind version of sustainable energy development may not readily distinguish the economic/class underpinnings of its victory from those of the conventional energy regime.

Rather than focusing on production of technology, we should embrace our ability to shape and transform our subjectivity as consumers, embracing voluntary simplicity – this debate offers a crucial moment to produce alternative knowledge about everyday living practices

Alexander ‘11

(Samuel, University of Melbourne; Office for Environmental Programs/Simplicity Institute, “

Voluntary Simplicity as an Aesthetics of Existence”, Social Sciences Research Network, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=1941087)

The aim of this paper, however, is not to present a thorough analysis of Foucault’s notion of an aesthetics of existence. Several such analyses have appeared in recent times (after years of unfortunate scholarly neglect), and much of this emerging commentary is very probing and insightful.12 But this is not the time to focus on furthering that critical discussion or even providing a comprehensive literature review of it. Instead, after providing a brief exposition of Foucault’s ethics, this paper will undertake to actually apply the idea of an aesthetics of existence to a particular subject of ethical concern, namely, to our role as ‘consumers’ in the context of First World overconsumption. This is an area that raises ethical questions concerning how we ought to live for two main reasons: firstly, due to the impact Western--‐style consumers are having on the natural environment; and secondly, due to the continued existence of poverty amidst plenty. There is, however, another perspective to consider also. A large body of sociological and psychological literature now exists indicating that Western--‐style consumption practices are often failing to provide meaning and fulfillment, even to those who have ‘succeeded’ in attaining a high material standard of living.13 These three consumption--‐related issues – ecological degradation, poverty amidst plenty, and consumer malaise – provide ample grounds for thinking that consumption is a proper subject for ethical engagement, in the Foucauldian sense of ethics as ‘the self enfgaging the self.’ If it is the case that our individual identities have been shaped, insidiously perhaps, by a social system that celebrates and encourages consumption without apparent limit – and it would not be unfair to describe consumer societies in these terms14 – then it may be that ethical practice today calls for a rethinking of our assumptions and attitudes concerning consumption, which might involve a deliberate reshaping of the self by the self. This paper will explore the possibility of such an ethics of consumption in the following ways. First, by explaining how neoclassical economics, which is arguably the most influential paradigm of thought in the world today, conceptualizes consumption as something that benefits both ‘self’ and ‘other’ and, therefore, as something that should be maximized. To the extent that modern consumers have internalized this conception of consumption, an ethics of consumption might involve engaging the self for the purpose of changing the self and creating something new. The second way an ethics of consumption will be explored will be through an examination of the theory and practice of ‘voluntary simplicity,’ a term that refers to an oppositional living strategy or ‘way of life’ with which people, somewhat paradoxically, perhaps, seek an increased quality of life through a reduction and restraint of one’s level of consumption.15 The paradox, so-­‐ called, consists in the attempt to live ‘more with less.’ Since voluntarily living simply means heading in the opposite direction to where most people in consumer societies (and increasingly elsewhere) seem to want to go, one would expect living simply to require a fundamentally creative engagement with life and culture, especially in contemporary consumer societies that seem to be predicated on the assumption that ‘more consumption is always better.’ This need for a fundamentally creative engagement with life is what prompted the present attempt to elucidate the idea of ‘voluntary simplicity as aesthetics of existence,’ and it is this attempt to infuse Foucauldian ethics with an emerging post-­‐consumerist philosophy of life that constitutes the original contribution of this paper. It is hoped that this practical application of Foucault’s ethics might also prompt others to consider how ethical engagement might produce new ways of being that are freer, more fulfilling, and yet less resource-­‐intensive and damaging than the modes of being which are dominant in consumer societies today. Could it be, for example, that the ‘Death of Man,’ to use Foucault’s phrase, was actually the first (and a necessary) phase in the demise of what one might call ‘homo consumicus’? And what forms of life, what modes of being, would or could materialize with the voluntary emergence of ‘homo post-­‐consumicus’? These are the large questions that motivated this study and in the following pages a preliminary attempt is made to grapple with them. The aim, however, is not to legitimate ‘what is already known,’16 since that would not be a very Foucauldian endeavor; rather, the aim is to explore whether or to what extent it is possible to ‘free thought from what it silently thinks,’17 in the hope that this might open up space to ‘think differently,’18 to think otherwise.

## DA

#### Venture capital shifting away from renewables to grid modernization now

NBC 12 [Dinah Wisenberg Brin, award-winning writer with a strong background producing financial, healthcare, government news, “Clean Tech Investing Shifts, With Lower-Cost Ventures Gaining Favor” March 1, http://www.cnbc.com/id/46222448/Clean\_Tech\_Investing\_Shifts\_With\_Lower\_Cost\_Ventures\_Gaining\_Favor]

For many investors, that change means shifting funds from capital-intensive alternative-energy technologies, such as solar panels, to lower-cost ventures focused on energy efficiency and “smart grid” technologies that automate electric utility operations.¶ “We continue to be very optimistic about things like the smart grid and the infusion of information technologies and software services” into old lines like electricity, agriculture and the built environment," says Steve Vassallo, general partner in Foundation Capital. “We’re very bullish on what I would consider the nexus of information technology and clean tech.”¶ Foundation, based in Menlo Park, Calif., reflects this in investments such as Sentient Energy Inc., a smart-grid monitoring company that allows utilities to remotely find power outages, and Silver Spring Networks, which provides utilities a wireless network for advanced metering and remote service connection.¶ Another holding, EnerNOC [ENOC 10.13 -0.22 (-2.13%) ], a demand-response business with technology to turn off noncritical power loads during peak periods, went public in 2007.¶ EMeter, a one-time Foundation investment, was recently acquired by Siemens Industry [SI 93.09 0.23 (+0.25%) ].¶ To be sure, investors have not abandoned costlier technologies with longer-term horizons, but many — put off, in part, by last year’s bankruptcy and shutdown of solar power firm Solyndra — now favor smaller infusions in businesses with a quicker potential payoff.¶ Rob Day, partner in Boston-based Black Coral Capital, says his cleantech investment firm maintains some solar holdings, but he sees a shift from an emphasis on those types of plays to more “intelligence-driven, software-driven, web-driven businesses.” These technologies can be used to improve existing businesses, he says.¶ One Black Coral smart-technology investment is Digital Lumens of Boston, which makes high-efficiency, low-cost LED lighting for warehouses and factories. Software and controls are embedded in the fixtures, which can cut lighting bills by 90 percent, providing customers a two-year payback, says Day. ¶ U.S. venture capital investment in cleantech companies hit $4.9 billion last year, down 4.5 percent in dollar terms but flat in the number of transactions, according to Ernst & Young LLP, which analyzed data from Dow Jones VentureSource. Cleantech companies raised 29 percent more capital last year than in 2009, E&Y said recently.¶ Most of that decline, however, came from less investment in sectors that were once hot.¶ Investment in energy and electric generation, including solar businesses, fell 5 percent to $1.5 billion, while that of industry products and services companies plunged 34 percent to $1 billion, according to E&Y's analysis of equity investments from venture capital firms, corporations and individuals.¶ The energy efficiency category leads the diverse industry in deals with 78 transactions worth $646.9 million. Energy-storage companies raised $932.6 million, a 250 percent increase and 47 percent deal increase.¶

#### Plan reverses that trend—causes capital diversion

De Rugy 12

Veronica, Testimony Before the House Committee on Oversight and Government Reform. Dr.de Rugy received her MA in economics from the University of Paris IX-Dauphine and her PhD in economics from the University of Paris 1Pantheon-Sorbonne. She is a senior research fellow at the Mercatus Center at George Mason University. Her primary research interests include the U.S. economy, federal budget, homeland security, taxation, tax competition, and financial privacy issues. Her popular weekly charts, published by the Mercatus Center, address economic issues ranging from lessons on creating sustainable economic growth to the implications of government tax and fiscal policies.

http://mercatus.org/publication/assessing-department-energy-loan-guarantee-program

3. Mal-investments Loan guarantee programs can also have an impact on the economy beyond their cost to taxpayers. Mal-investment—the misallocation of capital and labor—may result from these loan guarantee programs. In theory, banks lend money to the projects with the highest probability of being repaid. These projects are often the ones likely to produce larger profits and, in turn, more economic growth. However, considering that there isn’t an infi- nite amount of capital available at a given interest rate, loan guarantee programs could displace resources from non-politically motivated projects to politically motivated ones. Think about it this way: When the government reduces a lender’s exposure to fund a project it wouldn’t have funded otherwise, it reduces the amount of money available for projects that would have been viable without subsidies. This government involvement can distort the market signals further. For instance, the data shows that private investors tend to congregate toward government guarantee projects, independently of the merits of the projects, taking capital away from unsubsidized projects that have a better probability of success without subsidy and a more viable business plan. As the Government Accountability Office noted, “Guarantees would make projects [the federal government] assists financially more attractive to private capital than conservation projects not backed by federal guarantees. Thus both its loans and its guarantees will siphon private capital away.”[26] This reallocation of resources by private investors away from viable projects may even take place within the same industry—that is, one green energy project might trade off with another, more viable green energy project. More importantly, once the government subsidizes a portion of the market, the object of the subsidy becomes a safe asset. Safety in the market, however, often means low return on investments, which is likely to turn venture capitalists away. As a result, capital investments will likely dry out and innovation rates will go down.[27] In fact, the data show that in cases in which the federal government introduced few distortions, private inves- tors were more than happy to take risks and invest their money even in projects that required high initial capital requirements. The Alaska pipeline project, for instance, was privately financed at the cost of $35 billion, making it one of the most expensive energy projects undertaken by private enterprise.[28] The project was ultimately aban- doned in 2011 because of weak customer demand and the development of shale gas resources outside Alaska. [29] However, this proves that the private sector invests money even when there is a chance that it could lose it. Private investment in U.S. clean energy totaled $34 billion in 2010, up 51 percent from the previous year.[30] Finally, when the government picks winners and losers in the form of a technology or a company, it often fails. First, the government does not have perfect or even better information or technology advantage over private agents. In addition, decision-makers are insulated from market signals and won’t learn important and necessary lessons about the technology or what customers want. Second, the resources that the government offers are so addictive that companies may reorient themselves away from producing what customers want, toward pleasing the government officials.

Solves water scarcity

Muys et al 11 [Jerome C. Muys, Jr., Jeffrey M. Karp, and Van P. Hilderbrand, Jr. Sullivan & Worcester LLP, “The Intersection Between Water Scarcity And Renewable Energy” April, http://www.sandw.com/assets/htmldocuments/Intersection%20Between%20Water%20Scarcity%20and%20Renewable%20Energy%20-%20Muys%20Karp%20Hilderbrand%20W0230759.PDF]

The starting point for any discussion of the intersection between water scarcity and renewable energy is the now generally-accepted correlation between climate change and water resource impacts, which is creating further¶ imperatives for both reduction of GHG emissions and water¶ conservation. Most projections conclude that the water resource impacts of climate change will almost certainly be both diverse and wide-ranging, necessitating the implementation of new protocols for allocating water resources such as the Model Interstate Water Compact. However, a less obvious impact of predicted water shortages will be on the future ability to site new renewable energy facilities and, perhaps more importantly, on which¶ types of renewable energy gain prominence in the future. Consequently, water reuse and reclamation facilities are¶ increasingly being co-located with renewable energy¶ projects, and, indeed, technological development in the two¶ areas has begun to converge in ways that were completely¶ unforeseen twenty years ago.

#### Extinction

Reilly ‘2

(Kristie, Editor for In These Times, a nonprofit, independent, national magazine published in Chicago. We’ve been around since 1976, fighting for corporate accountability and progressive government. In other words, a better world, “NOT A DROP TO DRINK,” <http://www.inthesetimes.com/issue/26/25/culture1.shtml>)

\*Cites environmental thinker and activist Vandana Shiva Maude Barlow and Tony Clarke—probably North America’s foremost water experts

The two books provide a chilling, in-depth examination of a rapidly emerging global crisis. “Quite simply,” Barlow and Clarke write, “unless we dramatically change our ways, between one-half and two-thirds of humanity will be living with severe fresh water shortages within the next quarter-century. … The hard news is this: Humanity is depleting, diverting and polluting the planet’s fresh water resources so quickly and relentlessly that every species on earth—including our own—is in mortal danger.” The crisis is so great, the three authors agree, that the world’s next great wars will be over water. The Middle East, parts of Africa, China, Russia, parts of the United States and several other areas are already struggling to equitably share water resources. Many conflicts over water are not even recognized as such: Shiva blames the Israeli-Palestinian conflict in part on the severe scarcity of water in settlement areas. As available fresh water on the planet decreases, today’s low-level conflicts can only increase in intensity.

## Case

### Warming

#### No evidence that reducing CO2 emissions by the amount wind turbines would reduce it is enough to prevent their impact.

#### Rapid deployment increases emissions—manufacturing/installation increases

Science Daily '12

"Low-Carbon Technologies 'No Quick Fix'" May Not Lessen Global Warming Until Late This Century," 2/15/12 [www.sciencedaily.com/releases/2012/02/120216094801.htm AD 8/25/12](http://www.sciencedaily.com/releases/2012/02/120216094801.htm%20AD%208/25/12)

\*\*Citing Nathan Myhrvold, PhD in theoretical and mathematical physics; Ken Caldeira, PhD in Atmospheric Sciences, atmospheric scientist at the Carnegie Institution for Science; in a pee-reviewed article in Environmental Research Letters\*\*

ScienceDaily (Feb. 15, 2012) — A drastic switch to low carbon-emitting technologies, such as wind and hydroelectric power, may not yield a reduction in global warming until the latter part of this century, new research suggests. Furthermore, it states that technologies that offer only modest reductions in greenhouse gases, such as the use of natural gas and perhaps carbon capture and storage, cannot substantially reduce climate risk in the next 100 years. The study, published February 16, in IOP Publishing's journal Environmental Research Letters, claims that the rapid deployment of low-greenhouse-gas-emitting technologies (LGEs) will initially increase emissions as they will require a large amount of energy to construct and install. These cumulative emissions will remain in the atmosphere for extended periods due to the long lifetime of CO2, meaning that global mean surface temperatures will increase to a level greater than if we continued to use conventional coal-fired plants.

#### Wind power increases emissions – cycling inefficiency outweighs reduction

BENTEK 12 (BENTEK Energy is the leading energy markets information company, “How Less Became More”, <http://docs.wind-watch.org/BENTEK-How-Less-Became-More.pdf>, Acc: 8/1/12, og)

The study details the surprising conclusion that the use of wind energy in the PSCO and ¶ ERCOT context results in increased SO2 and NOX and, in the case of PSCO, CO2. The ¶ mechanism driving increased emissions is the need to cycle coal facilities in order to ¶ accommodate wind, which is considered a “must-take” resource due to the respective states’ ¶ RPS mandates. When wind generation comes online, generation from coal (and natural gasfired) plants is curtailed until the wind subsides, then their generation is once again ramped up ¶ to meet demand. Cycling coal units in this manner drives their heat rate up and their ¶ operating efficiency down, resulting in higher emissions of SO2, NOX and CO2 than would ¶ have been the case if the units had not been cycled.

#### Studies prove wind turbines increased localized warming by .72 degrees Celsius over a decade

Science Daily '12

"Night-Warming Effect Found Over Large Wind Farms in Texas," 4/30/12 www.sciencedaily.com/releases/2012/04/120430152045.htm AD 8/25/12

ScienceDaily (Apr. 30, 2012) — Large wind farms in certain areas in the United States appear to affect local land surface temperatures, according to a paper published April 30 in the journal Nature Climate Change. The study, led by Liming Zhou, an atmospheric scientist at the State University of New York- (SUNY) Albany, provides insights about the possible effects of wind farms. The results could be important for developing efficient adaptation and management strategies to ensure long-term sustainability of wind power. "This study indicates that land surface temperatures have warmed in the vicinity of large wind farms in west-central Texas, especially at night," says Anjuli Bamzai, program director in the National Science Foundation's (NSF) Division of Atmospheric and Geospace Sciences, which funded the research. "The observations and analyses are for a relatively short period, but raise important issues that deserve attention as we move toward an era of rapid growth in wind farms in our quest for alternate energy sources." Considerable research has linked the carbon dioxide produced by burning fossil fuels with rising global temperatures. Consequently, many nations are moving toward cleaner sources of renewable energy such as wind turbines. Generating wind power creates no emissions, uses no water and is likely "green." "We need to better understand the system with observations, and better describe and model the complex processes involved, to predict how wind farms may affect future weather and climate," said Zhou. There have been a growing number of studies of wind farm effects on weather and climate, primarily using numerical models due to the lack of observations over wind farms. As numerical models are computationally intensive and have uncertainties in simulating regional and local weather and climate, said Zhou, remote sensing is likely the most efficient and effective way to study wind farm effects over larger spatial and longer temporal scales. To understand the potential impact of wind farms on local weather and climate, Zhou's team analyzed satellite-derived land surface temperatures from regions around large wind farms in Texas for the period 2003-2011. The researchers found a night-time warming effect over wind farms of up to 0.72 degrees Celsius per decade over the nine-year-period in which data were collected. Because the spatial pattern of warming mirrors the geographic distribution of wind turbines, the scientists attribute the warming primarily to wind farms. The year-to-year land surface temperature over wind farms shows a persistent upward trend from 2003 to 2011, consistent with the increasing number of operational wind turbines with time. "This warming effect is most likely caused by the turbulence in turbine wakes acting like fans to pull down warmer near-surface air from higher altitudes at night," said Somnath Baidya Roy of the University of Illinois at Urbana-Champaign, a co-author of the paper.

### China Trade

#### There’s no solvency card on this advantage – their Jun card doesn’t indicate that the wind industry has anything to do with the overall Chinese economy, and they can’t give you an answer in CX when asked how much of China’s GDP is based on wind turbines.

#### Neodymium supplies necessary for wind are limited now but demand is keeping pace – the plan causes massive bottlenecks and price spikes. We are 100% dependent on China.

Cho 9-20 (Cho, analyst and reporter for Phys.org "rare earth metals: will we have enough?" September 20, 2012 phys.org/news/2012-09-rare-earth-metals.html

"To provide most of our power through renewables would take hundreds of times the amount of rare earth metals that we are mining today," said Thomas Graedel, Clifton R. Musser Professor of Industrial Ecology and professor of geology and geophysics at the Yale School of Forestry & Environmental Studies. There is no firm definition of rare earth metals, but the term generally refers to metals used in small quantities. Rare earth metals include: rare earth elements—17 elements in the periodic table, the 15 lanthanides plus scandium and yttrium; six platinum group elements; and other byproduct metals that occur in copper, gold, uranium, phosphates, iron or zinc ores. While many rare earth metals are actually quite common, they are seldom found in sufficient amounts to be extracted economically. According to a recent Congressional Research Service report, world demand for rare earth metals is estimated to be 136,000 tons per year, and projected to rise to at least 185,000 tons annually by 2015. With continued global growth of the middle class, especially in China, India and Africa, demand will continue to grow. High-tech products and renewable energy technology cannot function without rare earth metals. Neodymium, terbium and dysprosium are essential ingredients in the magnets of wind turbines and computer hard drives; a number of rare earth metals are used in nickel-metal-hydride rechargeable batteries that power electric vehicles and many other products; yttrium is necessary for color TVs, fuel cells and fluorescent lamps; europium is a component of compact fluorescent bulbs and TV and iPhone screens; cerium and lanthanum are used in catalytic converters; platinum group metals are needed as catalysts in fuel cell technology; and other rare earth metals are essential for solar cells, cell phones, computer chips, medical imaging, jet engines, defense technology, and much more. Ads by Google Donate Car to Make-A-Wish - Donate Your Car to Help NC Kids Free Towing & Maximum Tax Deduction - WheelsForWishes.org/Make-A-Wish Wind power has grown around 7 percent a year, increasing by a factor of 10 over the last decade, noted Peter Kelemen, Arthur D. Storke Memorial Professor of Geochemistry at the Earth Institute's Lamont-Doherty Earth Observatory. "Every megawatt of electricity needs 200 kilograms of neodymium—or 20 percent of one ton," he said. "So if every big wind turbine produces one megawatt, five turbines will require one ton of neodymium. If wind is going to play a major part in replacing fossil fuels, we will need to increase our supply of neodymium." A recent MIT study projected that neodymium demand could grow by as much as 700 percent over the next 25 years; demand for dysprosium, also needed for wind turbines, could increase by 2,600 percent. China currently supplies 97 percent of global rare earth metal demand, and 100 percent of heavy rare earth metals such as terbium and dysprosium, used in wind turbines. In 2005, it began restricting exports to preserve resources and protect the environment, causing prices to soar. Today, the United States is 100 percent dependent on imports for rare earth metals. From the mid-1960s through the 1980s, however, Molycorp's Mountain Pass mine in California was the world's main source of rare earth metals. As the U.S. share of rare earth metal production declined, China used government support, research and development, training programs, cheap labor and low prices to develop its supply chain, increasing its share of rare earth metal production from 27 percent in 1990 to 97 percent in 2011. In March, the U.S., Japan and the European Union lodged a complaint with the World Trade Organization over China's limits on rare earth exports. In response, China announced that it will export 30,996 more metric tons of rare earth metals in 2012 than it did in 2011.

#### An increase in demand for wind turbines triggers the link – government incentives distort the market

GCC 12 (Green Car Congress, report based on MIT Research "MIT study finds shift to green energy sources could mean crunch in supply of key rare earth elements" 9 March, 2012 www.greencarcongress.com/2012/03/ree-20120309.html)

A large-scale shift from coal-fired electric power plants and gasoline-fueled cars to wind turbines and electric vehicles could increase demand for two already-scarce rare earth elements (REE)—dysprosium and neodymium, available almost exclusively in China—by 600-2,600 percent over the next 25 years, according to a new study published in the ACS journal Environmental Science & Technology. The study by researchers at MIT also points out that production of the two metals has been increasing by only a few percentage points per year. ...the availability of REEs appears to be at risk based on a number of factors. Of particular significance, one country (China) controls 98% of current supply (production). Historically, much lower levels of market concentration have harmed manufacturing firms. For example, in 1978 Zaire controlled 48% of the cobalt supply and yet political unrest in Zaire resulted in a disruption to global supply that became known as the “Cobalt Crisis”. Another contributor to supply risk for REEs is the fact that they are comined; individual REEs are not mined separately. REEs are found together in geological deposits, rendering mining of individual elements economically inefficient. The supply of any individual REE depends on the geology of the deposits, the costs of the extraction technology employed, and the price of the basket of rare earths (RE). Finally, REEs have come under global scrutiny due to the environmental and social conditions under which they are mined, further increasing their supply risk. —Alonso et al. While the literature contains a number of reports that evaluate different aspects of RE availability, Randolph E. Kirchain, Ph.D., and colleagues evaluated future potential demand scenarios for REEs with a focus on the issue of comining. They analyzed the supply of lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium, terbium, dysprosium and yttrium under various scenarios, and projected the demand for these 10 rare earth elements through 2035. In particular, they estimated resource requirements for electric vehicles and windturbines (revolutionary demand areas for REEs) from performance specifications and vehicle sales or turbine deployment projections. Future demand was estimated for a range of scenarios including one developed by the International Energy Agency (IEA) with adoption of electric vehicles and wind turbines at a rate consistent with stabilization of CO2 in the atmosphere at a level of 450 ppm. In one scenario, demand for dysprosium and neodymium could be higher than 2,600 and 700 percent respectively. To meet that need, production of dysprosium would have to grow each year at nearly twice the historic growth rate for rare earth supplies. The applications that will be most negatively affected by constraints in these REEs (i.e., increased costs) will be those dependent upon high performance magnets. Applications such as petroleum refining, which depend on elements whose supply is projected to exceed demand, may be positively affected if primary producers increase overall production to meet the higher demand for specific elements. If a secondary market emerges to meet the higher demand for specific elements (i.e., recycling of magnets, but not catalysts), then, given that the portfolio of recycled REEs would be significantly different from the portfolio of primary supply, the overall supply portfolio of REEs could change. ...In the end, prices are not the only forces that will influence the REE markets. Government intervention in this market is prevalent. Also, corporate social responsibility policies may influence some firm’s decisions to use REE unless environmental concerns around their mining are addressed. These issues should be considered carefully by interested stakeholders and future research on this topic.

#### A supply bottleneck causes War with China –

Anthony 12/30/12 (Lead editor at Ziff Davis, Inc. Owner at SA Holdings Past Columnist at Tecca Editor at Aol (Weblogs, Inc) Educationm University of Essex, http://www.extremetech.com/extreme/111029-rare-earth-crisis-innovate-or-be-crushed-by-china/2)

The doomsday event that everyone is praying will never come to pass, but which every Western nation is currently planning for, is the eventual cut-off of Chinese rare earth exports. Last year, 97% of the world’s rare earth metals were produced in China — but over the last few years, the Chinese government has been shutting down mines, ostensibly to save what resources it has, and also reducing the amount of rare earth that can be exported. Last year, China produced some 130,000 tons of rare earths, but export restrictions meant that only 35,000 tons were sent to other countries. As a result, demand outside China now outstrips supply by some 40,000 tons per year, and — as expected — many countries are now stockpiling the reserves that they have. Almost every Western country is now digging around in their backyard for rare earth-rich mud and sand, but it’ll probably be too little too late — and anyway, due to geochemistry, there’s no guarantee that explorers and assayers will find what they’re looking for. The price of rare earths are already going up, and so are the non-Chinese-made gadgets and gizmos that use them. Exacerbating the issue yet further, as technology grows more advanced, our reliance on the strange and magical properties of rare earths increases — and China, with the world’s largest workforce and a fire hose of rare earths, is perfectly poised to become the only real producer of solar power photovoltaic cells, computer chips, and more. In short, China has the world by the short hairs, and when combined with a hotting-up cyber front, it’s not hard to see how this situation might devolve into World War III. The alternate, ecological point of view, is that we’re simply living beyond the planet’s means. Either way, strategic and logistic planning to make the most of scarce metals and minerals is now one of the most important tasks that face governments and corporations. Even if large rare earth deposits are found soon, or we start recycling our gadgets in a big way, the only real solution is to somehow lessen our reliance on a finite resource. Just like oil and energy, this will probably require drastic technological leaps. Instead of reducing the amount of tantalum used in capacitors, or indium in LCD displays, we will probably have to discover completely different ways of storing energy or displaying images. My money’s on graphene.

#### China won’t go to war – prefer our evidence.

Fettweis ‘11 – Professor of Political Science @ Tulane

Christopher, Professor of Political Science @ Tulane, Dangerous Times?: The International Politics of Great Power Peace, pg. 117

The diminution of military influence on policymaking is indicative of a broader generational change that seems to be occurring inside Beijing. A number of China experts have begun to argue that the current leadership of the PRC has little in common with the founding members of the communist party, and are far less dogmatic in their approach to both economics and politics." While it is surely a bit premature to suggest that there is a Chinese Gorbachev ready to bring political freedom to his people, at the very least Beijing has altered the way it treats its neighbors. China's much-discussed "charm offensive" has won it many friends in East Asia, and it has helped solidify many of the complex economic ties that cement stability across the region and avoid the regional tensions that realists have expected to see in response to its rapid economic growth." Beijing has been reluctant to use its military superiority to threaten or bully its neighbors into cooperation. Perhaps it is on its way to internalizing the norm of peaceful conflict resolution and will soon no longer contemplate the use of force to achieve its goals; for now, perhaps, the determination to be a good neighbor is the best step for which anyone can hope.

#### Trade can’t solve war.

Picker 6

Colin. Associate professor UMKC school of law. “Trade and Security: Empiricism, Change, Emotion & Relevancy.” 2006. Online.

The changed environments in which the new conflicts arise suggest that trade policy will not very easily influence those conflicts. For the most part, the environments that have changed the nature of armed conflict originated in or emerged after the end of the Cold War. Of course, some of these conditions existed before and some are still in formation, but the end of the Cold War presented a paradigm shift in the environments and nature of armed conflicts that is significant enough to merit the use of the word "new" in this context. The end of the Cold War changed the conflict landscape in many significant ways. For example, the conclusion of the Cold War has likely reduced one significant source of the rampant externalization of internal conflicts. Also, the primary source of global stress and differing economic ideologies was largely replaced by other tensions including differing ethnic and religious beliefs previously suppressed during the Cold War. Similarly, the end of the Cold War led to widespread demilitarization of many of its participants, both within the NATO and the former-Warsaw Pact, leaving them less able to intervene, positively or negatively, in emerging conflicts or failing states.24 Other examples of post-Cold War phenomena that have impacted the conflict environment in recent times include: “Globalization”, with its impact on propaganda/information and the supply of weapons (including WMDs); The rise of humanitarian intervention; The initial post-Cold War UN Security Council revival and its subsequent descent into near impotence; and The increase in uncontrolled non-state participants in conflicts, including through global terrorism and narco-terrorists. Most of these new dimensions of the conflict environment share a common crucial characteristic: they, for the most part, exist independently of global economic forces such as international trade. For example, economic factors are not obviously or perhaps even at all the source of conflicts involving ethnic tensions. Similarly, the rise of religious fundamentalism and the growth of humanitarian intervention are also largely isolated from global economic forces. True, there are some environments that are directly influenced by economic factors, such as globalization and the proliferation of weapons of all sorts, but clearly there are many conflict-producing environments they are immune to economic considerations. Accordingly, where an environment that gives birth to a conflict is impervious or resistant to economic forces, including the new international trade environment (the WTO and the many RTAs), it is less likely that those same economic forces will be able to have an influence on the birth and development of that armed conflicts. Similarly, those economic forces will likely not impact future conflicts that may arise within the same on-going environments. This conclusion should raise concerns for those that advocate employment of trade policy in conflict situations.

#### Empirical studies show no causal relationship between economic decline and war

Miller 1

Morris, Professor of Economics, Poverty: A Cause of War?, http://archive.peacemagazine.org/v17n1p08.htm

Library shelves are heavy with studies focused on the correlates and causes of war. Some of the leading scholars in that field suggest that we drop the concept of causality, since it can rarely be demonstrated. Nevertheless, it may be helpful to look at the motives of war-prone political leaders and the ways they have gained and maintained power, even to the point of leading their nations to war. Poverty: The Prime Causal Factor? Poverty is most often named as the prime causal factor. Therefore we approach the question by asking whether poverty is characteristic of the nations or groups that have engaged in wars. As we shall see, **poverty has never been as significant a factor as one would imagine**. Largely this is because of the traits of the poor as a group - particularly their tendency to tolerate their suffering in silence and/or be deterred by the force of repressive regimes. Their **voicelessness and powerlessness translate into passivity**. Also, because of their illiteracy and ignorance of worldly affairs, the poor become susceptible to the messages of war-bent demagogues and often willing to become cannon fodder. The situations conductive to war involve political repression of dissidents, tight control over media that stir up chauvinism and ethnic prejudices, religious fervor, and sentiments of revenge. The poor succumb to leaders who have the power to create such conditions for their own self-serving purposes. Desperately poor people in **poor nations cannot organize wars**, which are exceptionally costly. The statistics speak eloquently on this point. In the last 40 years the global arms trade has been about $1500 billion, of which two-thirds were the purchases of developing countries. That is an amount roughly equal to the foreign capital they obtained through official development aid (ODA). Since ODA does not finance arms purchases (except insofar as money that is not spent by a government on aid-financed roads is available for other purposes such as military procurement) financing is also required to control the media and communicate with the populace to convince them to support the war. Large-scale armed conflict is so expensive that governments must resort to exceptional sources, such as drug dealing, diamond smuggling, brigandry, or deal-making with other countries. The reliance on illicit operations is well documented in a recent World Bank report that studied 47 civil wars that took place between 1960 and 1999, the main conclusion of which is that the key factor is the availability of commodities to plunder. For greed to yield war, there must be financial opportunities. **Only affluent political leaders and elites can amass such weaponry**, diverting funds to the military even when this runs contrary to the interests of the population. In most inter-state wars the antagonists were wealthy enough to build up their armaments and propagandize or repress to gain acceptance for their policies. Economic Crises? Some scholars have argued that it is not poverty, as such, that contributes to the support for armed conflict, but rather some catalyst, such as an economic crisis. However, a study by Minxin Pei and Ariel Adesnik shows that this **hypothesis lacks merit**. After studying 93 episodes of economic crisis in 22 countries in Latin American and Asia since World War II, they concluded that much of the conventional thinking about the political impact of economic crisis is wrong: "The severity of economic crisis - as measured in terms of inflation and negative growth - bore no relationship to the collapse of regimes ... or (in democratic states, rarely) to an outbreak of violence... In the cases of dictatorships and semi-democracies, the ruling elites responded to crises by increasing repression (thereby using one form of violence to abort another)."

#### Even if China retaliates it will be small symbolic gestures—doesn’t escalate into a trade war

Mufson 12

Steven, “China asks WTO to block U.S. tariffs” [http://www.washingtonpost.com/business/economy/2012/05/25/gJQA7rNiqU\_story.html] May 25

Rather than resorting to retaliatory measures, China’s Ministry of Commerce on Friday asked for WTO consultations, the first stage of a formal dispute process. The products covered are worth a total of $7.29 billion, a substantial figure for the companies involved but only a small fraction of the trade between the two nations.¶ “From the broad strategic standpoint, it’s more of the tit-for-tatting that goes on with the U.S. and China in these trade barrier disputes,” said C. Fred Bergsten, head of the Peterson Institute. “I don’t think it’s anything like a trade war. At most, it is a skirmish over products that make up a tiny, tiny share of the trade between the two countries.”

#### Trade conflict with China is inevitable, but it does not threaten conflict.

-trade disputes are inevitable, even without currency – competing head-to-head, China seeks U.S. market access, old coalitions seeking cooperation are breaking down, growing tolerance of trade disputes by both sides

-trade conflicts will be managed, China will go to the WTO

-China still depends on the U.S. so will not threaten conflict

-China has other markets, means it can weather a trade conflict and won’t view as an existential threat

Feigenbaum ‘10

Evan A. Feigenbaum is head of the Asia practice group at the Eurasia Group and adjunct senior fellow for Asia at the Council on Foreign Relations. October 19, 2010. Foreign Policy. “Reluctant Warriors”. http://www.foreignpolicy.com/articles/2010/10/19/reluctant\_warriors?page=0,2

A full-fledged trade war between the United States and China would be disastrous; thankfully, it's far from likely. Decision makers on both sides appear to have concluded that their trade disputes can be managed without undermining the entire U.S.-China relationship. Trade conflict is here to stay, but it is fast becoming a "new normal" in relations between Washington and Beijing. What is fueling this growing tension on trade issues? Unemployment and flat growth in the United States are one part of the story. But four underlying factors are dramatically changing the U.S.-China economic relationship and will ensure that conflicts persist into the future. First, U.S. and Chinese firms increasingly compete head-to-head because China is moving up the value chain far more quickly and across a wider array of sectors -- from electric vehicles to solar energy to high-speed rail -- than many in the United States once expected. As China seeks both to "indigenize" technology -- not simply rely on technology transfers -- and to compete globally, it is forcing U.S. firms to confront a fast-changing and vastly more competitive landscape. Chinese firms already offer cutting-edge technology in high-speed rail and are in the hunt for contracts in developed markets such as Australia and California. And U.S. companies that once assumed a grand bargain -- providing U.S. technology in exchange for market access in China -- must now fight Chinese competitors for the same market share. Many in China, not least Premier Wen Jiabao, argue that China came late to both the industrial and information revolutions, and they are determined to ride the next technological wave. So, China (like other states before it) is using government policy to support its ambitious goals -- for example, favoring domestic companies in government procurement and offering preferential financing to homegrown national champions such as the Commercial Aircraft Corporation of China, which might soon challenge Boeing in the narrow-body passenger jet market. The bottom line is that U.S. firms face a more vigorous challenge from China. And they are working to meet that challenge in two ways: First, by seeking to move up the value chain faster -- companies like Apple, for example, have upped their game and succeeded, even in places like Japan, which is a wonderland of indigenously produced consumer electronics. And second, U.S.-based multinationals are teaming up with Western diplomats to push back against discriminatory market-access policies in an effort to level the playing field in China. Even though China's undervalued currency preoccupies Congress and smaller manufacturers, U.S. firms complain more often about the business climate in China -- a problem that will not go away even if the currency issue disappears. A second trend -- partly a result of intensifying competition -- is that old coalitions that once provided ballast to U.S.-China relations are breaking down. In China, interest groups divide over nearly every economic issue: Chinese exporters, bankers, and political leaders -- who once coalesced around trade-related issues -- are increasingly at odds. Thus, China's central bank initiated a revaluation of its currency in June despite opposition from China's Ministry of Commerce and export lobbies. Chinese interest groups are split over anti-dumping and protectionist trade measures. And Chinese interest groups are divided, too, about access for foreigners to sensitive sectors, such as Shell's partnership with PetroChina to explore for shale gas in Sichuan province. Meanwhile, despite the fact that many U.S. companies are deepening their engagement with China, the old political-business coalition that helped Beijing gain permanent normal trading status in the 1990s is fraying. It would likely be impossible to reassemble the alliance that worked to promote closer trade links in the Clinton and early Bush years. And new areas of trade conflict are emerging, such as in clean energy, which might produce new groups of skeptics. Just last week, the United States opened an investigation into Chinese support for clean-energy producers at the urging of the United Steelworkers, prompting a vigorous verbal challenge from China. A third trend is the growing tolerance for trade tensions in both Washington and Beijing. This confidence has made both governments less restrained in pursuing trade disputes. But it also means the United States and China have largely separated security issues, such as North Korea and Iran, from the minutiae of Section 301 and 421 filings and market-access disputes. The relationship will not collapse, even in the face of an avalanche of anti-dumping suits, as both governments work to delink the various issues on an increasingly complex bilateral menu. Beijing, having grown more comfortable with the World Trade Organization's dispute-resolution procedures (and having learned to leverage the system to its own advantage), is now prepared to vigorously fight U.S. suits in many of these areas. It has investigated numerous anti-dumping cases brought by Chinese producers, lent its ear to a proliferation of Chinese business lobbies, and is investigating a countervailing duties case into U.S. subsidies for the Big Three automakers. inally, U.S. demands for access to China's 1.3 billion consumers are growing in both scope and intensity, particularly as China's indigenous innovation policies threaten the proprietary technologies of U.S. companies. And demands for market access now flow both ways. A China already resistant to U.S. pressure will become even more so the more Chinese investments in the United States are blocked. Taken together, these four factors guarantee that U.S.-China trade relations are certain to become more fraught in the months and years ahead. But U.S.-China relations can probably weather a proliferation of such acrimonious trade disputes, especially if they are channeled through the WTO and other rules-based mechanisms. The bilateral relationship is extremely diverse; both sides have strong incentives not to let trade friction undermine every other form of cooperation. And it's worth noting that virtually no U.S. company plans to flee China -- not even those that stand to lose the most from China's indigenous innovation policies. Meanwhile, Beijing has two good reasons to keep the overall relationship with Washington on track. For one, China's economy is not yet "decoupled" from America's; China continues to run large trade surpluses with the United States and, because of its own stabilized exchange rate, is bound to U.S. monetary policy as its dollar reserves accumulate. For another, Beijing has more trade and investment options with more countries than ever before; China can now weather conflict with the United States more easily -- thus Beijing need not treat trade conflict with Washington as a strategic threat. Still, to keep frictions from escalating, both sides must make sure they stick as much as possible to WTO and rules-based mechanisms for resolving their differences, avoiding purely punitive actions not linked to specific commercial grievances. The likely course for the United States probably involves pursuing a mix of anti-dumping and countervailing duties cases -- and continuing to search for a more systemic remedy to press, persuade, and sometimes coerce China to level its playing field. That will produce very real tensions. But rules-based spats, though contentious, will not likely result in underlying strategic conflict. Indeed, the essential strategic reality of Asia today is this: China is fast becoming the central player in a new economic regionalism, but Asian countries are deepening defense and political coordination with the United States as a hedge against Beijing's growing strategic weight.