# \*\*Economy Answers\*\*

## No Crisis

### The entire HS topic is alarmist nonsense

**Lane, 11** – member of the Washington Post’s editorial board (Charles, “The U.S. infrastructure argument that crumbles upon examination,”10/31,

<http://www.washingtonpost.com/opinions/the-us-infrastructure-argument-that-crumbles-upon-examination/2011/10/31/gIQAnILRaM_story.html>)

For all its shortcomings, U.S. infrastructure is still among the most advanced in the world — if not the most advanced. I base this not on selective personal experience but on the same data alarmists cite. The contiguous United States (that is, excluding Alaska and Hawaii) cover 3.1 million square miles, including deserts, mountain ranges, rivers and two oceanic coastlines. In a world of vast dictatorships (China), tiny democracies (Switzerland) and everything in between, from Malta to Mexico, the challenge of building and maintaining first-rate roads, bridges, railroads, airports and seaports in a country like the United States is extraordinary — and so is the degree to which the United States succeeds. When you compare America’s WEF rankings with those of the 19 other largest countries, it stands second only to Canada, which is lightly populated — and whose infrastructure is linked with ours. Among the 20 most populous countries, the United States ranks behind France, Germany and Japan, in that order. This would seem to confirm the case for U.S. inferiority in the developed world. But France and Germany, in addition to being substantially smaller than the United States, are part of the European Union, a borderless single market from the Baltic Sea to the Black Sea. Sure enough, when you average out the scores of all 27 E.U. nations, the United States beats them by a clear margin. The WEF produced its rankings based on a survey in which business executives were asked to rate their respective countries’ infrastructure on an ascending scale of 1 to 7. Barbados’s 5.8 average score means that paradise’s execs are a smidgen happier with their infrastructure than are their American counterparts, who gave the United States an average score of 5.7. This is a “national disgrace”? Barbados has one commercial airport. The United States has more than 500. The WEF asked executives to rate “railroad infrastructure,” without distinguishing between freight (which excels in the United States) and passenger (which does not). Perhaps the survey’s subjectivity accounts for odd results such as Guatemala outranking Italy. Or that the U.S. score plunged below 6.0 for the first time in 2008 — proof of a sudden drop in the actual quality of our roads and bridges, or merely an indicator of the general despondency that hit U.S. businesses along with the Great Recession? And while that D from the American Society of Civil Engineers is undoubtedly sincere, the organization has a vested interest in greater infrastructure spending, which means more work for engineers. The engineers’ lobby has given America’s infrastructure a D in every one of its report cards going back to 1998, except for 2001, when the mark was D-plus.

### No infrastructure crisis

**O’Toole, 10** - senior fellow at the Cato Institute (Randal, “Fixing Transit The Case for Privatization”, 11/10, <http://www.cato.org/pubs/pas/PA670.pdf>)

Although much attention has been paid to a supposed infrastructure crisis involving roads and highway bridges, the truth is that there is no highway infrastructure crisis. The gas taxes, tolls, and other user fees that fund most of our highway system have been adequate, even after being raided to subsidize transit, to keep state highways in good shape. The number of bridges that are rated “structurally deficient” has declined by nearly 50 percent since 1990. 58 The average “roughness rating”— which ranges from under 60, meaning “very smooth,” to more than 220, meaning “very rough”—has improved from 92 to 78 in the last decade. 59 Some local highways and bridges may have problems, but our national system of interstate, U.S., and other state highways is in good shape.

## No Solvency

### Zero short-term stimulus from infrastructure investments

**Utt, 11** - Ronald D. Utt, Ph.D., is Herbert and Joyce Morgan Senior Research Fellow in the Thomas A. Roe Institute for Economic Policy Studies at The Heritage Foundation (“The Limited Benefits of a National Infrastructure Bank,” Congressional Testimony, 10/20, <http://www.heritage.org/research/testimony/2011/10/the-limited-beneftis-of-a-national-infrastructure-bank>)

Would an Infrastructure Bank Contribute to Jobs and Stimulate the Economy? For some advocates—especially the President—these banks are seen as mechanisms to propel the economy forward out of the lingering recession into an era of greater prosperity and more jobs. Sadly, all evidence indicates that this just isn’t so. As far back as 1983, the General Accounting Office (now the Government Accountability Office) reviewed an earlier infrastructure-based stimulus program and observed that although the program was enacted during the worst of the recession, “implementation of the act was not effective and timely in relieving the high unemployment caused by the recession.” Specifically, the GAO found that: Funds were spent slowly and relatively few jobs were created when most needed in the economy. Also, from its review of projects and available data, the GAO found that (1) unemployed persons received a relatively small proportion of the jobs provided, and (2) project officials’ efforts to provide em­ployment opportunities to the unemployed ranged from no effort being made to work­ing closely with state employment agencies to locate unemployed persons.[[5]](http://www.heritage.org/research/testimony/2011/10/the-limited-beneftis-of-a-national-infrastructure-bank" \l "_ftn5) Infrastructure-based stimulus programs have been a disappointment, in large part because of time delays in getting programs underway, projects identified and approved, and money spent. More recently, supporters of the American Recovery and Reinvestment Act (ARRA) claimed that it would focus on shovel-ready projects, but USDOT recently reported to this committee that as of July 2011—two and a half years after the enactment of the ARRA—just 61 percent of the authorized transportation funds had been spent. Perhaps contributing to this is the fact that the Federal Railroad Administration required 12 months to set up a mechanism to receive, review, and approve rail infrastructure projects authorized by the ARRA.

### Fiat doesn’t solve the delay argument

**Utt, 11** - Ronald D. Utt, Ph.D., is Herbert and Joyce Morgan Senior Research Fellow in the Thomas A. Roe Institute for Economic Policy Studies at The Heritage Foundation (“The Limited Benefits of a National Infrastructure Bank,” Congressional Testimony, 10/20, <http://www.heritage.org/research/testimony/2011/10/the-limited-beneftis-of-a-national-infrastructure-bank>)

In both of these cases, the stimulus funds were being spent through existing federal, state, and local channels by departments, managers, and employees with many years of experience in the project approval business. In large part, these delays are not due to any particular institutional failing but simply to the time it takes to establish guidelines and rules for project submission, for outside parties to complete the request, and for USDOT to review the many requests submitted and pick the most promising, perhaps with modifications, and fulfill the contractual details of awarding the contract. Once the award is made to state and local entities, they in turn must draw up the RFP (and perhaps produce detailed engineering plans as appropriate), put the contract out for bid, allow sufficient time for contractors to prepare bids, review submitted bids, and finally accept the winning contract. It is at this point that money can be spent on the project, and the time that elapses from the beginning to the end of the beginning can easily exceed a year or more. In the case of an infrastructure bank, such delays will be much longer—perhaps even double that described above. In the case of the above example, the assumption is that the newly authorized stimulus money would flow through an institutional “infrastructure” of well-established channels staffed by experienced people. In the case of the proposed infrastructure banks, no such administrative structure exists, and one will have to be created from scratch once the enabling legislation is enacted.

### It won’t help the economy

**O’Toole, 12** - senior fellow at the Cato Institute  (Randal, “Indy Transit Task Force Misses the Mark,” <http://www.cato.org/publications/commentary/indy-transit-task-force-misses-mark>

Commuter rail lines in cities comparable to Indianapolis, including Albuquerque, Dallas, Ft. Lauderdale, Nashville, Portland and Seattle, are so expensive and carry so few people it would cost less (and be better for the environment) to give every daily round-trip rider a brand-new Toyota Prius every other year for the rest of their lives. Some cities claim their rail lines spurred economic development, but this is merely more misinformation to justify bad decisions. The reality is almost all so-called “transit-oriented developments” along new rail lines required further subsidies. Portland has given hundreds of millions of dollars in subsidies to developers along its light-rail and streetcar lines. Most cities building new rail lines are merely chasing after federal dollars. Congress’ “New Starts” transit fund is designed so that cities that come up with the most expensive transit projects get the most money, while cities that plan efficient transit systems get the least. House Republicans want to end this fund, which means Indianapolis would not be likely to get much federal funding for an expensive project like the Noblesville commuter train.

## No War

### Econ collapse doesn’t cause war

Samuel Bazzi (Department of Economics at University of California San Diego) and Christopher Blattman (assistant professor of political science and economics at Yale University) November 2011 “Economic Shocks and Conflict: The (Absence of?) Evidence from Commodity Prices” <http://www.chrisblattman.com/documents/research/2011.EconomicShocksAndConflict.pdf?9d7bd4>

VI. Discussion and conclusions A. Implications for our theories of political instability and conflict The state is not a prize?—Warlord politics and the state prize logic lie at the center of the most influential models of conflict, state development, and political transitions in economics and political science. Yet we see no evidence for this idea in economic shocks, even when looking at the friendliest cases: fragile and unconstrained states dominated by extractive commodity revenues. Indeed, we see the opposite correlation: if anything, higher rents from commodity prices weakly 22 lower the risk and length of conflict. Perhaps shocks are the wrong test. Stocks of resources could matter more than price shocks (especially if shocks are transitory). But combined with emerging evidence that war onset is no more likely even with rapid increases in known oil reserves (Humphreys 2005; Cotet and Tsui 2010) we regard the state prize logic of war with skepticism.17 Our main political economy models may need a new engine. Naturally, an absence of evidence cannot be taken for evidence of absence. Many of our conflict onset and ending results include sizeable positive and negative effects.18 Even so, commodity price shocks are highly influential in income and should provide a rich source of identifiable variation in instability. It is difficult to find a better-measured, more abundant, and plausibly exogenous independent variable than price volatility. Moreover, other time-varying variables, like rainfall and foreign aid, exhibit robust correlations with conflict in spite of suffering similar empirical drawbacks and generally smaller sample sizes (Miguel et al. 2004; Nielsen et al. 2011). Thus we take the absence of evidence seriously. Do resource revenues drive state capacity?—State prize models assume that rising revenues raise the value of the capturing the state, but have ignored or downplayed the effect of revenues on self-defense. We saw that a growing empirical political science literature takes just such a revenue-centered approach, illustrating that resource boom times permit both payoffs and repression, and that stocks of lootable or extractive resources can bring political order and stability. This countervailing effect is most likely with transitory shocks, as current revenues are affected while long term value is not. Our findings are partly consistent with this state capacity effect. For example, conflict intensity is most sensitive to changes in the extractive commodities rather than the annual agricultural crops that affect household incomes more directly. The relationship only holds for conflict intensity, however, and is somewhat fragile. We do not see a large, consistent or robust decline in conflict or coup risk when prices fall. A reasonable interpretation is that the state prize and state capacity effects are either small or tend to cancel one another out. Opportunity cost: Victory by default?—Finally, the inverse relationship between prices and war intensity is consistent with opportunity cost accounts, but not exclusively so. As we noted above, the relationship between intensity and extractive commodity prices is more consistent with the state capacity view. Moreover, we shouldn’t mistake an inverse relation between individual aggression and incomes as evidence for the opportunity cost mechanism. The same correlation is consistent with psychological theories of stress and aggression (Berkowitz 1993) and sociological and political theories of relative deprivation and anomie (Merton 1938; Gurr 1971). Microempirical work will be needed to distinguish between these mechanisms. Other reasons for a null result.—Ultimately, however, the fact that commodity price shocks have no discernible effect on new conflict onsets, but some effect on ongoing conflict, suggests that political stability might be less sensitive to income or temporary shocks than generally believed. One possibility is that successfully mounting an insurgency is no easy task. It comes with considerable risk, costs, and coordination challenges. Another possibility is that the counterfactual is still conflict onset. In poor and fragile nations, income shocks of one type or another are ubiquitous. If a nation is so fragile that a change in prices could lead to war, then other shocks may trigger war even in the absence of a price shock. The same argument has been made in debunking the myth that price shocks led to fiscal collapse and low growth in developing nations in the 1980s.19 B. A general problem of publication bias? More generally, these findings should heighten our concern with publication bias in the conflict literature. Our results run against a number of published results on commodity shocks and conflict, mainly because of select samples, misspecification, and sensitivity to model assumptions, and, most importantly, alternative measures of instability. Across the social and hard sciences, there is a concern that the majority of published research findings are false (e.g. Gerber et al. 2001). Ioannidis (2005) demonstrates that a published finding is less likely to be true when there is a greater number and lesser pre-selection of tested relationships; there is greater flexibility in designs, definitions, outcomes, and models; and when more teams are involved in the chase of statistical significance. The cross-national study of conflict is an extreme case of all these. Most worryingly, almost no paper looks at alternative dependent variables or publishes systematic robustness checks. Hegre and Sambanis (2006) have shown that the majority of published conflict results are fragile, though they focus on timeinvariant regressors and not the time-varying shocks that have grown in popularity. We are also concerned there is a “file drawer problem” (Rosenthal 1979). Consider this decision rule: scholars that discover robust results that fit a theoretical intuition pursue the results; but if results are not robust the scholar (or referees) worry about problems with the data or empirical strategy, and identify additional work to be done. If further analysis produces a robust result, it is published. If not, back to the file drawer. In the aggregate, the consequences are dire: a lower threshold of evidence for initially significant results than ambiguous ones.20

### Financial crisis disproves

Thomas P.M. Barnett (senior managing director of Enterra Solutions LLC and a contributing editor/online columnist for Esquire magazine) August 2009 “The New Rules: Security Remains Stable Amid Financial Crisis” http://www.aprodex.com/the-new-rules--security-remains-stable-amid-financial-crisis-398-bl.aspx

When the global financial crisis struck roughly a year ago, the blogosphere was ablaze with all sorts of scary predictions of, and commentary regarding, ensuing conflict and wars -- a rerun of the Great Depression leading to world war, as it were. Now, as global economic news brightens and recovery -- surprisingly led by China and emerging markets -- is the talk of the day, it's interesting to look back over the past year and realize how globalization's first truly worldwide recession has had virtually no impact whatsoever on the international security landscape. None of the more than three-dozen ongoing conflicts listed by GlobalSecurity.org can be clearly attributed to the global recession. Indeed, the last new entry (civil conflict between Hamas and Fatah in the Palestine) predates the economic crisis by a year, and three quarters of the chronic struggles began in the last century. Ditto for the 15 low-intensity conflicts listed by Wikipedia (where the latest entry is the Mexican "drug war" begun in 2006). Certainly, the Russia-Georgia conflict last August was specifically timed, but by most accounts the opening ceremony of the Beijing Olympics was the most important external trigger (followed by the U.S. presidential campaign) for that sudden spike in an almost two-decade long struggle between Georgia and its two breakaway regions. Looking over the various databases, then, we see a most familiar picture: the usual mix of civil conflicts, insurgencies, and liberation-themed terrorist movements. Besides the recent Russia-Georgia dust-up, the only two potential state-on-state wars (North v. South Korea, Israel v. Iran) are both tied to one side acquiring a nuclear weapon capacity -- a process wholly unrelated to global economic trends. And with the United States effectively tied down by its two ongoing major interventions (Iraq and Afghanistan-bleeding-into-Pakistan), our involvement elsewhere around the planet has been quite modest, both leading up to and following the onset of the economic crisis: e.g., the usual counter-drug efforts in Latin America, the usual military exercises with allies across Asia, mixing it up with pirates off Somalia's coast). Everywhere else we find serious instability we pretty much let it burn, occasionally pressing the Chinese -- unsuccessfully -- to do something. Our new Africa Command, for example, hasn't led us to anything beyond advising and training local forces. So, to sum up: \* No significant uptick in mass violence or unrest (remember the smattering of urban riots last year in places like Greece, Moldova and Latvia?); \* The usual frequency maintained in civil conflicts (in all the usual places); \* Not a single state-on-state war directly caused (and no great-power-on-great-power crises even triggered); \* No great improvement or disruption in great-power cooperation regarding the emergence of new nuclear powers (despite all that diplomacy); \* A modest scaling back of international policing efforts by the system's acknowledged Leviathan power (inevitable given the strain); and \* No serious efforts by any rising great power to challenge that Leviathan or supplant its role. (The worst things we can cite are Moscow's occasional deployments of strategic assets to the Western hemisphere and its weak efforts to outbid the United States on basing rights in Kyrgyzstan; but the best include China and India stepping up their aid and investments in Afghanistan and Iraq.) Sure, we've finally seen global defense spending surpass the previous world record set in the late 1980s, but even that's likely to wane given the stress on public budgets created by all this unprecedented "stimulus" spending. If anything, the friendly cooperation on such stimulus packaging was the most notable great-power dynamic caused by the crisis. Can we say that the world has suffered a distinct shift to political radicalism as a result of the economic crisis? Indeed, no. The world's major economies remain governed by center-left or center-right political factions that remain decidedly friendly to both markets and trade. In the short run, there were attempts across the board to insulate economies from immediate damage (in effect, as much protectionism as allowed under current trade rules), but there was no great slide into "trade wars." Instead, the World Trade Organization is functioning as it was designed to function, and regional efforts toward free-trade agreements have not slowed. Can we say Islamic radicalism was inflamed by the economic crisis? If it was, that shift was clearly overwhelmed by the Islamic world's growing disenchantment with the brutality displayed by violent extremist groups such as al-Qaida. And looking forward, austere economic times are just as likely to breed connecting evangelicalism as disconnecting fundamentalism. At the end of the day, the economic crisis did not prove to be sufficiently frightening to provoke major economies into establishing global regulatory schemes, even as it has sparked a spirited -- and much needed, as I argued last week -- discussion of the continuing viability of the U.S. dollar as the world's primary reserve currency. Naturally, plenty of experts and pundits have attached great significance to this debate, seeing in it the beginning of "economic warfare" and the like between "fading" America and "rising" China. And yet, in a world of globally integrated production chains and interconnected financial markets, such "diverging interests" hardly constitute signposts for wars up ahead. Frankly, I don't welcome a world in which America's fiscal profligacy goes undisciplined, so bring it on -- please! Add it all up and it's fair to say that this global financial crisis has proven the great resilience of America's post-World War II international liberal trade order. Do I expect to read any analyses along those lines in the blogosphere any time soon? Absolutely not. I expect the fantastic fear-mongering to proceed apace. That's what the Internet is for.

### Countries turn inward – no fighting

Lloyd deMause, director of The Institute for Psychohistory, “Nuclear War as an Anti-Sexual Group Fantasy” Updated December 18th 2002, http://www.geocities.com/kidhistory/ja/nucsex.htm

The nation "turns inward" during this depressed phase of the cycle. Empirical studies have clearly demonstrated that major economic downswings are accompanied by "introverted" foreign policy moods, characterized by fewer armed expeditions, less interest in foreign affairs in the speeches of leaders, reduced military expenditures, etc. (Klingberg, 1952; Holmes, 1985). Just as depressed people experience little conscious rage--feeling "I deserve to be killed" rather than "I want to kill others" (Fenichel, 1945, p. 393)--interest in military adventures during the depressed phase wanes, arms expeditures decrease and peace treaties multiply.

### No causal relationship – ignores other variables

Niall Ferguson (Laurence A. Tisch Professor of History at Harvard University and a Senior Fellow at the Hoover Institution at Stanford University) 2006 Foreign Affairs, September/October, Vol. 85, Issue 5

Nor can economic crises explain the bloodshed. What may be the most familiar causal chain in modern historiography links the Great Depression to the rise of fascism and the outbreak of World War II. But that simple story leaves too much out. Nazi Germany started the war in Europe only after its economy had recovered. Not all the countries affected by the Great Depression were taken over by fascist regimes, nor did all such regimes start wars of aggression. In fact, no general relationship between economics and conflict is discernible for the century as a whole. Some wars came after periods of growth, others were the causes rather than the consequences of economic catastrophe, and some severe economic crises were not followed by wars.

## Resilient

### No protectionism – economy is resilient

Dani Rodrik (professor of political economy at Harvard, recipient of the Social Science Research Council’s Hirschman Prize) 2009 “The myth of rising protectionism”, http://www.business-standard.com/india/news/dani-rodrikmythrising-protectionism/373102/

There was a dog that didn’t bark during the financial crisis: protectionism. Despite much hue and cry about it, governments have, in fact, imposed remarkably few trade barriers on imports. Indeed, the world economy remains as open as it was before the crisis struck. Protectionism normally thrives in times of economic peril. Confronted by economic decline and rising unemployment, governments are much more likely to pay attention to domestic pressure groups than to upholding their international obligations. As John Maynard Keynes recognised, trade restrictions can protect or generate employment during economic recessions. But what may be desirable under extreme conditions for a single country can be highly detrimental to the world economy. When everyone raises trade barriers, the volume of trade collapses. No one wins. That is why the disastrous free-for-all in trade policy during the 1930’s greatly aggravated the Great Depression. Many complain that something similar, if less grand in scope, is taking place today. An outfit called the Global Trade Alert (GTA) has been at the forefront, raising alarm bells about what it calls “a protectionist juggernaut”. The GTA’s latest report identifies no fewer than 192 separate protectionist actions since November 2008, with China as the most common target. This number has been widely quoted in the financial press. Taken at face value, it seems to suggest that governments have all but abandoned their commitments to the World Trade Organization and the multilateral trade regime. But look more closely at those numbers and you will find much less cause for alarm. Few of those 192 measures are, in fact, more than a nuisance. The most common among them are the indirect (and often unintended) consequences of the bailouts that governments mounted as a consequence of the crisis. The most frequently affected sector is the financial industry. Moreover, we do not even know whether these numbers are unusually high when compared to pre-crisis trends. The GTA report tells us how many measures have been imposed since November 2008, but says nothing about the analogous numbers prior to that date. In the absence of a benchmark for comparative assessment, we do not really know whether 192 “protectionist” measures is a big or small number. What about the recent tariffs imposed by the United States on Chinese tires? President Barack Obama’s decision to introduce steep duties (set at 35 per cent in the first year) in response to a US International Trade Commission (USITC) ruling (sought by US labour unions) has been widely criticised as stoking the protectionist fires. But it is easy to overstate the significance of this case, too. The tariff is fully consistent with a special arrangement negotiated at the time of China’s accession to the WTO, which allows the US to impose temporary protection when its markets are “disrupted” by Chinese exports. The tariffs that Obama imposed were considerably below what the USITC had recommended. And, in any case, the measure affects less than 0.3 per cent of China’s exports to the US. The reality is that the international trade regime has passed its greatest test since the Great Depression with flying colours. Trade economists who complain about minor instances of protectionism sound like a child whining about a damaged toy in the wake of an earthquake that killed thousands. Three things explain this remarkable resilience: ideas, politics and institutions. Economists have been extraordinarily successful in conveying their message to policymakers—even if ordinary people still regard imports with considerable suspicion. Nothing reflects this better than how “protection” and “protectionists” have become terms of derision. After all, governments are generally expected to provide protection to their citizens. But if you say that you favour protection “from imports”, you are painted into a corner with Reed Smoot and Willis C. Hawley, authors of the infamous 1930 US tariff bill. But economists’ ideas would not have gone very far without significant changes in the underlying configuration of political interests in favour of open trade. For every worker and firm affected by import competition, there is one or more worker and firm expecting to reap the benefits of access to markets abroad. The latter have become increasingly vocal and powerful, often represented by large multinational corporations. In his latest book, Paul Blustein recounts how a former Indian trade minister once asked his American counterpart to bring him a picture of an American farmer: “I have never actually seen one,” the minister quipped. “I have only seen US conglomerates masquerading as farmers.” But the relative docility of rank-and-file workers on trade issues must ultimately be attributed to something else altogether: the safety nets erected by the welfare state. Modern industrial societies now have a wide array of social protections – unemployment compensation, adjustment assistance, and other labour-market tools, as well as health insurance and family support — that mitigate demand for cruder forms of protection.

### Econ resilient

Fareed Zakaria (editor of Newsweek International) December 2009 “The Secrets of Stability,” http://www.newsweek.com/id/226425/page/2]

One year ago, the world seemed as if it might be coming apart. The global financial system, which had fueled a great expansion of capitalism and trade across the world, was crumbling. All the certainties of the age of globalization—about the virtues of free markets, trade, and technology—were being called into question. Faith in the American model had collapsed. The financial industry had crumbled. Once-roaring emerging markets like China, India, and Brazil were sinking. Worldwide trade was shrinking to a degree not seen since the 1930s. Pundits whose bearishness had been vindicated predicted we were doomed to a long, painful bust, with cascading failures in sector after sector, country after country. In a widely cited essay that appeared in The Atlantic n this May, Simon Johnson, former chief economist of the International Monetary Fund, wrote: "The conventional wisdom among the elite is still that the current slump 'cannot be as bad as the Great Depression.' This view is wrong. What we face now could, in fact, be worse than the Great Depression." Others predicted that these economic shocks would lead to political instability and violence in the worst-hit countries. At his confirmation hearing in February, the new U.S. director of national intelligence, Adm. Dennis Blair, cautioned the Senate that "the financial crisis and global recession are likely to produce a wave of economic crises in emerging-market nations over the next year." Hillary Clinton endorsed this grim view. And she was hardly alone. Foreign Policy ran a cover story predicting serious unrest in several emerging markets. Of one thing everyone was sure: nothing would ever be the same again. Not the financial industry, not capitalism, not globalization. One year later, how much has the world really changed? Well, Wall Street is home to two fewer investment banks (three, if you count Merrill Lynch). Some regional banks have gone bust. There was some turmoil in Moldova and (entirely unrelated to the financial crisis) in Iran. Severe problems remain, like high unemployment in the West, and we face new problems caused by responses to the crisis—soaring debt and fears of inflation. But overall, things look nothing like they did in the 1930s. The predictions of economic and political collapse have not materialized at all. A key measure of fear and fragility is the ability of poor and unstable countries to borrow money on the debt markets. So consider this: the sovereign bonds of tottering Pakistan have returned 168 percent so far this year. All this doesn't add up to a recovery yet, but it does reflect a return to some level of normalcy. And that rebound has been so rapid that even the shrewdest observers remain puzzled. "The question I have at the back of my head is 'Is that it?' " says Charles Kaye, the co-head of Warburg Pincus. "We had this huge crisis, and now we're back to business as usual?"This revival did not happen because markets managed to stabilize themselves on their own. Rather, governments, having learned the lessons of the Great Depression, were determined not to repeat the same mistakes once this crisis hit. By massively expanding state support for the economy—through central banks and national treasuries—they buffered the worst of the damage. (Whether they made new mistakes in the process remains to be seen.) The extensive social safety nets that have been established across the industrialized world also cushioned the pain felt by many. Times are still tough, but things are nowhere near as bad as in the 1930s, when governments played a tiny role in national economies. It's true that the massive state interventions of the past year may be fueling some new bubbles: the cheap cash and government guarantees provided to banks, companies, and consumers have fueled some irrational exuberance in stock and bond markets. Yet these rallies also demonstrate the return of confidence, and confidence is a very powerful economic force. When John Maynard Keynes described his own prescriptions for economic growth, he believed government action could provide only a temporary fix until the real motor of the economy started cranking again—the animal spirits of investors, consumers, and companies seeking risk and profit. Beyond all this, though, I believe there's a fundamental reason why we have not faced global collapse in the last year. It is the same reason that we weathered the stock-market crash of 1987, the recession of 1992, the Asian crisis of 1997, the Russian default of 1998, and the tech-bubble collapse of 2000. The current global economic system is inherently more resilient than we think. The world today is characterized by three major forces for stability, each reinforcing the other and each historical in nature.

### Other even bigger crises prove resilience

Mark Skousen. "What have we learned." Forecasts&Strategies. 2 Jun. 2003. http://www.markskousen.com/article.php?id=1096

The second lesson is that the global economy is far more resilient than anyone imagined. During the past 20 years, we have suffered through two major energy crises, double digit inflation, stock market and real estate crashes in the U.S. and Japan, an unprecedented credit crunch, mammoth federal deficits, the AIDS crisis, several major wars, terrorist attacks, the collapse of the Soviet Union and many other mini-panics, and yet we continue to survive and even prosper. We are not depression-proof, but we are surprisingly depression-resistant. Armageddon has again been postpone

### Economic institutions ensure bounceback even if there is a total meltdown

Glenn Somerville. "Paulson: Economy resilient but Fed move helpful." Reuters. 22 Jan. 2008. http://news.yahoo.com/s/nm/20080122/bs\_nm/usa\_economy\_paulson\_dc

Treasury Secretary Henry Paulson said on Tuesday he was confident the U.S. and global economies were resilient but welcomed an emergency rate cut by the Federal Reserve as a helpful move. ADVERTISEMENT The U.S. central bank cut benchmark U.S. interest rates by a steep three-quarters of a percentage point while Paulson while still answering questions after addressing a Chamber of Commerce breakfast meeting. Paulson had earlier acknowledged the U.S. economy has slowed "materially" in recent weeks but, despite a meltdown in global stock prices, insisted that the global economy had "underlying resiliency" that would let it weather the storm. The U.S. Treasury chief initially looked surprised when a Chamber of Commerce official said the Fed had just cut rates in a relatively rare move between meetings of its policy-setting Federal Open Market Committee, but praised the action. "This is very constructive and I think it shows this country and the rest of the world that our central bank is nimble and can move quickly in response to market conditions," Paulson said. The U.S. Treasury chief, who headed Wall Street giant Goldman Sachs before taking over Treasury in 2006, said the $145-billion short-term stimulus package that President George W. Bush was asking Congress to work on was needed to minimize the impact of a U.S. economic slowdown. "We need to do something now, because short-term risks are clearly to the downside, and the potential benefits of quick action to support our economy have become clear," Paulson said. But early signs were that Bush's call for bipartisan action -- and a relatively positive Congressional response to it -- were not calming financial markets but might actually be fanning fears that the economy was at greater risk of toppling into recession than officially acknowledged. Stock markets around the world sank sharply on Monday, when U.S. markets were closed for the holiday in observance of slain civil rights leader Martin Luther King's birthday. Paulson tried to reassure that there was reason to feel confident in the U.S. economy's long-term prospects, notwithstanding severe problems in the housing sector and other credit-market strains. "The U.S. economy is resilient and diverse," he said. "It's been remarkably robust and it will be again." He added: "The unemployment rate remains low and job creation continues, albeit at a modest pace. The structure of our economy is sound and our long term economic fundamentals are healthy."

# \*\*Oil Answers\*\*

## Impact Answers

### No resource wars

Idean Salehyan (Professor of Political Science at the University of North Texas) May 2008 “From Climate Change to Conflict? No Consensus Yet\*” Journal of Peace Research, vol. 45, no. 3 http://emergingsustainability.org/files/resolver%20climate%20change%20and%20conflict.pdf

First, the deterministic view has poor predictive power as to where and when conflicts will break out. For every potential example of an environmental catastrophe or resource shortfall that leads to violence, there are many more counter-examples in which conflict never occurs. But popular accounts typically do not look at the dogs that do not bark. Darfur is frequently cited as a case where desertification led to food scarcity, water scarcity, and famine, in turn leading to civil war and ethnic cleansing.5 Yet, food scarcity and hunger are problems endemic to many countries – particularly in sub-Saharan Africa – but similar problems elsewhere have not led to large-scale violence. According to the Food and Agriculture Organization of the United Nations, food shortages and malnutrition affect more than a third of the population in Malawi, Zambia, the Comoros, North Korea, and Tanzania,6 although none of these countries have experienced fullblown civil war and state failure. Hurricanes, coastal flooding, and droughts – which are all likely to intensify as the climate warms – are frequent occurrences which rarely lead to violence. The Asian Tsunami of 2004, although caused by an oceanic earthquake, led to severe loss of life and property, flooding, population displacement, and resource scarcity, but it did not trigger new wars in Southeast Asia. Large-scale migration has the potential to provoke conflict in receiving areas (see Reuveny, 2007; Salehyan & Gleditsch, 2006), yet most migration flows do not lead to conflict, and, in this regard, social integration and citizenship policies are particularly important (Gleditsch, Nordås & Salehyan, 2007). In short, resource scarcity, natural disasters, and long-term climatic shifts are ubiquitous, while armed conflict is rare; therefore, environmental conditions, by themselves, cannot predict violent outbreaks. Second, even if local skirmishes over access to resources arise, these do not always escalate to open warfare and state collapse. While interpersonal violence is more or less common and may intensify under resource pressures, sustained armed conflict on a massive scale is difficult to conduct. Meier, Bond & Bond (2007) show that, under certain circumstances, environmental conditions have led to cattle raiding among pastoralists in East Africa, but these conflicts rarely escalate to sustained violence. Martin (2005) presents evidence from Ethiopia that, while a large refugee influx and population pressures led to localized conflict over natural resources, effective resource management regimes were able to ameliorate these tensions. Both of these studies emphasize the role of local dispute-resolution regimes and institutions – not just the response of central governments – in preventing resource conflicts from spinning out of control. Martin’s analysis also points to the importance of international organizations, notably the UN High Commissioner for Refugees, in implementing effective policies governing refugee camps. Therefore, local hostilities need not escalate to serious armed conflict and can be managed if there is the political will to do so. Third, states often bear responsibility for environmental degradation and resource shortfalls, either through their own projects and initiatives or through neglect of the environment. Clearly, climate change itself is an exogenous stressor beyond the control of individual governments. However, government policies and neglect can compound the effects of climate change. Nobel Prizewinning economist Amartya Sen finds that, even in the face of acute environmental scarcities, countries with democratic institutions and press freedoms work to prevent famine because such states are accountable to their citizens (Sen, 1999). Others have similarly shown a strong relationship between democracy and protection of the environment (Li & Reuveny, 2006). Faced with global warming, some states will take the necessary steps to conserve water and land, redistribute resources to those who need them most, and develop disaster-warning and -response systems. Others will do little to respond to this threat. While a state’s level of income and technological capacity are certainly important, democracy – or, more precisely, the accountability of political leaders to their publics – is likely to be a critical determinant of how states respond to the challenge. Fourth, violent conflict is an inefficient and sub-optimal reaction to changes in the environment and resource scarcities. As environmental conditions change, several possible responses are available, although many journalists and policymakers have focused on the potential for warfare. Individuals can migrate internally or across borders, or they can invest in technological improvements, develop conservation strategies, and shift to less climate-sensitive livelihoods, among other adaptation mechanisms. Engaging in armed rebellion is quite costly and risky and requires large-scale collective action. Individuals and households are more likely to engage in simpler, personal, or smallscale coping strategies. Thus, organized violence is inefficient at the individual level. But, more importantly, armed violence against the state is used as a means to gain leverage over governments so as to gain some form of accommodation, namely, the redistribution of economic resources and political power. Organized armed violence rarely (if ever) arises spontaneously but is usually pursued when people perceive their government to be unwilling to listen to peaceful petitions. As mentioned above, rebellion does not distribute resources by itself, and protracted civil wars can have devastating effects on the economy and the natural environment, leaving fewer resources to bargain over. Thus, organized violence is inefficient at the collective level. Responsive, accountable political leaders – at all levels of government – are more likely to listen to citizen demands for greater access to resources and the means to secure their livelihoods. Political sensitivity to peaceful action can immunize states from armed insurrection.

### No conflict over resources – for every example to prove resource wars exist there are several examples that disprove it

Simon Dalby (Dept. Of Geography, Carleton University) 2006 "Security and environment linkages revisited" in Globalisation and Environmental Challenges: Reconceptualising Security in the 21st Century, www.ntu.edu.sg/idss/publications/SSIS/SSIS001.pdf)

In parallel with the focus on human security as a necessity in the face of both natural and artificial forms of vulnerability, recent literature has emphasised the opportunities that environmental management presents for political cooperation between states and other political actors, on both largescale infrastructure projects as well as more traditional matters of wildlife and new concerns with biodiversity preservation (Matthew/Halle/Switzer 2002). Simultaneously, the discussion on water wars, and in particular the key finding the shared resources frequently stimulate cooperation rather than conflict, shifted focus from conflict to the possibilities of environmental action as a mode of peacemaking. Both at the international level in terms of environmental diplomacy and institution building, there is considerable evidence of cooperative action on the part of many states (Conca/Dabelko 2002). Case studies from many parts of the world suggest that cooperation and diplomatic arrangements can facilitate peaceful responses to the environmental difficulties in contrast to the pessimism of the 1990’s where the focus was on the potential for conflicts. One recent example of the attempts to resolve difficulties in the case of Lake Victoria suggests a dramatic alternative to the resource war scenarios. The need to curtail over-fishing in the lake and the importance of remediation has encouraged cooperation; scarcities leading to conflict arguments have not been common in the region, and they have not influenced policy prescriptions (Canter/Ndegwa 2002). Many conflicts over the allocations of water use rights continue around the world but most of them are within states and international disputes simply do not have a history of leading to wars.

### Your lit base is rigged to come to the conclusion that scarcity leads to conflict – prefer our evidence

David G. Victor, Adjunct Senior Fellow for Science and Technology professor of law at Stanford Law School and the director of the Program on Energy and Sustainable Development. He is also a senior fellow at the Council on Foreign Relations 1-2-08 Smoke and Mirrors The National Interest.

Nearly all of the vast literature that Homer-Dixon applauds suffers from the affliction of severe selection bias and failure to assign proper weights to causal factors. Put a microscope on any big conflict looking for resources, and you’re sure to find exactly what you’re looking for. Nobody doubts that causation is complex; the dispute is on the central forces. And to Klare’s point about methodology, my article focuses narrowly on hot conflict—that is, “war”—because the best way to get causation right usually requires starting narrowly. However, technological change and economic shifts away from resource-intensive industries and the globalization of most resources into commodities implies that a broader version of my hypothesis probably also holds—natural resources matter less and thus are less important for conflict, except where lootable resources coincide with exceptionally poor governance.

### Ensures no escalation – these conflicts have never escalated beyond local levels. The only way they escalate is getting highly developed countries involved – that wont happen

Nils Petter Gleditsch (International Peace Research Institute, Oslo (PRIO) & Norwegian University of Science and Technology, Trondheim) 1998 “Armed Conflict and the Environment: A Critique of the Literature” JSTOR

A similar point holds for economic variables. Much of the environmental literature lacks explicit recognition of the fact that material deprivation is one of the strongest predictors of civil war. Moreover, economically highly developed countries rarely fight one another (Mueller, 1989), although this regularity is less absolute than the democratic peace. Finally, while economic development does tend to exacerbate certain environmental problems (such as pollution and excessive resource extraction) up to a point, the most advanced industrial economies also tend to be relatively more resource-friendly. Hence, resource competition is likely to be less fierce domestically as well as externally among the most highly developed countries. Going back to the example of shared water re- sources, highly developed countries have very strong economic motives for not fighting over scarce water resources; instead, they use technology to expand the resources or find cooperative solutions in exploiting them. Poor countries generate more local environmental problems, which in turn may exacerbate their poverty and which is also conducive to conflict. Certain types of environmental degradation - like deforestation, lack of water and sanitation, and soil erosion - are part and parcel of underdevelopment.

### No resource wars – states are rational and strategic

Idean Salehyan (Professor of Political Science at the University of North Texas) May 2008 “From Climate Change to Conflict? No Consensus Yet\*” Journal of Peace Research, vol. 45, no. 3 http://emergingsustainability.org/files/resolver%20climate%20change%20and%20conflict.pdf

On a fundamental level, if we acknowledge that actors faced with environmental stress make decisions strategically, then we can see that violence is generally a poor response to resource scarcity, given the alternatives. Barring the defeat, subjugation, or extermination of the other party, armed conflict by itself does nothing to resolve the underlying incompatibility over the distribution of resources. Violence is typically used as a strategy used to influence outcomes during negotiations, whether in a domestic or international setting (Filson & Werner, 2002; Wagner, 2000); eventually, actors must come to the bargaining table. Moreover, there is good reason to think that civil wars are extremely disruptive to the natural environment, leaving fewer resources than there were to begin with. Warfare is, therefore, an inefficient and costly way to resolve conflicts over resources (Fearon, 1995). Failure to find a suitable bargain and forgo fighting stems from failures in the political process, not from the absolute level of resources. Thus, while environmental degradation is certainly not a necessary condition for armed conflict, neither is it a sufficient one, since states play a key role in containing or aggravating violence

### No resource wars – too costly for invaders

Daniel Deudney, Fellow in Science, Technology, and Politics, Princeton University, MILLENIUM, 1990, p. 471-

Second, the prospects for resource wars are diminished, since states find it increasingly difficult to exploit foreign resources through territorial conquest. Although the invention of nuclear explosives has made it easy and cheap to annihilate humans and infrastructure in extensive areas, the spread of small arms and national consciousness has made it very costly for an invader, even one equipped with advanced technology, to subdue a resisting population—as France discovered in Indochina and Algeria, the United States in Vietnam and the Soviet Union in Afghanistan.

### Resources are not the root cause of conflict

David G. Victor, Adjunct Senior Fellow for Science and Technology professor of law at Stanford Law School and the director of the Program on Energy and Sustainable Development. He is also a senior fellow at the Council on Foreign Relations, November 1, 2007 National Interest “What Resource Wars?” http://www.cfr.org/publication/14710/what\_resource\_wars.html?breadcrumb=%2Fissue%2Fpublication\_list%3Fgroupby%3D2%26page%3D1%26id%3D18

Rising energy prices and mounting concerns about environmental depletion have animated fears that the world may be headed for a spate of “resource wars”—hot conflicts triggered by a struggle to grab valuable resources. Such fears come in many stripes, but the threat industry has sounded the alarm bells especially loudly in three areas. First is the rise of China, which is poorly endowed with many of the resources it needs—such as oil, gas, timber and most minerals—and has already “gone out” to the world with the goal of securing what it wants. Violent conflicts may follow as the country shunts others aside. A second potential path down the road to resource wars starts with all the money now flowing into poorly governed but resource-rich countries. Money can fund civil wars and other hostilities, even leaking into the hands of terrorists. And third is global climate change, which could multiply stresses on natural resources and trigger water wars, catalyze the spread of disease or bring about mass migrations. Most of this is bunk, and nearly all of it has focused on the wrong lessons for policy. Classic resource wars are good material for Hollywood screenwriters. They rarely occur in the real world. To be sure, resource money can magnify and prolong some conflicts, but the root causes of those hostilities usually lie elsewhere. Fixing them requires focusing on the underlying institutions that govern how resources are used and largely determine whether stress explodes into violence. When conflicts do arise, the weak link isn’t a dearth in resources but a dearth in governance.

# \*\*Warming Answers\*\*

## No Solvency

### Congress funding to the states for mass transit can’t attach guidelines for greening transit

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Customarily, Congress funds transportation across the country via legislation that distributes money directly to the states.187 This approach tends to either implement the process of planning too late to become a factor, or focus on procedures in lieu of outcomes.188 Federal dollars spent on transportation do not generally require performance standards from those receiving the federal monies.189 The regulations put forth by the DOT require states and MPOs to consider certain planning aspects during their analyses, but do not make them compulsory.190 This creates a situation where the DOT is unable to demand a particular outcome or result, which essentially becomes an open-ended check on the State or MPOs by the federal government.191 The States or MPOs must certify to the government that the planning factors received consideration, but the DOT’s supervision of compliance with these requirements receives little enforcement, if any.192 Furthermore, past allocations of transportation funds to the states generally occurred based on VMT, fuel used, and lane miles.193 This policy ends up promoting VMT because, the more of each of these factors a state can demonstrate, the more federal funding they will receive.194 In turn, more VMT increases states’ collection of gas taxes, which then intensifies the counterproductive and endless cycle of revenue generation, the need for more infrastructure, and again, an increase in VMT.195 This formulaic funding system favors highways, which ultimately results in greater greenhouse gas emissions, rather than promoting less VMT, reduced emissions, or transit alternatives.196

### Mass transit is a financial impossibility and would have little effect on the environment

Staley and Damask, 00 – Ph.D. in Public Administration; director of appropriations with the Ohio House of Representatives (Dr. Sam; James A., “If You Build It, Will They Ride? The Potential of Mass Transit in Ohio's Major Cities”, The Heartland Institute, 9/1/00, http://heartland.org/policy-documents/if-you-build-it-will-they-ride-potential-mass-transit-ohios-major-cities)//LP

Is taxpayer-financed rail transit a worthwhile investment? If rail is built, will Ohioans even ride it? Can market solutions address transit concerns? These are the questions facing policymakers in many of Ohio's cities. Rail projects are underway across the state, particularly in Columbus, Cleveland, and Cincinnati. These projects are eligible for millions of dollars of federal funds and potentially billions in local and state funds. Columbus' transit authority proposed a sales tax increase to pay for a transit strategy that relies heavily on a new commuter rail system. Cleveland is considering an extension of its existing rail system, and Cincinnati is developing an ambitious regional strategy that includes over 100 miles of rail corridors. Public transit in general, however, is losing ground relative to the automobile in Ohio's largest metropolitan areas. Between 1980 and 1996, per-capita ridership declined 40.4 percent in Cincinnati, 48.4 percent in Cleveland, and 24.7 percent in Columbus. The Cost of Rail Transit Often, rail transit is pitched as a cost-effective alternative to automobile and bus transit. COTA, the transit authority in Columbus, claims the average consumer spends $4,552 per year on his car. By comparison, riding an express bus (round trip) each day of the year would cost a paltry $1,095. But COTA's estimates suffer from several defects and are highly misleading. First and foremost, the reported public transit costs per ride ignore capital costs, which are largely subsidized by the federal government. If those costs were included, annual costs would jump to $8,325 per ride annually. It would be cheaper to lease new cars for rail passengers in Columbus, Cleveland, and Cincinnati than to build expensive rail systems. In Cleveland, the Regional Transit Authority could have leased each passenger a 1999 Chrysler Sebring LXi; doing so would have been less expensive than construction of the Waterfront Line. In Cincinnati, the transit authority could lease each potential rail passenger a 1999 Audi A4 Quattro . . . and save taxpayers $320,000 each year by doing so. In Columbus, COTA could lease each rail passenger a 2000 Ford Explorer XLT and save taxpayers over $3.5 million each year. With respect to operating (as opposed to capital) costs, new cars cost about 10.9 cents per mile per year. Operating costs for mass transit, by contrast, are nearly six times as expensive in Cleveland (63.7 cents) and Columbus (66.5 cents), and four times as expensive in Cincinnati (39.9 cents). Thus, if cost effectiveness were the primary criteria, leasing or buying cars for each rider would be a more cost-effective alternative than subsidizing rail. Public transit, and rail transit in particular, is incapable of covering its costs through fares and increased ridership. None of the major urban-transit systems in Ohio generates more than one-third of its revenues from fares. Population Density and Ridership Population density is falling in Ohio's major cities. This fact is important, because large concentrations of people are necessary to generate passengers for rail transit. In Cleveland, population density reached its peak in 1950 at 12,197 people per square mile. In 1998, population density had fallen to 6,439 per square mile, a 47.2 percent decline. Population densities also peaked in 1950 for Columbus and Cincinnati; by 1998 they had fallen by 63.2 percent in Columbus and 35.1 percent in Cincinnati. As neighborhood populations decline, the viability of rail transit falls. A neighborhood targeted today for rail transit because its high population density may no longer support rail two or three decades from now, a consequence of shifting populations in a city with a fixed-route, capital-intensive transportation strategy. Managing Congestion and Pollution Disregarding rail's inability to pay for itself, many rail advocates cite its potential to reduce congestion and improve air quality. But many of the factors that prevent rail transit systems from breaking even financially also limit their effectiveness as ways to reduce congestion and improve air quality. The form of the city has been changing. As people have become more dispersed, the ability of fixed-route transit systems to improve personal mobility has declined significantly. As a result, people continue to use their cars, and actual rail ridership always falls short of forecasts. Transportation plans that ignore the fundamental role of the automobile as the preferred transportation mode will have little effect on either congestion or pollution. One of the more important problems faced by transit authorities in Ohio is the relatively low level of use. Public transit captures 2 percent or less of the travel market in Cincinnati, Cleveland, and Columbus. As a practical matter, then, public transit is unlikely to have a major effect on travel patterns. In Cincinnati and northern Kentucky, it is estimated that a 43-mile light-rail transit line would reduce freeway travel by just 1 percent during peak periods. Since the vast majority of Ohioans use automobiles, congestion management requires effective management of automobile traffic volumes. None of Ohio's urban freeways has reached its maximum capacity, according to the Federal Highway Administration. Solving the congestion problem depends less on building new highway capacity than spreading existing traffic over a longer period of time through congestion pricing: using tolls or other user fees to give drivers an incentive to use freeways at different times. In Arizona, the state transportation department estimated congestion pricing could reduce Phoenix's congestion by 10 percent. Completing planned freeway projects could reduce congestion by another 8 percent, the department said, while light rail and extended public transit could together reduce congestion by 1 percent. Regarding pollution, the population densities necessary to sustain a viable rail transit system are more likely to increase air pollution. Congestion pricing and completing highway projects, by contrast, remove more tons of pollution, at a lower cost, than transit strategies. The Future of Rail Transit in Ohio Any transportation management strategy that emphasizes rail in Ohio suffers from four significant weaknesses: 1. Transit ridership in Ohio is stable or falling. Monthly ridership on Cleveland's new Waterfront Line, for example, has fallen 42.8 percent since its opening in 1998. Such a decline is consistent with national trends. 2. Congestion, to the extent it is a problem, is best addressed through road-based transportation strategies. Rail represents an exceedingly small share of all trips taken in Ohio. Rail systems have not been able to mitigate congestion in the past, and they are unlikely to do so in the future. 3. Car travel is subsidized at a lower rate than public transit, especially rail. While subsidies for rail and other forms of public transit routinely exceed two-thirds of operating costs, those who travel by automobile pay between 66 and 90 percent of their costs. 4. Ohio's cities and metropolitan areas are evolving, becoming less dense and more geographically fragmented--not more dense and compact, as is needed for successful rail systems.

## No Warming

### No warming

**Beisner 10** — former associate professor of interdisciplinary studies in economics, government, and public policy, Covenant. PhD, University of St. Andrews (Calvin, Forget Global Warming Mini Ice Age May Be on Its Way, 12 January 2010, http://www.rightsidenews.com/201001128144/energy-and-environment/forget-global-warming-mini-ice-age-may-be-on-its-way.html, AMiles) Note – graph omitted

The UK's MailOnline did just that this week under the headline The mini ice age starts here. Lead paragraph? "The bitter winter afflicting much of the Northern Hemisphere is only the start of a global trend towards cooler weather that is likely to last for 20 or 30 years, say some of the world's most eminent climate scientists." Right. MailOnline reporter David Rose doesn't call them "the world's leading climate skeptics." He calls them "some of the world's most eminent climate scientists"--and he goes on to cite "Mojib Latif, a leading member of the UN's Intergovernmental Panel on Climate Change (IPCC)," "Anastasios Tsonis, head of the University of Wisconsin Atmospheric Sciences Group," and "William Gray, emeritus Professor of Atmospheric Sciences at Colorado State University." Contrary to fears of inexorably diminishing Arctic sea ice, Rose cites the U.S. National Snow and Ice Data Center as reporting that "Arctic summer sea ice has increased by 409,000 square miles, or 26 per cent, since 2007." Though snow's been unusual for most of the southern half of the United Kingdom in recent decades, the Mail published the accompanying satellite photo of Great Britain during the recent cold snap. The island is essentially all covered with snow. Rose reported record lows as far south as Cuba--something I can attest to, living near Miami in south Florida, where we experienced sub-freezing weather over the weekend. He quoted Tsonis as saying that last week 56% of the United States was covered by snow--something that hasn't happened in several decades. And the "'Arctic oscillation'--a weather pattern that sees the development of huge 'blocking' areas of high pressure in northern latitudes, driving polar winds far to the south . . . is at its strongest for at least 60 years. As a result, the jetstream--the high-altitude wind that circles the globe from west to east and normally pushes a series of wet but mild Atlantic lows across Britain--is currently running not over the English Channel but the Strait of Gibraltar." Consequently, most of the Northern Hemisphere is much colder this winter than it's been in decades--and the Southern Hemisphere is cooler, too. According to Rose, Latif, Tsonis, and other scientists attribute the cold shift primarily to a shift in the world's dominant ocean circulations--the Pacific Decadal Oscillation and the Atlantic Multidecadal Oscillation--from a warm phase to a cool phase, something that happens about every 20 to 30 years. "The scientists' predictions also undermine the standard climate computer models, which assert that the warming of the Earth since 1900 has been driven solely by man-made greenhouse gas emissions and will continue as long as carbon dioxide levels rise. They say that their research shows that much of the warming was caused by oceanic cycles when they were in a 'warm mode' as opposed to the present 'cold mode'." That's a point made by Dr. Roy W. Spencer in the science chapter of the Cornwall Alliance's new document A Renewed Call to Truth, Prudence, and Protection of the Poor: An Evangelical Examination of the Theology, Science, and Economics of Global Warming and illustrated in the graph below. "A significant share of the warming we saw from 1980 to 2000 and at earlier periods in the 20th Century was due to these cycles," said Latif, "perhaps as much as 50 per cent. They have now gone into reverse, so winters like this one will become much more likely. Summers will also probably be cooler, and all this may well last two decades or longer. The extreme retreats that we have seen in glaciers and sea ice will come to a halt. For the time being, global warming has paused, and there may well be some cooling." Tsonis also believes that the ocean current cycles dominated global climate change in the 20th century, including the post-1970s, the period many point to as driven by human greenhouse gas emissions, but he doesn't venture to attribute specific percentages to the natural and human causes. "I do not believe in catastrophe theories," Rose quoted him as saying. "Man-made warming is balanced by the natural cycles, and I do not trust the computer models which state that if CO2 reaches a particular level then temperatures and sea levels will rise by a given amount. These models cannot be trusted to predict the weather for a week, yet they are running them to give readings for 100 years." Gray went farther: "Most of the rise in temperature from the Seventies to the Nineties was natural. Very little was down to CO2--in my view, as little as five to ten per cent." Gray, Tsonis, and Latif all agreed that the findings about the ocean currents undermined the credibility of the computer climate models on which the IPCC and other alarmists rely.

### No warming, no impact; all lies

**Lehr** **2005** (Jay, Science Director of the Heartland Institute, 1-12-2005, Yearbook of Experts)

EVIDENCE THAT THE TEMPERATURE OF THE EARTH IS NOT INCREASING SIGNIFICANTLY AS A RESULT OF MAN'S ACTIVITY ON THE PLANET 1 - Our most reliable sources of temperature data show no global warming trend. Satellite and weather balloon readings of temperatures in the lower troposphere (an area scientists predict would immediately reflect any global warming) show no warming since readings began 25 years ago, when the satellite system was first launched. Only land based temperature stations show a warming trend, and these stations do not cover the entire globe as satellite readings do, and these are often affected by heat generated by nearby urban development. 2 - All predictions of global warming are based on computer models not historical data. In order to get their models to produce predictions that are close to their designers expectations, modelers make adjustments to unknown variables that are many times greater than the effect of doubling carbon dioxide concentrations in the atmosphere. For example, knowledge of the amount of energy flowing from the equator to the poles is uncertain by an amount equivalent to 25 to 30 Watts per square meter (W/m2) of the earth's surface. the amount of sunlight absorbed by the atmosphere or reflected by the surface is also uncertain by as much as 25 W/m2. The role of clouds is uncertain by at least 25 W/m2. The heat added to the atmosphere by a doubling of CO2 is not uncertain. It is easily measured in laboratory experiments and amounts to only 4 Watts per square meter (4 W/m2) of the earth's surface. Obviously the uncertainties are many times larger than the input of energy resulting from a doubling of carbon dioxide in the atmosphere. 3 - When scientists analyzed the relationship between atmospheric CO2 levels and temperatures dating back 250,000 years in ice cores from Greenland and Antarctica, they found that sometimes concentration of CO2 was high when the temperature was low and sometime CO2 was low when temperature was high. 4 - While we hear much about one or another melting glaciers, a recent study of 246 glaciers around the world between 1946 and 1995 indicated a balance between those that are losing ice, gaining ice and remaining in equilibrium. There is no global trend in any direction. 5 - The gases in the atmosphere that absorb outgoing radiation forming the greenhouse effect are water vapor (absorbing 90% of outgoing heat), methane (4%), nitrous oxide (2%), carbon dioxide (4%). Thus a doubling of CO2 would not achieve a significant change in heat retained. 6 - Temperature fluctuations during the current 300 year recovery from the Little Ice Age which ended around 1700AD, following the Medieval Warming Period correlate almost perfectly with fluctuations in solar activity. This correlation long predates human use of significant amounts of fossil fuels such as coal, oil and natural gas. 7 - In defining the tremendous impact the sun has on climate one must really understands the actual movement of the earth around the sun. There are three variables, orbit shape, tilt and wobble which profoundly affect weather patterns. The earth's orbit does not form a circle as it moves around the sun - it forms an ellipse passing further away from the sun at the one end of the orbit than at the other end. During the 100,000 year cycle the tug of other planets on the earth causes its orbit to change shape. It shifts from a short broad ellipse that keeps the earth closer to the sun to a long flat ellipse that allows it to move farther from the sun and back again. 8 - There is no consensus of scientists in favor of human caused global warming. While opinion polls do not determine truth in science, more than 17,000 American scientists signed a petition drafted by the Oregon Institute of Science and Medicine which stated: "There is no convincing scientific evidence that human release of carbon dioxide, methane, or other greenhouse gases is causing or will, in the foreseeable future, cause catastrophic heating of the Earth's atmosphere and disruption of the Earth's climate. Moreover, there is substantial scientific evidence that increases in atmospheric carbon dioxide produce many beneficial effects upon the natural plant and animal environments of the Earth." 9 - A modest amount of global warming, should it occur would be beneficial to the natural world. The warmest period in recorded history was the Medieval Warm Period roughly 800 to 1200AD when temperatures were 7 to 9 degrees Fahrenheit warmer than today allowing great prosperity of mankind. 10 - Carbon dioxide is NOT a pollutant. On the contrary it makes crops and forests grow faster. Mapping by satellite shows that the earth has become about 6% greener overall in the past two decades, with forests expanding into arid regions. The Amazon rain forest was the biggest gainer, despite the much advertised deforestation caused by human cutting along their edges. Certainly climate change does not help every region equally, but careful studies predict overall benefit, fewer storms (not more), more rain, better crop yields, longer growing seasons, milder winters and decreasing heating costs in colder climates. The news is certainly not all bad and on balance may be rather good. 11 - Energy is the currency of technological progress. Billions of people in the Earth's poor countries are trying to lift themselves from poverty through use of simple technology. Hundreds of millions of these people are so close to the bottom rungs of the ladder of existence that loss of hydrocarbon fuels can cause their deaths. Many international elitists understand this well as they attempt to use the myth of global warming as a means of "population control". 12 - Global warming is a major industry today. Between 1992 and 2000 the U.S. Government spent $18 Billion on climate change research and now contributes $6 billion a year. This finances jobs, grants, conferences, international travel and academic journals. It not only keeps a huge army of people in comfortable employment, but also fills them with self righteousness and moral superiority regardless of the fact that real science did not support it.

### No warming and no impact

**Taylor 9** (James, Senior Fellow Env. Policy @ Heartland Institute, Naples Daily News, “Guest Commentary: Global warming”, http://www.naplesnews.com/news/2009/jan/03/guest-commentary-global-warming/)

In a pair of recent columns claiming humans are causing a global-warming crisis, Ben Bova disparages mere “assertions” while saying people need to rely on “observable, measurable facts.” While Bova’s concern about Earth’s climate is admirable, he should follow his own advice regarding assertions versus facts. Bova asserts Earth has a “rising fever.” Yet the fact is that global temperatures are unusually cool. For most of the past 10,000 years temperatures have been 1.0 to 3.0 degrees Celsius warmer than they are today. The 0.6 degree rise in temperatures during the 20th century occurred from the baseline of the little ice age, which saw the coldest global temperatures during the past 10,000 years. Earth has a “rising fever” only if we pretend the little ice age was “normal” and ignore Earth’s long-term temperature facts. Bova asserts “the loss of sea ice in the Arctic is threatening the survival of polar bears.” Yet the fact is that polar bear numbers have doubled since the 1980s. Moreover, Antarctic sea ice is growing and has been setting records for much of the past year. If “global” warming is causing receding polar ice, then why is Antarctic sea ice setting growth records? Bova asserts “measurements ... show that the rise in global temperatures matches quite closely the increase in carbon dioxide.” Yet the fact is that solar scientists at Harvard and other leading universities have published research in the world’s leading scientific journals showing that temperatures match solar output much more closely than carbon dioxide, even in the 20th century. Bova asserts that as a result of global warming “much of our crop land turns to desert.” Yet, the fact is that global precipitation and global soil moisture have increased during the 20th century, and the Sahara Desert and other deserts around the world are in retreat. Bova asserts we run the risk of a breaching a “tipping point” or a “greenhouse cliff where the global climate shifts too rapidly for us to protect ourselves from its drastic effects.” Yet, the fact is that in a recent survey of more than 500 climate scientists from around the world, less than half agreed that “assuming climate change will occur, it will occur so suddenly that a lack of preparation could result in devastation of some areas of the world.” Bova asserts that in California’s Yosemite National Park warmer temperatures are allowing mice and pine trees to live at higher altitudes than a century ago. Yet, the fact is that fossilized trees exist at altitudes above the current California tree line, showing that temperatures were significantly warmer 1,000 years ago than today. Plant and animal species are migrating to higher elevations only in comparison to the abnormally cold temperatures of the little ice age that ended just over a century ago. For most of the past 10,000 years, warmer temperatures enabled mice and trees to live at altitudes significantly higher than is possible today. Global-warming activism is long on unsubstantiated assertions and short on objective facts. Only by comparing today’s temperatures to the abnormal cold of the little ice are — and by completely ignoring the warmer temperatures that predominated during most of the past 10,000 years — can global-warming activists paint a picture of a planet suffering a global warming crisis. Moreover, sound science has thrown cold water on each and every one of the alleged global-warming crises, such as endangered polar bears, melting ice caps, etc., alleged to result from global warming.

## Warming Not Anthro

### Warming’s not anthropogenic

**Singer, 7**, distinguished research professor at George Mason and Avery, director of the Center for Global Food Issues at the Hudson Institute (S. Fred, Dennis T, “Unstoppable Global Warming: Every 1,500 Years” Pages 7-8.

The Earth has recently been warming. This is beyond doubt. It has warmed slowly and erratically-for a total of about 0.8 degrees Celsius-since 1850. It had one surge of warming from 1850 to 1870 and another from 1920 to 1940. However, when we correct the thermometer records for the effects of growing urban heat islands and widespread intensification of land use, and for the recently documented cooling of the Antarctic continent over the past thirty years, overall world temperatures today are only modestly warmer than they were in 1940, despite a major increase in human CO2 emissions. The real question is not whether the Earth is warming but why and by how much. We have a large faction of intensely interested persons who say the warming is man-made, and dangerous. They say it is driven by releases of greenhouse gases such as CO2 from power plants and autos, and methane from rice paddies and cattle herds. The activists tell us that modern society will destroy the planet; that unless we radically change human energy production and consumption, the globe will become too warm for farming and the survival of wild species. They warn that the polar ice caps could melt, raising sea levels and flooding many of the world's most important cities and farming regions. However, they don't have much evidence to support their position-only (1. the fact that the Earth is warming, (2. a theory that doesn't explain the warming of the past 150 years very well, and (3. some unverified computer models. Moreover, their credibility is seriously weakened by the fact that many of them have long believed modern technology should be discarded whether the Earth is warming too fast or not at all. Many scientists - though by no means all- agree that increased CO2 emissions could be dangerous. However, polls of climate-qualified scientist show that many doubt the scary predictions of the global computer models. This book cites the work of many hundreds of researchers, authors, and coauthors whose work testifies to the 1,500-year cycle. There is no "scientific consensus," as global warming advocates often claim. Nor is consensus important to science. Galileo may have been the only man of his day who believed the Earth revolved around the sun, but he was right! Science is the process of developing theories and testing them against observations until they are proven true or false. If we can find proof, not just that the Earth is warming, but that it is warming to dangerous levels due to human-emitted greenhouse gases, public policy will then have to evaluate such potential remedies as banning autos and air conditioners. So far, we have no such evidence. If the warming is natural and unstoppable, then public policy must focus instead on adaptations-such as more efficient air conditioning and building dikes around low-lying areas like Bangladesh. We have the warming. Now we must ascertain its cause.

### Mars proves—solar changes are inevitable and cause more warming

**National Post, 2007** (Lawrence Solomon, staff writer, February 7, “Look to Mars for the Truth on Globl Warming” http://www.nationalpost.com/story.html?id=edae9952-3c3e-47ba-913f-7359a5c7f723&k=0/)

Climate change is a much, much bigger issue than the public, politicians, and even the most alarmed environmentalists realize. Global warming extends to Mars, where the polar ice cap is shrinking, where deep gullies in the landscape are now laid bare, and where the climate is the warmest it has been in decades or centuries. "One explanation could be that Mars is just coming out of an ice age," NASA scientist William Feldman speculated after the agency's Mars Odyssey completed its first Martian year of data collection. "In some low-latitude areas, the ice has already dissipated." With each passing year more and more evidence arises of the dramatic changes occurring on the only planet on the solar system, apart from Earth, to give up its climate secrets. NASA's findings in space come as no surprise to Dr. Habibullo Abdussamatov at Saint Petersburg's Pulkovo Astronomical Observatory. Pulkovo -- at the pinnacle of Russia's space-oriented scientific establishment -- is one of the world's best equipped observatories and has been since its founding in 1839. Heading Pulkovo's space research laboratory is Dr. Abdussamatov, one of the world's chief critics of the theory that man-made carbon dioxide emissions create a greenhouse effect, leading to global warming. "Mars has global warming, but without a greenhouse and without the participation of Martians," he told me. "These parallel global warmings -- observed simultaneously on Mars and on Earth -- can only be a straightline consequence of the effect of the one same factor: a long-time change in solar irradiance." The sun's increased irradiance over the last century, not C02 emissions, is responsible for the global warming we're seeing, says the celebrated scientist, and this solar irradiance also explains the great volume of C02 emissions. "It is no secret that increased solar irradiance warms Earth's oceans, which then triggers the emission of large amounts of carbon dioxide into the atmosphere. So the common view that man's industrial activity is a deciding factor in global warming has emerged from a misinterpretation of cause and effect relations." Dr. Abdussamatov goes further, debunking the very notion of a greenhouse effect. "Ascribing 'greenhouse' effect properties to the Earth's atmosphere is not scientifically substantiated," he maintains. "Heated greenhouse gases, which become lighter as a result of expansion, ascend to the atmosphere only to give the absorbed heat away."

### Best data proves the greenhouse theory cannot explain the current warming trends

**Singer, 7** distinguished research professor at George Mason and Avery, director of the Center for Global Food Issues at the Hudson Institute (S. Fred, Dennis T, “Unstoppable Global Warming: Every 1,500 Years” Pages 10-11.

Let's quickly review the shortcomings of the Greenhouse Theory for explaining known realities. First, and most obvious. CO2 changes do not account for the highly variable climate we know the Earth has recently had, including the Roman Warming, the Dark Ages, the Medieval Warming, and the Little Ice Age. However, these variations fit into the I ,500-year cycle very well. Second, the Greenhouse Theory does not explain recent temperature changes. Most of the current warming occurred before 1940. before there was much human-generated CO2 in the air. After 1940, temperatures declined until 1975 or so, despite a huge surge in industrial CO2 during that period. These events run counter to the CO2 theory. but they are in accord with the 1,500-year cycle. Third, the early and supposedly most powerful increases in atmospheric CO2 have not produced the frightening planetary overheating that the theory and climate models told us to expect. We must discount future increments of CO2 in the atmosphere. because each increment of CO2 increase produces less warming than the unit before it. The amounts of CO2 already added to the atmosphere must already have "used up" much-and perhaps most-of CO2's forcing capability. Fourth, we must discount the "official" temperature record to reflect the increased size and intensity of today's urban heat islands, where most of the official thermometers are located. We must take account of the changes in rural land use (forests cleared for farming and pastures, more intensive row-crop and irrigated farming) that affect soil moisture and temperatures. When meteorological experts reconstructed U.S. official temperatures "without cities and crops" - using more accurate data from satellites and high-altitude weather balloons—about half of the recent “official” warming disappeared. Fifth, the Earth’s surface thermometers have recently warmed faster than the temperature readings in the lower atmosphere up to 30,000 feet. yet the Greenhouse Theory says that CO2 will warm the lower atmosphere first, and then the atmospheric heat will radiate to the Earth's surface. This is not happening. Figure 1.1 shows the very moderate trend in the satellite readings over the past two decades, totaling 0.125 degrees Celsius per decade. The short-term temperature spike in 1998 was one of the strongest El Nino events in recent centuries, but its effect quickly dissipated, as always happens with El Ninos. A reconstruction of weather-balloon temperature readings at two meters above the Earth's surface (1979-1996. shows a trend increase of only 0.015 degree Celsius per decade'' Nor can we project even that slow increase over the coming centuries, since the I ,500-year cycles have often achieved half of their total warming in their first few decades, followed by erratic warmings and coolings like those we've recorded since 1920. Sixth, CO2 for at least 240,000 years has been a lagging indicator of global warming, not a causal factor. Within the last 15 years, the ice cores have revealed that temperatures and CO2 levels have tracked closely together during the warmings after each of Earth's last three ice age glaciations. However, the CO2 changes have lagged about 800 years behind the temperature changes. Global warming has produced more CO2, rather than more CO2 producing global warming. This accords with the reality that the oceans hold the vast majority of the planet's carbon, and the laws of physics let cold oceans hold more CO2 gas than warm oceans. Seventh, the Greenhouse Theory predicts that CO2-driven warming of the Earth's surface will start, and be strongest, in the North and South Polar regions, This is not happening either, A broadly scattered set of meteorological stations and ocean buoys show that temperature readings in the Arctic, Greenland, and the seas around them are colder today than in the 1930s. Alaska has been warming, but researchers say this is due to the recent warming of the Pacific Decadal Oscillation (PDO), not a broader Arctic warming pattern. The twenty to thirty year cycle of the PDO seems to have recently reversed again, so Alaska may now cool with the rest of the Arctic. In the Antarctic, only the thin finger of the Antarctic Peninsula, which juts up toward Argentina (and the equator) has been warming. Temperatures over the other 98 percent of the Antarctic continent have been declining slowly since the 1960s, according to a broad array of Antarctic surface stations and satellite measurements. Eighth, the scary predictions of planetary overheating require that the warming effect of additional CO2 be amplified by increased water vapor in the atmosphere. Warming will indeed lift more moisture from the oceans into the air. But what if the moister, warmer air increases the efficiency of rainfall, and leaves the upper atmosphere as dry, or even dryer, than it was before? We have absolutely no evidence to demonstrate that the upper atmosphere is retaining more water vapor to amplify the CO2, To the contrary, a team of researchers from NASA and MIT recently discovered a huge vertical heat vent in the Earth's atmosphere. It apparently increases the efficiency of rainfall when sea surface temperatures rise above 28° C. This effect seems to be big enough to vent all the heat the models predict would be generated by a doubling of CO2.16

### Cow farts overwhelm CO2

**Noam Mohr, Coordinator of the Jewish Vegetarians of North America, 2005** (“A New Global Warming Strategy How Environmentalists are Overlooking Vegetarianism as the Most Effective Tool Against Climate Change in Our Lifetimes” http://www.earthsave.org/news/earthsave\_global\_warming\_report.pdf)

By far the most important non-CO2 greenhouse gas is methane, and the number one source of methane worldwide is animal agriculture.17Methane is responsible for nearly as much global warming as all other non-CO2 greenhouse gases put together.18 Methane is 21 times more powerful a greenhouse gas than CO2.19 While atmospheric concentrations of CO2 have risen by about 31% since pre-industrial times, methane concentrations have more than doubled.20 Whereas human sources of CO2 amount to just 3% of natural emissions, human sources produce one and a half times as much methane as all natural sources.21 In fact, the effect of our methane emissions may be compounded as methane-induced warming in turn stimulates microbial decay of organic matter in wetlands—the primary natural source of methane.22 With methane emissions causing nearly half of the planet’s human-induced warming, methane reduction must be a priority. Methane is produced by a number of sources, including coal mining and landfills—but the number one source worldwide is animal agriculture.23 Animal agriculture produces more than 100 million tons of methane a year.24 And this source is on the rise: global meat consumption has increased fivefold in the past fifty years, and shows little sign of abating.25 About 85% of this methane is produced in the digestive processes of livestock,26 and while a single cow releases a relatively small amount of methane,27 the collective effect on the environment of the hundreds of millions of livestock animals worldwide is enormous. An additional 15% of animal agricultural methane emissions are released from the massive “lagoons” used to store untreated farm animal waste,28 and already a target of environmentalists’ for their role as the number one source of water pollution in the U.S.29

## No Impact

### 3 periods of rapid warming show no extinctions- models are flawed guesswork

**NIPCC 11** (Nongovernmental International Panel on Climate Change, “2011 Interim Report from the Nongovernmental International Panel on Climate Change,” http://nipccreport.org/reports/2011/2011report.html)

The first period they examined was the Eocene Climatic Optimum (53–51 million years ago), when the atmosphere‘s CO2 concentration exceeded 1,200 ppm and tropical temperatures were 5–10°C warmer than modern values. Yet far from causing extinctions of the tropical flora (where the data are best), the four researchers report ―all the evidence from low-latitude records indicates that, at least in the plant fossil record, this was one of the most biodiverse intervals of time in the Neotropics.‖ They also note ―ancestors of many of our modern tropical and temperate plants evolved ...when global temperatures and CO2 were much higher than present ... indicating that they have much wider ecological tolerances than are predicted based on present-day climates alone.‖ The second period they examined included two rapid-change climatic events in the Holocene—one at 14,700 years ago and one at 11,600 years ago—when temperatures increased in the mid- to high-latitudes of the Northern Hemisphere by up to 10°C over periods of less than 60 years. There is evidence from many sites for rapid plant responses to rapid warming during these events. The researchers note ―at no site yet studied, anywhere in the world, is there evidence in the fossil record for large-scale climate-driven extinction during these intervals of rapid warming.‖ On the other hand, they report extinctions did occur due to the cold temperatures of the glacial epoch, when subtropical species in southern Europe were driven out of their comfort zone. The Willis et al. study also makes use of recent historical data, as in the case of the 3°C rise in temperature at Yosemite Park over the past 100 years. In comparing surveys of mammal fauna conducted near the beginning and end of this period, they detected some changes but **no local extinctions**. Thus they determined that for all of the periods they studied, with either very warm temperatures or very rapid warming, there were **no detectable species extinctions.** In a study that may help explain how some researchers could have gotten things so wrong in predicting massive extinctions of both plants and animals in response to projected future warming, Nogues-Bravo (2009) explains the climate envelope models (CEMs)—often employed to predict species responses to global warming (and whether or not a species will be able to survive projected temperature increases)—―are sensitive to theoretical assumptions, to model classes and to projections in non-analogous climates, among other issues.‖ To determine how appropriate these models are for determining whether a particular species will be driven to extinction by hypothesized planetary warming, Nogues-Bravo reviewed the scientific literature pertaining to the subject and found several flaws. Nogues-Bravo writes, ―the studies reviewed: (1) rarely test the theoretical assumptions behind niche modeling such as the stability of species climatic niches through time and the equilibrium of species with climate; (2) they only use one model class (72% of the studies) and one palaeoclimatic reconstruction (62.5%) to calibrate their models; (3) they do not check for the occurrence of non-analogous climates (97%); and (4) they do not use independent data to validate the models (72%).‖ Nogues-Bravo writes, ―ignoring the theoretical assumptions behind niche modeling and using inadequate methods for hindcasting can produce ―a cascade of errors and naïve ecological and evolutionary inferences. Hence, he concludes, ―there are a wide variety of challenges that CEMs must overcome in order to improve the reliability of their predictions through time. Until these challenges are met, contentions of impending species extinctions must be considered little more than guesswork (see also Chapman, 2010).

### Evolution checks

**NIPCC 11** (Nongovernmental International Panel on Climate Change, “2011 Interim Report from the Nongovernmental International Panel on Climate Change,” http://nipccreport.org/reports/2011/2011report.html)

One of the most powerful means plant and animal species have for avoiding extinction during climate change is the ability to evolve in ways that enable them to deal with the change. Several studies have demonstrated the abilities of numerous plants and animals to do just that. Working in the Swiss Alps, Stocklin et al. (2009) studied the consequences of the highly structured alpine landscape for evolutionary processes in four different plants (Epilobium fleischeri, Geum reptans, Campanula thyrsoides, and Poa alpina), testing for whether genetic diversity within their populations was related to altitude and land use, while seeking to determine whether genetic differentiation among populations was related more to different land use or to geographic distances. In pursuit of these goals, the three Swiss scientists determined that within population genetic diversity of the four species was high and mostly not related to altitude and population size, while genetic differentiation among populations was pronounced and strongly increased with distance, implying ―considerable genetic drift among populations of alpine plants.‖ Based on these findings and the observations of others, Stocklin et al. write, ―phenotypic plasticity is particularly pronounced in alpine plants,‖ and ―because of the high heterogeneity of the alpine landscape, the pronounced capacity of a single genotype to exhibit variable phenotypes is a clear advantage for the persistence and survival of alpine plants.‖ Hence they conclude, ―the evolutionary potential to respond to global change is mostly intact in alpine plants, even at high altitude.‖ This result makes it much easier to understand why—even in the face of significant twentieth-century global warming—**no species of plants have been observed to have been ―pushed off the planet** in alpine regions. This has been shown to be the case in several pertinent studies, including Walther et al. (2005), Kullman (2007), Holzinger et al. (2008), Randin et al. (2009), and Erschbamer et al. (2009).

### Warming impacts have no empirical basis- weather will likely get milder

**Bast 12** ( Joseph L. Bast is president and CEO of The Heartland Institute, a 22-year-old national nonprofit research center located in Chicago, Illinois. According to a recent telephone survey, among state elected officials The Heartland Institute is among the nation’s best-known and most highly regarded "think tanks." “Global Warming: Not a Crisis,” http://heartland.org/ideas/global-warming-not-crisis#Singer)

Alarmists claim global warming will cause massive flooding, more violent weather, famines, and other catastrophic consequences. If these claims are true, then we should have seen evidence of this trend during the twentieth century. Idso and Singer (2009) provide extensive evidence that no such trends have been observed. Even von Storch (2011) admits **there is no consensus on these matters.** The preponderance of scientific data suggest sea levels are unlikely to rise by more than several inches, weather may actually become more mild, and since most warming occurs at night and during the winter season, it has little adverse effect (and some positive effect) on plants and wildlife. Hurricanes are likely to diminish, not increase, in frequency or severity (Spencer, 2008; Singer and Avery, 2008).

# \*\*Solvency Answers\*\*

## 1nc Solvency

### States won’t participate – HSR investments prove

**Utt, 11 -** Ph.D., is Herbert and Joyce Morgan Senior Research Fellow in the Thomas A. Roe Institute for Economic Policy Studies at The Heritage Foundation (Robert, “Time to End Obama’s Costly High-Speed Rail Program,” 2/11, <http://www.heritage.org/research/reports/2011/02/time-to-end-obamas-costly-high-speed-rail-program>)

Abstract: President Barack Obama’s high-speed rail program promises to spend hundreds of billions of dollars in federal and state funds to provide mediocre passenger rail service to an extremely small fraction of travelers. In this time of tight budgets, neither the federal government nor the states can afford such extravagance. Instead of creating a heavily subsidized, underutilized passenger rail system, Congress and the Administration should promptly end the program and use the recovered funds to reduce the federal budget deficit. In his State of the Union address, President Barack Obama attempted to revive his faltering high-speed rail (HSR) program by doubling down on his commitment to it: “Within 25 years, our goal is to give 80 percent of Americans access to high-speed rail.… As we speak, routes in California and the Midwest are already underway.”[[1]](http://www.heritage.org/research/reports/2011/02/time-to-end-obamas-costly-high-speed-rail-program#_ftn1) The reality is that the Midwest routes have been cancelled by newly elected governors in Ohio and Wisconsin, who have returned $1.3 billion in federal HSR grants to the U.S. Treasury, and California’s worsening budget crisis will discourage any state investment in its HSR system, which will cost between $42 billion and $80 billion to complete. Despite these setbacks, however, President Obama is now proposing an extravagantly costly system to serve the “urbanized” population (80 percent of the total U.S. population) that resides in the 514 communities and metropolitan areas. Although the President offers no cost estimate for this ambitious project, which would use immense federal subsidies to undermine the existing private and tax-paying bus and air service to these communities, it would likely be one of the costliest and most underutilized federal programs in American history. As noted, California’s HSR plan to connect Los Angeles with San Francisco could cost up to $80 billion, Amtrak estimates that HSR in the Northeast Corridor would cost $117 billion, and the modest Tampa to Orlando plan will come in at $3 billion or more. A federal commitment to HSR has been a key component of President Obama’s domestic policy agenda since he took office. In the first month of his Administration, President Obama used the American Recovery and Reinvestment Act (the “stimulus” package) to create a new federal program to build a comprehensive HSR system. Congress agreed to dedicate $8 billion of the $787 billion in stimulus spending to begin developing HSR in the United States. In addition, Obama requested and Congress approved an additional $5 billion over the next five years beginning in fiscal year (FY) 2010. At the same time, then-Chairman of the House Committee on Transportation and Infrastructure James Oberstar (D–MN) announced that the next highway reauthorization bill would include an additional $50 billion for HSR. Shortly thereafter, the many industries benefiting from massive federal spending on HSR formed the US High Speed Rail Association to lobby for the program.[[2]](http://www.heritage.org/research/reports/2011/02/time-to-end-obamas-costly-high-speed-rail-program#_ftn2) Reflecting the excitement that gripped the new Administration, President Obama proclaimed in April 2009: What we’re talking about is a vision for high-speed rail in America. Imagine boarding a train in the center of a city. No racing to an airport and across a terminal, no delays, no sitting on the tarmac, no lost luggage, no taking off your shoes…. Imagine whisking through towns at speeds over 100 miles an hour, walking only a few steps to public transportation, and ending up just blocks from your destination. Imagine what a great project that would be to rebuild America.[[3]](http://www.heritage.org/research/reports/2011/02/time-to-end-obamas-costly-high-speed-rail-program#_ftn3) Even though the President’s HSR plans have suffered several major setbacks and the federal budget faces a $1.4 trillion deficit, the Administration remains undeterred in its pursuit of this costly scheme. In mid-February, Vice President Joseph Biden provided a few more details on the President’s proposal when he announced plans to spend $57 billion on HSR over the next six years.[[4]](http://www.heritage.org/research/reports/2011/02/time-to-end-obamas-costly-high-speed-rail-program#_ftn4) The President’s High-Speed Rail Program Unravels Despite the President’s continued enthusiasm for his HSR proposals, several major setbacks have occurred over the past year, including the realization by most Americans that they preferred to live in the 21st century, not the late 19th. In January 2010, the Federal Railroad Administration (FRA) announced that it would spend more than half of the $8 billion in the so-called HSR grants on for-profit freight railroads to benefit existing slow-speed Amtrak lines and proposed Amtrak-style service. At the same time, as citizens of states receiving the money began to inspect the Obama plan’s cost estimates, travel benefits, and long-term subsidy obligations more closely, support for HSR began to wane, and gubernatorial candidates in Wisconsin, Ohio, and Florida who opposed or were skeptical about HSR won their elections. The new governors of Wisconsin and Ohio have since canceled their states’ programs, and the Florida program, one of only two real HSR programs funded by the FRA, is under review by the new governor. The California program, the only other real HSR proposal, will likely not be built because of its exceptionally high cost and California’s long-term, systemic fiscal crisis. Despite Congress’s commitment of significant funding to the program and the President’s giddy excitement about an America transformed by an inefficient, inconvenient, and wildly expensive mode of travel, the President’s HSR program is in a state of collapse. The new Congress should put an end to what little life remains in this futile and costly exercise and use any recovered funds for deficit reduction. Ohio and Wisconsin Reject the Federal Funds. For inexplicable reasons, in January 2010, the FRA awarded $4.5 billion (56 percent) of the HSR funds to existing freight railroads for track improvements that would benefit them and existing and prospective slow-speed Amtrak service that shares the same tracks under contract with the freight railroads that own the tracks on which Amtrak operates. The FRA awarded just $3.5 billion (44 percent) to only two genuine HSR projects, those in California and Florida.[[5]](http://www.heritage.org/research/reports/2011/02/time-to-end-obamas-costly-high-speed-rail-program#_ftn5) Not surprisingly, HSR advocates were disappointed and expressed their concerns accordingly. Because all of these projects—slow-speed and high-speed—would require substantial state matching funds and perpetual state operating subsidies (since no passenger rail system in the U.S. and only a handful abroad earn a profit or break even), any state accepting the money would also be accepting a significant, long-term financial liability at a time when most states are hard-pressed to meet the core responsibilities of education, law enforcement, and public health. Consequently, supporting or opposing the President’s rail plan became an issue in several gubernatorial races, particularly in Wisconsin, Ohio, and Florida, where the winning candidates either opposed or questioned the value of the federal rail grant. In Wisconsin, incoming Governor Scott Walker (R) opposed the plan, and outgoing Governor James Doyle (D) suspended the project in response to the voters’ decision.

### No one will use it

**Utt, 11 -** Ph.D., is Herbert and Joyce Morgan Senior Research Fellow in the Thomas A. Roe Institute for Economic Policy Studies at The Heritage Foundation (Robert, “Time to End Obama’s Costly High-Speed Rail Program,” 2/11, <http://www.heritage.org/research/reports/2011/02/time-to-end-obamas-costly-high-speed-rail-program>)

If one’s knowledge of European travel preferences comes from Time, The New York Review of Books, and Pink Panther movies, then the President’s statement would seem to ring true. Sadly, the reality is quite different. European and Asian governments have paid staggering sums to subsidize a mode of travel that only a small and shrinking share of their populations uses.[[18]](http://www.heritage.org/research/reports/2011/02/time-to-end-obamas-costly-high-speed-rail-program" \l "_ftn18) In its most recent report on European travel patterns, the European Commission noted that passenger rail’s share of the European market (EU-27) declined from 6.6 percent in 1995 to 6.3 percent in 2008, reaching a low of 5.9 percent in 2004. Market shares for autos and buses also fell over the period, while the airlines’ market share jumped. In effect, Europeans are adopting more American modes of travel, despite massive taxpayer subsidies for rail. They are shifting their travel to unsubsidized, taxpaying airlines, which expanded their market share from 6.5 percent in 1995 to 8.6 percent in 2008. Indeed, by 2008, passenger rail’s share of the transportation market was the lowest of all modes, except travel by sea and motorcycles.[[19]](http://www.heritage.org/research/reports/2011/02/time-to-end-obamas-costly-high-speed-rail-program" \l "_ftn19) Although the total size and scope of European subsidies for passenger rail are not known, a recent report by Amtrak’s Inspector General indicated that they are sizable and likely exceed what the U.S. government pays for highways. One purpose of the review was to address the contention that passenger rail in other countries, especially HSR, operates at a profit (that is, without subsidies). For 1995–2006, the study found that the governments of Germany, France, the United Kingdom, Spain, Denmark, and Austria spent “a combined total of $42 billion annually on their national passenger railroads.”[[20]](http://www.heritage.org/research/reports/2011/02/time-to-end-obamas-costly-high-speed-rail-program" \l "_ftn20) These six countries have a combined population of 269 million, and their expenditure of $42 billion on passenger rail in 2006[[21]](http://www.heritage.org/research/reports/2011/02/time-to-end-obamas-costly-high-speed-rail-program" \l "_ftn21) is roughly proportional to the $54.8 billion that the government of the United States (population of 309 million) spent on all forms of transportation, including highways, rail, aviation, water transport, and mass transit.[[22]](http://www.heritage.org/research/reports/2011/02/time-to-end-obamas-costly-high-speed-rail-program" \l "_ftn22) Data from individual countries reveal the financial catastrophes that the U.S. could confront if it embraces Euro-style passenger rail programs. According to the left-leaning The Economist, passenger rail subsidies reached $8.9 billion in 2008– 2009, and the magazine wondered: It is not clear why the public should be heavily subsidizing a mode of transport that accounts for a tiny minority of all travel: 8% of the total distance travelled in Britain during 2009, compared with 85% by cars and vans. The relatively few who use railways often are disproportionately well-off: three-fifths of the traffic is concentrated in the wealthy commuting counties of the south-east.[[23]](http://www.heritage.org/research/reports/2011/02/time-to-end-obamas-costly-high-speed-rail-program" \l "_ftn23) Despite these massive subsidies, rail ticket prices are still comparatively high. At present, two people traveling from Heathrow airport to downtown London can hire a limousine that meets them at the baggage claim and takes them directly to their destination for less than the cost of taking the Heathrow Express to Paddington Station and then taking the Tube or a taxi to their final destination.

### Mass transit won’t decrease emissions

**O’Toole, 12** - senior fellow at the Cato Institute  (Randal, “Indy Transit Task Force Misses the Mark,” <http://www.cato.org/publications/commentary/indy-transit-task-force-misses-mark>

Nor is transit good for the environment because buses and Diesel-powered commuter trains burn fossil fuels just like automobiles. IndyGo’s buses use more energy and emit more greenhouse gases, per passenger mile, than the average SUV, and extending bus service to remote suburbs will only make things worse.

### Mass transit isn’t economically sustainable and will collapse

**O’Toole, 8** - senior fellow at the Cato Institute  (Randal, “Light-Rail Systems Are a False Promise,” 9/16, <http://www.cato.org/publications/commentary/lightrail-systems-are-false-promise>

Rail transit has become such an albatross around the necks of the American cities that have it that it is hard to imagine that anyone of good will would wish it upon Kansas City. Rail transit is expensive to build, to operate and maintain. One of rail transit’s dirty secrets is that the entire system - rails, cars, electrical facilities, stations - must be replaced, rebuilt or rehabilitated roughly every 30 years. This costs almost as much as the original construction, which means for taxpayers that rails are a "pay now, pay more later" proposition. The Chicago Transit Authority is on the verge of financial collapse. The agency estimates it needs $16 billion it doesn’t have to rehabilitate tracks and trains. To keep the trains running, the agency siphoned money away from the city’s bus system and lost a third of its bus riders between 1986 and 1996. Newer systems face other financial challenges. San Jose’s light-rail system put the city’s transit agency so far in debt that when sales tax revenues fell short early in this decade, it was forced to cut bus and rail service by 20 percent. Rail construction almost always costs more than the original estimates. Denver voters approved a 119-mile rail system in 2004 on the promise that it would cost $4.7 billion to build it by 2017. The current estimate is up to $7.9 billion, and the regional transit agency says the system might not be complete until 2034.

## Extn Won’t Use

### Transit ridership is substantially declining

**O’Toole, 10** - senior fellow at the Cato Institute (Randal, “Fixing Transit The Case for Privatization”, 11/10, <http://www.cato.org/pubs/pas/PA670.pdf>)

At best, all this money has done is arrest the decline in transit ridership. In 1944, about 84 million Americans lived in urban areas, and they rode transit an average of 275 times a year. Since that year, per capita urban ridership declined steadily to 60 trips per year in 1965 and less than 50 trips per year in 1970. Since then, it has fluctuated—mainly in response to gasoline prices—between about 40 and 50 trips a year, settling at 45 trips per year in 2008. 30 Although the national average is 44 trips per urban resident, fewer than two dozen urban areas out of the more than 320 that provide transit service exceed this average. Transit systems in nearly half of all urban areas with transit service attract fewer than 10 rides per resident per year. As Table 1 suggests, urban areas with high rates of transit ridership tend to have large concentrations of jobs at the urban core (such as New York City; San Francisco; and Washington, DC) or are college towns (as in State College, Pennsylvania; Ames, Iowa; and Champaign–Urbana, Illinois). The presence or absence of expensive rail transit does not seem to be an important factor in the overall use of transit. While per capita ridership may have remained steady at about 40 to 50 trips per year, transit’s share of travel has declined as per capita urban driving has grown. From 1970 through 2008, per capita transit ridership stagnated, but per capita driving of personal vehicles grew by 120 percent. 31 As a result, transit’s share of motorized urban travel fell from 4.2 percent in 1970 to 1.8 percent in 2008. 32

### Mass transit fails – people won’t use it

**Wall Street Journal, 12** – editorial (“Why Your Highway Has Potholes,” 4/15,

<http://online.wsj.com/article/SB10001424052702303815404577333631864470566.html?mod=WSJ_Opinion_LEADTop>

Since 1982 government mass-transit subsidies have totaled $750 billion (in today's dollars), yet the share of travelers using transit has fallen by nearly one-third, according to Heritage Foundation transportation expert Wendell Cox. Federal data indicate that in 2010 in most major cities more people walked to work or telecommuted than used public transit.

Brookings Institution economist Cliff Winston finds that "the cost of building rail systems is notorious for exceeding expectations, while ridership levels tend to be much lower than anticipated." He calculates that the only major U.S. rail system in which the benefits outweigh the government subsidies is San Francisco's BART, and no others are close to break-even.

### No one will use it

**O’Toole, 11** - senior fellow at the Cato Institute  (Randal, “Transportation: From the Top Down or Bottom Up?,” 5/25, <http://www.cato.org/publications/commentary/transportation-top-down-or-bottom>)

Central planners' fascination with trains is a wonder to behold. A group called Reconnecting America laments that only 14 million American jobs — about 10 percent — are located within a quarter mile of transit, by which they mean rail transit. The group advocates spending a quarter of a trillion dollars to increase this to 17.5 million jobs, or 12.5 percent.

Simply putting transit close to jobs, however, doesn't mean people will ride it. The Brookings Institution recently ranked San Jose as the second-most transit-accessible urban area in America, while Chicago was ranked 46th. Yet the Census Bureau says only 3.4 percent of San Jose commuters use transit, compared with 13.2 percent in Chicago.

### Empirically it will be underutiilized

**O’Toole, 8** - senior fellow at the Cato Institute  (Randal, “Light-Rail Systems Are a False Promise,” 9/16, <http://www.cato.org/publications/commentary/lightrail-systems-are-false-promise>

Once built, light-rail systems never live up to their promises, even in places like Portland. Before building light rail, Portland’s bus system carried 9.8 percent of the region’s transit riders to work. Today, thanks to cutbacks in the bus system forced by the high cost of rail, transit carries just 7.6 percent.

### Mass transit is more expensive than automobiles, leading consumer to choose the more economically feasible driving option

O’Toole, 10-American public policy analyst, Cato Institute Senior Fellow (Randal, “Public Transit Proves Costly to Taxpayers and the Environment”, The Tennessee Center for Policy Research, 6/3/10, http://www.beacontn.org/2010/06/public-transit-proves-costly-to-taxpayers-and-the-environment/)//LP

NASHVILLE – The Tennessee Center for Policy Research today released a policy report in conjunction with transportation expert Randal O’Toole. The report, titled Tackling Public Transit in Tennessee, affirms that Tennessee’s public transit system has provided little in the way of cost or environmental efficiency. Seventeen years of expense data from the Federal Transit Administration show that not only are automobiles a more cost-effective transportation option, but they also release far fewer greenhouse gases into the environment. “Public transit is often portrayed as a low-cost, energy-efficient alternative to auto driving. In reality, transit is much more costly than driving and requires huge subsidies to attract any riders at all,” said O’Toole in the report. The average transit cost per passenger mile is $1.21, while driving costs just $0.23. Similarly, the average transit subsidy per passenger mile is $1.04, where driving is subsidized merely $0.01 per passenger mile. O’Toole explained, “Tennessee transit riders pay an average of less than 70 cents every time they board a bus, while taxpayers pay an average of more than $4 to support that trip.” The current transportation system also has few benefits for the environment. Transit options release approximately 0.4 more pounds of CO2 into the environment than the average car. The insufficient amount of filled seats in transport vehicles such as buses, the Memphis trolley and the Music City Star contribute to each one’s failures to be energy-efficient. By ending highway subsidies, Congress would eliminate the excuse to subsidize inefficient rail transit. Contracting out and privatizing the transit industry would save tax dollars as well as encourage private operators to invest in the most efficient forms of transportation. Also, providing vouchers to the small percentage of Tennesseans who do not have access or the ability to drive would present a significantly smaller burden on taxpayers than the current system. “In the end,” O’Toole said, “only free market reforms will save Tennessee taxpayers hundreds of millions of dollars while truly improving transit services for most people.” The policy report can be read in its entirety here: http://www.tennesseepolicy.org/wp-content/uploads/Tacking-Public-Transit-in-Tennessee.pdf

### People will not utilize mass transit, even if it is made available.

Rodrigue and Comtois, 09-PhDs in transportation (Jean-Paul and Claude, “Transportation and Sustainability”, 2009, http://people.hofstra.edu/geotrans/eng/ch8en/conc8en/ch8c4en.html//LP

1. Sustainable Development An issue that has triggered concerns over the recent decades relates to the capacity of the global economy to accommodate an enduring demographic, economic and resource consumption growth. Since the 1970s, many statements have been made asserting that the world would be unable to sustain such growth without a possible socioeconomic and/or environmental breakdown. While these perspectives have been demonstrated to be inaccurate, since resources availability and the quality of life increased, there are enduring concerns that at some point a threshold will be reached. These concerns were well underlined by the Brundtland Commission in 1987 which defined sustainable development as "Development which meets the needs of the present without compromising the ability of future generations to meet their own needs". As the above quote suggests, sustainable development is a vague concept that is subject to numerous interpretations of what are present needs and what would be the needs of future generations. Should it be based on a minimal standard of living threshold or let to what standard of living each individual is able to afford based upon current price and availability? It is not surprising that the subject is prone to much demagogy leading to confusion in terms of its nature, consequences and appropriate response. It is however generally agreed that a sustainable society favors conditions that benefits the environment, the economy and the society without compromising the welfare of future generations. The problems remains how to define and assess the welfare of future generations, which is essentially impossible. Still, as history clearly demonstrates, the conditions of future societies will largely depend upon the legacy of current societies on resources and the environment. All form of assets (capital, real estate, infrastructures, resources) passed on to the next generation should be at least of equal value (utility) per capita. The basic definition of sustainability has been expanded to include three major points (often referred as the three Es):•Social equity. Relates to conditions favoring a distribution of resources among the current generation based upon comparative levels of productivity. This implies that individuals or institutions are free to pursue the ventures of their choice and reaps the rewards for the risk they take and the efforts they make. Social equity should not be confused with welfare programs (socialism) where the productive segment of the population agrees or is coerced to support a non productive segment; this is not equity but redistribution. Thus, central planning and socialism are much at odd with the concept of social equity.•Economic efficiency. Concerns conditions permitting higher levels of economic efficiency in terms of resource and labor usage. It focuses on competitiveness, flexibility in production and providing goods and services that supply a market demand. Under such circumstances, factors of production should be freely allocated and markets open to trade. •Environmental responsibility. Involves a "footprint" which is lesser than the capacity of the environment to accommodate. This includes the supply of resources (food, water, energy, etc.), but also the safe disposal of numerous forms of wastes. Its core tenets include the conservation and reuse of resources. Another important debate relates to what extent public entities (both at the national and supra-national levels) have a role to play. More bluntly, should sustainability be coerced by governments or be the outcome of market forces? Environmentalists are dominantly leaning towards coercion as they distrust market forces and would argue that sustainability is a much too long term concept to be addressed by corporations focused on the short term. A counter argument could be made that the time horizon of governments, especially democratic regimes, is also very short and on rare instances governments have shown to be proactive regarding environmental matters. The question remains as if expectations can be placed on entities that seek to optimize positive perception (governments) or on entities that seek to optimize efficiency (corporations). Paradoxically, while governments tend to be inflexible and unable to adapt, corporations have demonstrated a resounding ability to shift their strategies and provide products that reflect the needs of their customers (including environmentally responsible products). It could thus be argued that the private sector is more likely to achieve sustainability than the public sector. Societies do not contribute to environmental problems at the same level. A comparison between developed countries and developing countries reveals that the developed world consumes 70% of the world’s energy, 75% of minerals and 85% of wood. For example, the Sears Tower in Chicago consumes more energy than an American city of 150,000 or an Indian city of 1 million. Sustainability can be thus expressed at two spatial levels:•Global. Long term stability of the earth’s environment and availability of resources to support human activities.•Local. Localized forms often related to urban areas in terms of jobs, housing and environmental pollution.Since a growing share of the global population is urbanized, sustainability has increasingly become focused on urban areas. Major cities are requiring a vast array of supporting infrastructures including energy, water, sewers and transport. A key to urban sustainability issues is linked with the provision and maintenance of a wide range of urban infrastructure. Every city has specific infrastructure and environmental problems. For instance, cities in developing countries have chronic deficiencies in the provision of the most basic infrastructure while their environmental conditions are deteriorating. Infrastructures can be publicly or privately owned. Public infrastructures have the advantage to be available to a larger share of the population at a low cost, but are expensive for the government to maintain (subsidies). Private infrastructures tend to service a smaller share of the population, at the choice of the infrastructure company, but are financially profitable. As income levels increase, some infrastructure problems are solved while some environmental problems are created. For instance, an increase in income is linked to better sanitation and water provision, but at the expense of greater waste and carbon dioxide emissions.2. Transportation and Sustainability Transportation, as a core component supporting the interactions and the development of socioeconomic systems, has also been the object of much consideration about to what extent it is sustainable. Building upon the Brundtland Commission sustainable transportation can be defined as:"The ability to meet today’s transportation needs without compromising the ability of future generations to meet their transportation needs." (Black, 2010)Again, this is a vague statement that has several parameters difficult if not impossible to assess, particularly of what could be the transportation needs of future generations. Most studies agree that automobile dependence is related to an unsustainable urban environment. However, such an observation is at odd with the mobility choice and preferences of the global population where the automobile is rapidly adopted when income levels reach a certain threshold. Other transport alternatives commonly do not measure up to the convenience of the automobile. Private and flexible forms of transportation, such as the automobile, are thus fundamental to urban mobility and should not be discarded as options for the sake of sustainability. A bias is observed in the transport community towards an emphasis for public transit and non-motorized transportation as the dominant, if not sole, strategy towards sustainable transportation. Yet, almost all public transit systems are financially unsustainable, imposing burdens on the society. Freight transportation must also been considered in this process considering the substantial growth of raw materials and goods being traded in a global economy. In fact, freight transportation relies on much more environmentally sound modes such as rail and maritime transport.

## Extn Won’t Decrease Emissions

### Mass transit won’t decrease emissions and will result in a net increase

**O’Toole, 9** - senior fellow at the Cato Institute  (Randal, Congressional Testimony, “On Transit and Climate”, <http://www.cato.org/testimony/ct-ro-20090707.html>)

Urban transit is important for those who lack access to automobiles. But the history of the last four decades shows that transit cannot and will not play a significant role in saving energy or preventing climate change. Forty years ago, American cities were choked with air pollution, so Congress passed the Clean Air Act of 1970 and created the Environmental Protection Agency (EPA) to administer the law. The EPA adopted two strategies to reduce pollution. First, it required automakers to make cars that polluted less. Second, it also encouraged cities to promote transit and adopt other policies aimed at getting people to drive less.

Today, we know what worked and what did not. Automotive air pollution has declined by at least two-thirds since 1970. This entire decline was due to technological changes in automobiles. Far from responding to transit investments by reducing driving and taking transit more, Americans today drive far more than they did in 1970.

As the late University of California (Irvine) economist Charles Lave demonstrated in the October, 1979 Atlantic Monthly, investing in transit fails to save energy or reduce air pollution for two reasons:

* First, spending more money on transit does not significantly reduce driving.
* Second, transit uses just about as much energy as cars, so even if we could persuade people to take transit it would not save energy (see http://www.theatlantic.com/doc/197910/197910).

Dr. Lave's arguments are as valid today as they were in 1979, and as valid for greenhouse gas emissions as for energy and other pollutants. The difference between 1979 and today is that today we have much more evidence to back up Dr. Lave's points. Transit Investments Do Not Significantly Increase Transit Ridership Transit subsidies have historically had only a trivial effect on ridership. Between 1987 and 2007, annual subsidies in real dollars grew by 68 percent. Yet annual ridership grew by only 18 percent. While capital subsidies are sketchy before 1987, operating subsidies increased by 1240 percent since 1970. Yet ridership grew by only 45 percent. More importantly, despite total real subsidies of well over three-quarters of a trillion dollars since 1970, per-capita transit ridership and passenger miles actually declined. Figure one (on page 8) shows that per-capita transit travel declined more-or­less steadily from 1970 through 1995. Although per-capita transit usage has grown a little since 1995, it remains below 1988, and far below 1970, levels. Moreover, as figure two shows, while per-capita transit travel was declining, per-capita urban driving grew by 120 percent. Transit carried more than 4 percent of urban travel in 1970; but it fell below 2 percent in 1990 and now stands at 1.6 percent. My former hometown of Portland, Oregon has invested more than $2 billion in light rail and streetcars. Yet this has had almost no effect on Portland travel habits. In 1980, before Portland built its first light-rail line, the census found 9.8 percent of Portland urbanized area commuters took transit to work. Today, Portland has four light-rail routes and a streetcar line, yet the Census Bureau's American Community Survey says only 6.5 percent of Portland commuters take transit to work. The number of Portland-area residents taking transit to work actually declined between 2000 and 2007. These census numbers are confirmed by a 100-percent census of downtown employers conducted by the Portland Business Alliance in 2001 through 2007. More than two-thirds of all Portland-area transit commuters work in downtown Portland, but this census found that 7 percent fewer downtown workers took transit to work in 2007 than in 2001. Transit Is Not Significantly Cleaner than Driving Even if more subsidies to transit could attract significant numbers of people out of their cars, it would not save energy or reduce greenhouse gas emissions because transit uses as much energy and generates nearly as much greenhouse gas per passenger mile as urban driving. As described in my Cato Institute Policy Analysis no. 615 (http://www.cato.org/pubs/pas/pa-615.pdf), the following data are based on the Department of Energy's Transportation Energy Data Book, the Federal Transit Administration's National Transit Database, and the Federal Highway Administration's Highway Statistics. In 2006, the nation's transit systems used an average of 3,444 BTUs and emitted 213 grams of CO2 per passenger mile. The average passenger car used 3,445 BTUs—just 1 BTU more—and emitted 245 grams of COsup>2 per passenger mile, just 15 percent more. While transit appears slightly cleaner than autos, as shown in figure three, auto and light truck energy efficiencies have rapidly improved, while transit energy efficiencies have declined. Since CO2 emissions are proportional to energy consumption, these trends hold for greenhouse gas production as well. We can expect these trends to continue. If auto manufacturers meet the Obama administration's new fuel-economy standards for 2016—even if they fail to improve energy efficiencies beyond that—by 2025 the average car on the road will consume only 2,600 BTUs and emit only about 186 grams of CO2 per passenger mile—considerably less than most transit systems (figure four). This rapid improvement is possible because America's auto fleet almost completely turns over every 18 years. By comparison, cities that invest in rail transit are stuck with the technology they choose for at least 30 years. This means potential investments in transit must be compared, not with today's cars, but with cars 15 to 20 years from now. In much of the country, the fossil-fuel-burning plants used to generate electricity for rail transit emit enormous amounts of greenhouse gases. Washington's Metrorail system, for example, generates more than 280 grams of CO2 per passenger mile— considerably more than the average passenger car. Light-rail systems in Baltimore, Cleveland, Denver, Philadelphia, and Pittsburgh all emit more greenhouse gases per passenger mile than the average SUV. In places, such as the West Coast, that get much of their electricity from renewable sources, it would be wiser and more cost-effective to apply that electricity to plug-in hybrids or other electric cars that can recharge their batteries at night when renewable power plants generate surplus energy. As Professor Lave said, the "law of large proportions" dictates that "the biggest components matter most." In other words, since more than 90 percent of urban travel is by auto and only 1.6 percent is by transit, small improvements in autos can be far more significant than large investments in transit.

### Full lifecycle costs of transit are higher than automobiles

**O’Toole, 10** - senior fellow at the Cato Institute (Randal, “Fixing Transit The Case for Privatization”, 11/10, <http://www.cato.org/pubs/pas/PA670.pdf>)

Supporters of transit subsidies justify those subsidies by inventing and exaggerating the social benefits of transit. They imagine, for example, that transit is environmentally superior to driving, when in fact, the environmental impacts of transit are approximately equal to driving. 77 In 2008, for example, operating the average car used about 3,400 British thermal units (BTUs) per passenger mile, while the average transit bus used 4,300. 78 While rail transit operations use an average just 2,500 BTUs per passenger mile, the energy cost of building rail lines is high. 79 A complete lifecycle analysis has found that “total lifecycle energy inputs and greenhouse gas emissions contribute an additional 63% for onroad, 155% for rail, and 31% for air systems over vehicle tailpipe operation.” 80 In other words, the total energy cost of driving is about 5,500 BTUs per passenger mile, while rail transit is about 6,400 BTUs per passenger mile.

### Mass transit will increase overall emissions

**O’Toole, 8** - senior fellow at the Cato Institute  (Randal, “Light-Rail Systems Are a False Promise,” 9/16, <http://www.cato.org/publications/commentary/lightrail-systems-are-false-promise>

Nor is rail transit good for the environment. Most U.S. light-rail lines use more energy, per passenger mile, than an SUV. Considering that most of Missouri’s electricity comes from fossil fuels, a Kansas City light rail, like the ones in Dallas, Denver and Cleveland, is also likely to produce more greenhouse gases per passenger mile than an SUV.

### Construction emissions and feeder buses substantially increase emissions

**O’Toole, 9** - senior fellow at the Cato Institute  (Randal, Congressional Testimony, “On Transit and Climate”, <http://www.cato.org/testimony/ct-ro-20090707.html>)

Transit has several other disadvantages as a way of reducing greenhouse gas emissions. First, even where electric-powered rail transit generates less greenhouse gases than cars or buses, the trains are supported by feeder bus systems that emit lots of greenhouse gases. While the trunk line buses that new rail transit lines replace typically run fairly full, the feeder buses that support rail transit run fairly empty because many rail riders drive to transit stations. The result is that greenhouse gas emissions on many transit systems increase after opening rail transit lines. After opening its first light-rail line, CO2 emissions from St. Louis' transit system climbed from 340 to 400 grams per passenger mile, while Houston's grew from 218 to 263 grams per passenger mile. Construction of rail transit also consumes huge amounts of energy and releases enormous amounts of greenhouse gases. Portland planners estimated that the energy cost of constructing one of the city's light-rail lines would equal 170 years worth of energy savings. Highway construction also generates greenhouse gases, but because highways are much more heavily used than most rail transit lines, the emissions per passenger mile are far lower. Contrary to claims that rail transit can carry as many people as four or more freeway lanes, the New York City subway is the only rail transit line in America that carries more passenger miles per rail mile than one urban freeway lane mile. Outside of New York, the average urban freeway lane mile carries 12 times as many passenger miles as the average commuter rail mile, 7.5 times as many as the average light-rail mile, and 2.4 times as many as the average subway/elevated mile.

## A2 Assumes Buses

### Trains are even worse

**O’Toole, 11** - senior fellow at the Cato Institute  (Randal, “Heavy Overall Expense Makes Such Rapid Transit Unfeasible,” 7/25, <http://www.cato.org/publications/commentary/indy-transit-task-force-misses-mark>

Nor are trains particularly environmentally friendly. Intercity buses use 60 percent less energy per passenger mile as Amtrak trains, and when full life-cycle costs are counted, the difference is even greater. Autos are getting more energy-efficient each year, and by 2025, the average car on the road will use less energy per passenger mile than any high-speed train.

# \*\*Obesity Answers\*\*

## A2 Obesity death impacts

### Obesity doesn’t cause mass death – their studies are wrong

**Lalasz 5** (Robert, Senior Editor, “Will Rising Childhood Obesity Decrease U.S. Life Expectancy?”, Population Reference Bureau, May, http://www.prb.org/Articles/2005/WillRisingChildhoodObesityDecreaseUSLifeExpectancy.aspx?p=1)

Demographers Debate the Limits to Life Expectancy But other demographers say the Olshansky team's study simplifies the complex interplay of factors that have fueled 20th century gains in life expectancy in the United States and other developed countries. These analysts also characterize the study as part of a demographic paradigm—assuming a biological limit to life expectancy—that trends since 1950 have cast into doubt. "It's a Malthusian example of belief in the fixity of nature," says Samuel Preston, professor of demography at the University of Pennsylvania and the author of a rejoinder to the Olshansky study in the same issue of the New England Journal of Medicine. "Their notion is that we wear out and die and there's nothing to be done about it. The fact is that we have been very successful at postponing death at older ages, and other countries have been even more successful. It's obvious that we should expect the life expectancy [82] that Japan has achieved." "Many demographers now accept that **the biological maximum is not so well set**," adds Christine Himes, a sociologist at Syracuse University. "The [survival] curves are now being pushed out—more people are living past 100, and more past 110. There may be some maximum, but it's pretty far out there, past 120." Preston makes three additional points in defending conventional life expectancy projections: that decreases in the rate of death at older ages in the United States have been constant since 1950, that extrapolating from past trends has provided the best forecasts, and that conventional projections have **already incorporated** the recent rise in obesity rates. "We should do what we can to reduce levels of obesity," Preston says. "But there are no long-term studies of the effect of childhood obesity on long-term mortality. And the claim this is going to offset all the factors working to increase life expectancy and result in a reduction of life expectancy is **inaccurate**." Such factors, he says, might include genetic engineering, a continuing decline in the rates of infectious diseases and smoking, and changes in public behavior, such as increasing condom use among groups hit hardest by HIV/AIDS. Olshansky, however, argues that future medical advances will principally benefit older people and only incrementally boost life expectancy. "We've squeezed about as much longevity per person at younger ages through science as we can," he says. "Child obesity will influence early-age mortality, and therein lies the difference. Any time you get one of these pulse events—war, influenza, obesity, AIDS—it affects early-age mortality disproportionately." Others dispute the Olshansky **study's methods**. "Some people have tried to forecast the future of mortality by getting best guesses for each cause and then trying to assemble them into an overall projection, but that method has never worked very well," says Richard Suzman, associate director of behavioral and social research at the National Institute on Aging. "The mix of factors at play is too large, and there's too much interrelation among them." And Himes, who studies the effects of obesity on health and functioning in later life, says the study has **no empirical analysis** of the specific effects of childhood obesity. "Olshansky's approach is **pretty simplistic**—you can't just extrapolate from current death rates by obesity status," she says. "Those **rates aren't just based on obesity alone**, but on other factors as well." The new CDC study has also raised questions about Olshansky's conclusions. While it says that obesity killed almost 112,000 people in the United States in 2002, it also concludes that being merely overweight (having a BMI of 25-30) is associated with a lower rate of mortality than that of underweight people, especially after age 70. But Olshansky is unconvinced that obesity is less of a danger, pointing out that many recent studies point out what he calls a "startling" rise in diabetes rates.

### Obesity is a tiny health risk – their evidence is biased exaggeration

**CCF 8** (Center for Consumer Freedom, “CDC Must Retract Obesity Deaths Study”, http://www.consumerfreedom.com/article\_detail.cfm/article/161?nd=1)

In the past few years, the federal government has waged an all out war to scare Americans about our so-called "obesity epidemic." The Surgeon General says it's [just as dangerous as the threat of terrorism](http://www.time.com/time/2004/obesity/index.html" \t "_blank). A leading Harvard expert compares obesity to a [massive tsunami heading toward American shores](http://au.health.yahoo.com/050316/3/3r3b.html" \t "_blank). The director of the CDC called it [worse than the Black Death](http://www.theledger.com/apps/pbcs.dll/article?AID=/20041108/NEWS/411080310/1036" \t "_blank). Unfortunately, [trial lawyers who see dollar signs where the rest of us see dinner](http://www.consumerfreedom.com/issuepage.cfm/topic/32) have seized on the CDC's 400,000 deaths number to justify their frivolous crusades. Now word comes from experts within the CDC that excess weight is about **one-fifteenth as dangerous as previously thought**, and has a lower death toll than diseases like septicemia and nephritis. Each death is of course tragic. But has anyone heard of the septicemia "epidemic" or the nephritis "tsunami"? It turns out that the 70 million Americans who are technically “overweight” have **no increased mortality risk**. The real problems occur only among the small percentage of Americans with a [Body Mass Index of 35 or more](http://www.bmiscale.com/). To put that in perspective, ["fat actress" Kirstie Alley](http://www.sho.com/site/fatactress/people.do" \t "_blank) and ["fat adult actress" Anna Nicole Smith](http://www.sky.com/showbiz/article/0,,50002-1174850,00.html" \t "_blank) both had a BMI of 31 -- before they lost weight. Shortly after the 400,000 study was published, Science magazine [reported on a storm within CDC's headquarters](http://www.consumerfreedom.com/article_detail.cfm?article=162" \t "_blank). Many top researchers warned a **political agenda to exaggerate the risk** of obesity had trumped scientific concerns. Debate was suppressed, and at least [one agency expert said he feared speaking out would cost him his job.](http://www.sciencemag.org/cgi/content/full/304/5672/804" \t "_blank) An internal investigation was launched soon thereafter. The CDC buried a [summary](http://www.cdc.gov/nccdphp/publications/actual_causes.htm" \t "_blank) of its findings on their website, and requests for the full report have gone unfulfilled. But the overview does acknowledge, "the fundamental scientific problem centers around the **limitations in** both the **data** **and** the **methodology**." In January the CDC disclosed that a small mathematical error had artificially raised their 400,000 estimate by 35,000 deaths. Some admission. If NASA operated this way, Neal Armstrong would be landing on Pluto about now. What's the difference between the original 400,000 statistic and the updated 26,000 figure? Primarily, it's that the new study uses more recent data. The 400,000 number took data from as long ago as 1948 and didn't adjust for improved medical care. Those who were able to complete high-school math and [noted this problem months ago](http://www.consumerfreedom.com/news_detail.cfm?headline=2535) can claim some measure of vindication. Unbelievably, the CDC had the more recent data readily available on its own computers. [The CDC collects that data](http://www.cdc.gov/nchs/nhanes.htm" \t "_blank). Why didn't they use it? No one is saying. Now a CDC scientist who co-authored the original 400,000 deaths estimate admits the new number is "[a step forward](http://www.iht.com/articles/2005/04/20/news/fat.php" \t "_blank)." Yet the agency's official position is that it will take no position. The [CDC proclaims the science is too new](http://www.theledger.com/apps/pbcs.dll/article?AID=/20050420/ZNYT02/504200403" \t "_blank), debates about methodology "[detract from the real issue," and we shouldn't focus so much on obesity deaths anyway](http://www.ajc.com/opinion/content/opinion/0205/25cdc.html" \t "_blank). Funny. It didn't have any of these quibbles when it announced the 400,000 number and said obesity would soon become the number one cause of preventable death. It's said that a lie can travel halfway round the world while the truth is putting on its shoes. Well, the truth about obesity is finally lacing up. And that's bad news for trial lawyers pursuing obesity lawsuits against food and beverage companies as well as the self-appointed diet dictators seeking extra taxes on foods they don't like.

### Err Neg – there’s no scientific evidence for their claims

**Basham and Luik 6** (Patrick, Director – Democracy Institute, and John, Health Policy Writer, “Four Big, Fat Myths”, The Telegraph, 11-26, http://www.telegraph.co.uk/news/uknews/1535176/Four-big,-fat-myths.html)

Yet the obesity epidemic is a **myth** manufactured by public health officials in concert with assorted academics and special-interest lobbyists. These crusaders preach a sermon consisting of four obesity myths: that we and our children are fat; that being fat is a certain recipe for early death; that our fatness stems from the manufacturing and marketing practices of the food industry (hence Ofcom's recently announced ban on junk food advertising to children); and that we will lengthen our lives if only we eat less and lose weight. The trouble is, **there is no scientific evidence to support these myths**. Let's start with the myth of an epidemic of childhood obesity. The just-published Health Survey for England, 2004 does not show a significant increase in the weight of children in recent years. The Department of Health report found that from 1995 to 2003 there was only a one-pound increase in children's average weight. Nor is there any evidence in claims that overweight and obese children are destined to become overweight and obese adults. The Thousand Families Study has researched 1,000 Newcastle families since 1954. Researchers have found little connection between overweight children and adult obesity. In the study, four out of five obese people became obese as adults, not as children. There is not even any compelling scientific evidence to support the Government's claim that childhood obesity results in long-term health problems and lowers one's life expectancy. In fact, the opposite may be true: we could be in danger of creating a generation of children obsessed with their weight with the consequent risk of eating disorders that really do threaten their health. Statistics on the numbers of children with eating disorders are hard to come by, but in the US it is estimated that 10 per cent of high school pupils suffer from them. Recent studies show adults' attempts to control children's eating habits result in children eating more rather than less. Parental finger wagging increases the likelihood that children develop body-image problems as well as eating disorders.

# \*\*Urban Sprawl Answers\*\*

### **Urban rail transit fails - inefficient**

Winston, Maheshri, 2006 – Brookings Institution, U.C. Berkeley (Clifford, Vikram, “On the Social Desirability of Urban Rail Transits,” Brookings Institution, 08/23/06, http://www.brookings.edu/~/media/research/files/papers/2006/8/rail%20systems%20winston/08\_rail\_systems\_winston.pdf)//AX

The evolution of urban rail transit in the United States over the past twenty years has been marked by three inescapable facts that signal an inefficient allocation of transit resources. Rail’s share of urban travelers is declining during a period when there has been little investment in new roads; its deficits are rising sharply; and yet investment to build new systems and extend old ones continues. In 1980, two million Americans got to work by rail transit. Today, in spite of an increase in urban jobs and transit coverage, fewer than one million U.S. workers commute by rail, causing its share of work trips to drop from 5 percent to 1 percent.1 Although rail transit’s farebox revenues have consistently failed to cover its operating and capital costs since World War II, governmental aid to cover transit deficits has been increasingly available. Since 1980, annual operating subsidies have climbed from $6 billion to more than $15 billion today (APTA Transit Fact Books, figures in 2001 dollars). Capital subsidies have also increased as transit agencies struggle to maintain and provide new facilities, track, and rolling stock. These worrisome trends, however, have not curbed U.S. cities’ appetite for rail transit service. During the 1990s, Cleveland, Washington, Santa Clara, Sacramento and other cities expanded their systems, while Los Angeles, Denver, Dallas, and St. Louis built new ones. Recently, Houston and Minneapolis opened new light rail lines while small, sparsely populated cities such as Sioux City, Harrisburg, and Staunton, Virginia suggested that they want federal funds to help build their systems. And although county residents repeatedly nixed a referendum to build a $4 billion extension of Washington’s Metro out to Dulles airport, planners nevertheless circumvented popular will and diverted increased toll revenue from the Dulles toll road to finance a portion of the ultimate extension. Any private firm that was losing market share and reporting increasing losses would be hard pressed to attract funds to expand. Almost certainly, it would try to determine the most efficient way to contract. Of course, a transit agency does not seek to maximize profits, but its public financing is justified only if it is raising social welfare, where social welfare can be measured as the difference between net benefits to consumers and the agency’s budget deficit, also taking into account relevant externalities (for instance, the reduction in roadway congestion attributable to rail). Although the costs and benefits of public rail transit operations have been debated in the policy community (see, for example, Litman [1]), we are not aware of a recent comprehensive empirical assessment of rail’s social desirability.2 The purpose of this paper is to estimate the contribution of each U.S. urban rail operation to social welfare based on the demand for and cost of its service. We find that with the single exception of BART in the San Francisco Bay area, every U.S. transit system actually reduces social welfare. Worse, we cannot identify an optimal pricing policy or physical restructuring of the rail network that would enhance any system’s social desirability without effectively eliminating its service. Rail transit’s fundamental problem is its failure to attract sufficient patronage to reduce its high (and increasing) average costs. This problem has been complicated enormously by new patterns of urban development. Rail operations, unfortunately, are best suited for yesterday’s concentrated central city residential developments and employment opportunities; they are decidedly not suited for today’s geographically dispersed residences and jobs. At best, urban rail service may be socially desirable in a few large U.S. cities if its operations can be adjusted to mirror successful privatization experiments conducted abroad. Ironically, however, rail transit enjoys powerful political support from planners, civic boosters, and policymakers, making it highly unlikely that rail’s social cost will abate.

### **There is no way to fix urban rail transit**

Winston, Maheshri, 2006 – Brookings Institution, U.C. Berkeley (Clifford, Vikram, “On the Social Desirability of Urban Rail Transits,” Brookings Institution, 08/23/06, http://www.brookings.edu/~/media/research/files/papers/2006/8/rail%20systems%20winston/08\_rail\_systems\_winston.pdf)//AX

Could any system be transformed to have a positive effect on social welfare? We are unable to find ways to significantly raise the net benefits of the nation’s transit systems given their current operations. However, recently privatized rail transit systems in foreign cities, notably Tokyo and Hong Kong, have been able to eliminate deficits by reducing labor and capital costs and by introducing more comfortable cars and remote payment mechanisms, among other innovations, that have reduced operating costs and expanded ridership. We therefore investigated which, if any, U.S. rail transit systems would become socially desirable assuming privatization reduced short-run total costs 20 percent—a plausible estimate based on U.S. and foreign experience with bus transit privatization (Winston and Shirley [3]). With the exception of BART, which already generates small net benefits, we found that such a cost reduction would result in only the New York City and Chicago systems producing positive net benefits. We are not aware of any public officials who have endorsed complete privatization of rail transit. On the other hand, a few have encouraged bus transit agencies to contract with private companies in an effort to reduce costs. Private contracting would be a politically more feasible alternative to privatization, but it appears that at best it would enable only a few rail systems to be socially justified. Because no policy option exists that would enhance the social desirability of most urban rail transit systems, policymakers only can be advised to limit the social costs of rail systems by curtailing their expansion. Unfortunately, transit systems have been able to evolve because their supporters have sold them as an antidote to the social costs associated with automobile travel, in spite of strong evidence to the contrary.40 As long as rail transit continues to be erroneously viewed in this way by the public, it will continue to be an increasing drain on social welfare.

# \*\*Case Offense\*\*

## Disease Turn

### Mass transit spreads pandemics

Rodrigue, Luke, and Osterholm, 09-Department of Virology, Naval Medical Research Center, Director of the Center for Infectious Disease Research and Policy, University of Minnesota, (Dr. Jean Paul, Dr. Thomas, Dr. Michael, “Transportation and Pandemics”, The Geography of Transport Systems, 2009, http://people.hofstra.edu/geotrans/eng/ch9en/appl9en/ch9a3en.html)//LP

1. Pandemics-There are approximately 1,500 microbes that are known to be a source of disease among the human population. Influenza can be one the most virulent among them because of its ability to mutate and be efficiently transmitted through the respiratory route. Under normal circumstances, influenza's impacts are relatively benign since populations have developed a level of immunity to its debilitating effects. Yet, it is estimated that between 1 to 1.5 million people per year die of influenza or related complications with a distinct seasonality that runs between October and March in the northern hemisphere and between May and September in the southern hemisphere. Influenza pandemics are thus considered to be among the most significant threats to the welfare of the global population. Pandemic. An epidemic of infectious disease that spreads through human populations across a large area, even worldwide. Over the last 300 years, ten major influenza pandemics have occurred. The 1918 pandemic (Spanish Flu) is considered to be yet the most severe. 30% of the world’s population became ill and between 50 and 100 million died. One important factor why the Spanish Flu spread so quickly and so extensively was through modern transportation, which at the beginning of the 20th century offered a global coverage. The virus was spread around the world by infected crews and passengers of ships and trains and severe epidemics occurred in shipyards and railway personnel. Concerns about the emergence of a new pandemic are salient, particularly in light of recent outbreaks such as SARS (Severe Acute Respiratory Syndrome) in 2002-2003 and the Swine Flu in 2009, which quickly spread because of the convenience and ubiquity of global air travel. The next influenza pandemic could be equally severe and widespread illness or absenteeism in freight transportation sectors can cause cascading disruptions of social and economic systems. The relationships between transportation and pandemics involves two major sequential dimensions:

•Transportation as a vector. With ubiquitous and fast transportation comes a quick and extensive diffusion of a communicable disease. From an epidemiological perspective, transportation can thus be considered as a vector, particularly for passengers transportation systems. The configuration of air transportation networks shapes the diffusion of pandemics. This issue concerns the early phases of a pandemic where transportation systems are likely to spread any outbreak at the global level.

•Continuity of freight distribution. Once a pandemic takes place or immediately thereafter, the major concerns shift to freight distribution. Modern economic activities cannot be sustained without continuous deliveries of food, fuel, electricity and other resources. However, few events can be more disruptive than a pandemic as critical supply chains can essentially shut down. Disruptions in the continuity of distribution are potentially much more damaging than the pandemic itself.

2. Vectors and Velocities

The more efficient transportation, the more efficient the vector that can transmit an infectious disease. International and long distance transport such as air and rail, modes and terminals alike, concentrates passengers and increase the risk of exposure. In the past, this could be an advantage as a ship could be quarantined, since there were ample time during the voyage for an infection to carry its course and the symptoms to become apparent. Today, it is a different matter as the velocity conferred by transportation systems for long distance travel is superior to incubation time of many flu variants (the period after the infection before symptoms are revealed). Since the incubation time for the average influenza virus is between 1 and 4 days, there is ample time for someone being infected to travel to the other side of the world before noticing symptoms. This represents the translocation phase and is the most crucial in a pandemic. Once symptoms have developed, there is also a "denial phase" where an infected individual will continue traveling, particularly if going back to his place of origin. An infected individual beginning to show symptoms is likely to cancel an outbound travel, but will do the utmost, even breaking quarantine (or warnings), to go back home. Thus, in a window of a few days before an outbreak could become apparent to global health authorities, a virus could have easily been translocated in many different locations around the world. At this point, the vector and velocity of modern transport system would insure that an epidemic becomes a pandemic. In some cases, the velocity of global transportation systems is higher than at the regional level, which paradoxically implies that a virus can spread faster at the global level - between major gateways - than at the regional level. Once an outbreak becomes apparent, the global passenger transportation system, such as air travel and passenger rail, can quickly be shut down in whole or in part, either voluntarily (more likely if the outbreak is judged to be serious) or by the unwillingness of passengers to be exposed to risks. The later is what happened during the SARS outbreak in 2003. For instance, while the public transportation systems of several large Chinese cities were still operated, the number of users precipitously dropped because of risk avoidance. The SARS outbreak also had a substantial impact on the global airline industry. After the disease hit, flights in Pacific Asia decreased by 45% from the year before. During the outbreak, the number of flights between Hong Kong and the United States fell 69%. It is quite clear that this impact would be pale in comparison to that of a 12 to 36 month worldwide influenza pandemic.

### Infections disease spread risks global extinction

Steinbruner 98 – Senior Fellow at Brookings Institution (John D., “Biological weapons: A plague upon all houses,” Foreign Policy, Dec 22, LN)

It is a considerable comfort and undoubtedly a key to our survival that, so far, the main lines of defense against this threat have not depended on explicit policies or organized efforts. In the long course of evolution, the human body has developed physical barriers and a biochemical immune system whose sophistication and effectiveness exceed anything we could design or as yet even fully understand. But evolution is a sword that cuts both ways: New diseases emerge, while old diseases mutate and adapt. Throughout history, there have been epidemics during which human immunity has broken down on an epic scale. As infectious agent believed to have been the plague bacterium killed an estimated 20 million people over a four-year period in the fourteenth century, including nearly one-quarter of Western Europe’s population at the time. Since its recognized appearance in 1981, some variations of the HIV viruses have infected an estimated 29.4 million worldwide, with 1.5 million people currently dying of aids each year. Malaria, tuberculosis, and cholera-once thought to be under control-are making a comeback. As we enter the twenty first century, changing conditions have enhanced the potential for widespread contagion. The rapid growth rate of the total world population, the unprecedented freedom of the movement across international borders, and scientific advanced that expand the capability for the deliberate manipulation of pathogens are all cause for worry that the problem might be greater in the future than it has ever been in the past. The threat of infectious pathogens is not just an issue of public health, but a fundamental security problem for the species as a whole.

## Disease Link Extn

### Antibiotic resistant MRSA is spread on trains, causing potential unstoppable pandemics

Reid, Massey, Thomas, 12-Bachelors in the Arts; Ph.D. Trinity College, Dublin, Ireland, Department of Biology and Biochemistry at the University of Bath; PhD University of Texas, Department of Biology, University of York, (Rachel, Dr. Ruth, Dr. Chris, “MRSA USA300: Flesh-eating Bug Commonly Spread On Buses And Trains”,http://mrsatopic.com/2012/03/mrsa-usa300-flesh-eating-bug-commonly-spread-on-buses-and-trains/)//LP

The community-acquired bacteria has evolved further, and is able to maintain a higher level of toxicity while also resisting treatment from antibiotics, making it a much larger problem- Journal of Infectious Diseases The highly infectious strain, MRSA USA300 , is resistant to many front-line antibiotics and has now been discovered in public places, such as buses and trains. Though people can avoid direct contact with a sneeze or cough, Professor Thomas from the University of Birmingham highlights the possibility of becoming infected from touching surfaces. In this way, every day settings and public surfaces act as viable means to contract an infection. According to the Daily Mail, MRSA USA300 has been called “flesh-eating” due to its ability to lead to large skin boils, abscesses, blood poisoning and even fatal forms of pneumonia that destroy lung tissue. The Daily Mail reports Dr. Ruth Massey of the Department of Biology and Biochemistry at the University of Bath warns people to take care in guarding against MRSA, especially strains that carry genes for Panton-Valentine leukocidin (PVL). This cytotoxin can destroy white blood cells and cause extensive tissue necrosis. According to Massey, more than a thousand PVL positive-community-acquired cases were reported in England last year. Of these, 1 in 5 were caused by the USA300 strain. MRSA USA300 has the ability to break down tissues, and can enter the bloodstream through open wounds and wreak havoc on various parts of the body. These circumstances could potentially be fatal. Dr. Ruth Massey and her colleagues have conducted research that highlight the difference found in the cell wall between hospital MRSA strains and community-acquired strains. Adaptation of the former enables them to suit their environment by switching on toxin production when necessary. This element has been shown to be a fundamental factor contributing to the rumored greater toxicity of community-acquired MRSA strains. Massey and her colleagues expand on their research by explaining the main ways MRSA bacteria is able to cause disease results from its ability to secrete toxins. By using a sensing system, community-acquired strains picked up on buses and trains are able to control when to switch on this function so as not to cause disease until it is concretely fixed within the human. In order to resist the effects of antibiotics, the MRSA USA300 begins to makes changes to its cell wall, rendering many antibiotic treatments ineffective. In England, MRSA USA300 is responsible for sporadic cases most often involving physical ailments of skin boils and abscesses, but has not yet emerged as a major public health matter within the country. Many medical institutions in the UK have been effective in controlling the spread of MRSA in hospitals more recent years. This is especially the case after implementing universal MRSA screening in a patients nose. However, there is growing concern on the prevalence of community-acquired MRSA strains as they can be picked up on buses and trains. This brings to attention the dangers of the public abusing antibiotics, and how every effort to pursue optimal health should be practiced by the public when it is within their control.

### Mass transit spreads pandemics

Van-Tam, 11- member of the UK Scientific Advisory Group for Emergencies (Jonathan N. Et. Al. Joy Troko, Puja Myles, Jack Gibson, Ahmed Hashim, Joanne Enstone, Susan Kingdon, Christopher Packham, Shahid Amin, Andrew Hayward, “Is public transport a risk factor for acute respiratory infection?”, 1/21/10, http://www.biomedcentral.com/1471-2334/11/16//LP

The relationship between public transport use and acquisition of acute respiratory infection (ARI) is not well understood but potentially important during epidemics and pandemics. Methods A case-control study performed during the 2008/09 influenza season. Cases (n = 72) consulted a General Practitioner with ARI, and controls with another non-respiratory acute condition (n = 66). Data were obtained on bus or tram usage in the five days preceding illness onset (cases) or the five days before consultation (controls) alongside demographic details. Multiple logistic regression modelling was used to investigate the association between bus or tram use and ARI, adjusting for potential confounders. Results Recent bus or tram use within five days of symptom onset was associated with an almost six-fold increased risk of consulting for ARI (adjusted OR = 5.94 95% CI 1.33-26.5). The risk of ARI appeared to be modified according to the degree of habitual bus and tram use, but this was not statistically significant (1-3 times/week: adjusted OR = 0.54 (95% CI 0.15-1.95; >3 times/week: 0.37 (95% CI 0.13-1.06).Conclusions We found a statistically significant association between ARI and bus or tram use in the five days before symptom onset. The risk appeared greatest among occasional bus or tram users, but this trend was not statistically significant. However, these data are plausible in relation to the greater likelihood of developing protective antibodies to common respiratory viruses if repeatedly exposed. The findings have differing implications for the control of seasonal acute respiratory infections and for pandemic influenza.

### Increased security won’t guarantee safety

Johnstone, 05-Member of the 9/11 Commission, 8/10/05, “New Strategies to Protect America: Terrorism and Mass Transit after London and Madrid”, http://www.americanprogress.org/issues/2005/08/after\_london\_madrid.html//LP

There have been five attacks against transit systems in major international capitals over the past 17 months – two in Moscow, one in Madrid and now two in London – by terrorist cells either affiliated with or at least sympathetic to al Qaeda. However, other than the Department of Homeland Security (DHS) decision to place all U.S. transit systems on “Orange Alert” (signifying a “High Threat Level”) and new random searches of bags on the New York transit system, there is little sense of urgency about mass transit security here in the United States. It does not appear that DHS is making any significant adjustments in policies and priorities – even as it is clear that terrorists are adjusting their tactics and pursuing softer targets in major cities around the world. There are a number of reasons for this. The current structure of homeland security emerged from the tragedy of September 11. Today, in terms of the protection of transportation infrastructure, the vast majority of resources – money and people – are dedicated to fixing what went wrong four years ago, to the detriment of other transportation modes that are increasingly at risk. Since homeland security emerged as the amalgamation of 22 existing federal agencies, there are still competing lines of authority and overlapping responsibilities when it comes to transportation security and particularly mass transit. And, despite multiple requirements by both the executive and legislative branches, the Department of Homeland Security has yet to complete a comprehensive national transportation security strategy that sets clear federal standards; outlines the responsibilities of federal, state and local governments and the private sector; determines the resources necessary to make the nation’s transportation systems – aviation, maritime, rail, transit and surface transportation – more secure; and identifies how those resources will be generated and sustained. Secretary of Homeland Security Michael Chertoff’s increased emphasis on a risk-based approach to homeland security is laudable. If actually implemented, it will almost certainly give greater weight to transit security systems, which exist in urban centers where the terrorism risk to the United States is highest and are important components of regional economies across the country. In light of the attacks in Madrid and London, the United States needs to do the following: Treat the homeland as a central front in the war on terror and view homeland security as a vital dimension of national security, with commensurate policy attention and priority; Complete a comprehensive National Transportation Security Strategy that addresses the requirements necessary to secure our aviation, maritime, rail, transit and surface transportation systems; Redress the current resource imbalance in transportation infrastructure security and, based on risk assessment, devote more resources to mass transit security, both through dedicated transit security grants and through a higher percentage of homeland security funding; Clarify the roles and responsibilities of the Transportation Security Administration (TSA), the Federal Transit Administration (FTA), and other federal entities involved in transit security; and Do what can be done to make transit systems more secure now; accelerate the development of more reliable explosive detection capabilities; and integrate improved security features into the design of future mass transportation systems.

## Terrorism Turn

### Mass transit is a terrorism magnet

United States Government Accountability Office, 02-(“Federal Action Could Help Transit Agencies Address Security Challenges”, GAO-03-263, 12/ 13/02, http://www.gao.gov/products/GAO-03-263)//LP

About one-third of terrorist attacks worldwide target transportation systems, and transit systems are the mode most commonly attacked. In light of the history of terrorism against mass transit and the terrorist attacks on September 11, GAO was asked to examine challenges in securing transit systems, steps transit agencies have taken to improve safety and security, and the federal role in transit safety and security. To address these objectives, GAO visited 10 transit agencies and surveyed a representative sample of transit agencies, among other things.

### Mass Transit inspires terrorist attacks

Orr 09’- (J.Scott, “Mass Transit: A Terror Target?”, Parade, 8/9, http://www.parade.com/news/intelligence-report/archive/090809-mass-transit-a-terror-target.html)//SP

While America’s mass-transit systems have not yet come under attack, security experts say that trains and buses are atop terrorists’ target lists. Americans take more than 10 billion public-transit rides per year—many times the number of flights—but federal efforts to secure ground transportation from terrorist attacks have been underfunded and inefficient. Still, Congress plans this year to cut funding for mass-transit security from last year’s level of just $400 million—less than 2% of the $30 billion spent on airline security since 9/11. William Millar, president of the American Public Transportation Association, insists that mass transit remains a safe way to travel. However, he says: “One-third of terror attacks around the world have been aimed at public-transit systems. There are no guarantees when it comes to security.” In 2007, the Transportation Security Administration (TSA) reported 171 mass-transit incidents, such as those involving suspicious packages and behavior.

### Data shows terrorists like mass transit targets

Butter, Dolev, Jenkins ’12- (Bruce, Shalom, Brian,” What Have We Learned From Terrorist Attacks on Buses? Free Report Highlights 16 Case Studies in Israel”, PR Newswire, ([http://www.prnewswire.com/news-releases/what-have-we-learned-from-terrorist-attacks-on-buses-free-report-highlights-16-case-studies-in-israel-141113113.html, 3-1-12)//sp](http://www.prnewswire.com/news-releases/what-have-we-learned-from-terrorist-attacks-on-buses-free-report-highlights-16-case-studies-in-israel-141113113.html,%203-1-12)//sp)

The statistical data come from Mineta's (MTI) proprietary Database on Terrorist and Serious Criminal Attacks against Public Surface Transportation. The report also analyzes the effectiveness of different improvised explosive devices and methods for delivering them, and it raises questions for further discussion. "Public surface transportation has been and remains a primary target for terrorists throughout the world," said Mr. Butterworth. "MTI's database records 2,287 attacks against public surface transportation between January 1, 1970 and November 1, 2011, in which 7,581 people were killed and 29,212 were injured. Of these attacks, 65 percent were against buses, bus stations, and bus stops. They accounted for 51 percent of the fatalities and 41 percent of the injuries resulting from terrorist attacks during this period." Some key findings include: Suicide delivery was the dominant method of attack. In 12 cases, devices were worn by or carried by the attacker. In one case, a vehicle-borne improvised explosive device (VBIED) was detonated by a suicide driver alongside a bus. In three cases, bombs were concealed in bags or other items left behind.

## Crime Turn

### Mass transit attracts increased crime.

Stoller, 11- CAP Index, Houston Crime Department, Reporter; Crime forecasting program (Gary, “US: Crime Lurks Outside Airports, Rail Stations”, Mass Transit Magazine, 7/12/11, http://www.masstransitmag.com/news/10295844/us-crime-lurks-outside-airports-rail-stations)//LP

The CAP Index study finds that the likelihood of crime is nearly eight times higher than the national average outside Philadelphia airport and nearly five times higher outside Newark airport. The likelihood of crime exceeds the national average outside 28 of 29 big-city airports in the study and outside all 26 central train stations, says CAP Index, which uses statistics, demographics and computer modeling to determine the likelihood of crime. Of the 29 airports, about half have surrounding neighborhoods where the likelihood of crime is more than four times higher than the national average. Of 26 central train stations, 21 have surrounding neighborhoods where the likelihood is more than four times higher. CAP Index President Jon Groussman says his company's analysis of law enforcement and clients' loss data shows a large number of crimes are committed in such neighborhoods. "You are clearly getting into a more elevated risk potential" when you enter a neighborhood with a crime likelihood at least four times the national average, he says. CAP Index says its crime-risk determinations are 70% to 90% accurate. Like other probability formulas, CAP Index's methodology has its limitations, company officials acknowledge, because it does not take into account various variables, including police force size, amount of security equipment being used and current events. Rosemary Erickson, a criminologist and security expert, says CAP Index is "extremely useful for predicting crime," and travelers should heed its findings for neighborhoods outside airports and central train stations. The areas outside airports and central train stations have a higher likelihood of crime because they're often poor neighborhoods and are probably not as effectively policed as some downtown areas, says Lewis Yablonsky, emeritus professor of criminology at California State University-Northridge. Though airports may have a heavier police and security presence than nearby streets, they aren't immune to crime. During the first five months this year at New York's JFK airport, for example, 912 crimes were reported to police, according to Port Authority of New York and New Jersey statistics. Erickson says the areas around airports and train stations aren't the most desirable to live. Many are low-income areas with high unemployment rates "signs of social disorder" and higher crime rates, she says. In southwest Philadelphia, for instance, the neighborhood outside the airport falls under the jurisdiction of police district 12 one of the two "most violent" of 21 districts, according to a 2007 Philadelphia Police Department report. There were 3,580 crimes in district 12 reported to police last year, ranking the district 13th in total number of major crimes, according to Philadelphia Police Department statistics. Last year, Philadelphia police busted an alleged prostitution ring that operated from hotels near the airport. Many robberies, assaults and a murder of an alleged pimp in December 2009 were related to the ring, police said. Where the hot spots are Hotels and motels near other U.S. airports have also been crime scenes. Police in Burbank, Calif., last year said prostitution and criminal activities were increasing in hotels near Bob Hope Airport. At a motel near Virginia's Richmond airport in April 2007, Gary Post of Broadway, Va., was murdered while unloading his vehicle with his two adult sons. The men had driven to the motel for an inexpensive room before their flight the next day, police said. They were approached by four men with semiautomatic weapons attempting to rob them. Several frequent fliers say they're wary of the neighborhood outside Los Angeles International Airport. Dallas-based Ted Mitchell, who works for a software company, calls the neighborhood "awful." According to CAP Index, the likelihood of becoming a crime victim outside Los Angeles International is nearly four times more than the national average. The likelihood of crime is even higher more than seven times above the national average in the neighborhood outside the airport in Ontario, Calif. Of all neighborhoods near airports and central train stations in CAP Index's study, none has a higher likelihood of crime than the one outside Houston's Amtrak station on Washington Avenue. The crime likelihood there is nearly 11 times higher than the national average. A review of the Houston Police Department's online statistics for crimes within a half mile of the Amtrak station indicates that during the first five months this year, more than 200 crimes were reported to police, says CAP Index Vice President Stephen Longo.

### Mass transit increases crime

Dubner, 08-MFA from Colombia University, coauthor of Freakonomics, , (Stephen J., “Could a Public-Transit Boom Result in a Crime Boom?”, Freakonomics, 10/23/08, http://www.freakonomics.com/2008/10/23/could-a-public-transit-boom-result-in-a-crime-boom/)//LP

Ask virtually any store manager at the Saint Louis Galleria about shoplifting, and you’ll invariably get two responses: One, it’s out of control; and two, it’s gotten exceedingly worse since August 2006, when MetroLink opened a stop just 500 yards from the high-end shopping center. In the first six months of this year, Richmond Heights police made 345 arrests at the mall. That’s nearly double the number of arrests made in all of 2005, before MetroLink opened its Shrewsbury line. More alarming are the numbers of juveniles (kids under the age of 17) arrested at the mall. This year police are on pace to take 276 juveniles into custody for shoplifting and other offenses — a sevenfold increase over the 39 kids arrested at the Galleria in 2005. “I know it’s not politically correct, but how else do you explain it?” comments a frustrated Galleria store manager who, like many Galleria shopkeepers interviewed by Riverfront Times, says her employer prohibits her from officially speaking for the company. “Anyone can see all these people crossing Brentwood Boulevard from the MetroLink station,” the manager continues. “Most of them aren’t here to shop. They’re here to hang out and cause trouble.” Mall workers say it’s not just shoplifting that’s causing problems. In November 2006 police arrested five juveniles and four older teenagers following a fistfight at the Galleria that involved dozens of minors. Four months later in March, another fight in the mall — this one involving up to 100 teens — led to three more arrests and the Galleria imposing new sanctions on teenagers. The so-called “Parental Guidance Required” policy, put in place in April 2007, prohibits anyone under age 17 from entering the mall after 3 p.m. on weekends without an adult chaperone. There’s more: Now — eighteen months after the Galleria curfew first went into effect — many store owners in University City speculate the ban has resulted in pushing troublemakers six stops up the MetroLink line to the Delmar Loop. Police in University City confirm that they first noticed large groups of teens congregating in the Loop in June 2007, two months after the Galleria imposed its curfew. In recent weeks, dozens of those same teens have been implicated in violent attacks that have hospitalized people working and living near the light rail stations in the Loop and the nearby DeBaliviere neighborhood. If the incoming President can find the money, there will surely be renewed efforts to expand public transit in a lot of cities. There are obvious gains: environmental, less road congestion, fewer accidents, etc. But if St. Louis’s experience is at all indicative, there might also be at least one unintended consequence worth thinking about.

## Hearing Turn

### Mass Transit causes hearing loss

Berger ’09- Professor at Columbia University’s Mailman School of Public Health [Stephanie, “Got ear plugs? You may want to sport them on the subway and other mass transit, researchers say”, EurekAlert, 6/18, <http://www.eurekalert.org/pub_releases/2009-06/cums-gep061809.php>] //SP

The U.S. mass transit system, the largest in the world, provides affordable and efficient transportation to more than 33 million riders each weekday. The system is generally considered one of the safest modes of travel. But recent public health studies have identified several sources of environmental hazards associated with mass transit, including excessive noise, a large and growing problem in urban settings. Now, a team of researchers from the University of Washington and Columbia University have found that Metropolitan Transit Authority (MTA) subways had the highest average noise levels of all mass transit in New York City, with levels high enough to potentially increase the risk of noise induced hearing loss. Researchers studied the risk of excessive exposure to noise related to mass transit ridership, and conducted an extensive set of noise measurements of New York City mass transit systems. The findings are available online today in the American Journal of Public Health and will be published in the August 2009 issue. Noise induced hearing loss, a permanent, irreversible health problem, is estimated to affect more than 30 million people worldwide, and as many as 10 million in the U.S. alone. Using sensitive noise dosimeters, the team of researchers, led by exposure scientist Richard Neitzel from the School of Public Health at the University of Washington and Robyn Gershon, DrPH, an environmental and occupational health scientist and faculty member at the Columbia University Mailman School of Public Health, conducted hundreds of measurements of noise levels at platforms and stations, as well as inside of vehicles on New York City subways (MTA and PATH), buses (MTA), ferries (Staten Island), commuter railways (LIRR, SIRR and Metro North), and the Roosevelt Island tramway. The scientists found that on average, the MTA subways had the highest noise levels, at 80.4 decibels (dBA), followed by the Path trains, at 79.4 dBA, and the tram, at 77.0 dBA. The lowest average levels measured, 74.9 dBA and 75.1 dBA, were obtained from the LIRR and Metro-North trains, respectively. The very highest levels measured in the study were found on an MTA subway platform (102.1dBA) and at a bus stop (101.6 dBA). In contrast, the noise level of a whisper is 30 dBA, normal conversation is 60 to 70 dBA, a chainsaw is 100 dBA, and gunfire is 140 dBA. In general, noise levels were significantly higher at platforms compared to inside vehicles for all forms of mass transit, except for ferries and the tram. The borough with the highest mass transit noise levels was Manhattan, followed by Queens and the Bronx. Major hubs were noisier than local stops and underground trains and stations were significantly louder than those aboveground. According to Dr. Gershon, of all mass transit, subways had the highest noise levels, with roughly half of the maximum levels exceeding 90 dBA. "At some of the highest noise levels we obtained (ex. 102.1 dBA on the subway platforms), as little as two minutes of exposure per day would be expected to cause hearing loss in some people with frequent ridership, based upon the International Organization for Standardization models for predicting hearing impairment from noise." "Even though compared to subways, lower levels were obtained for commuter rail, buses, ferries and the tramway, chronic exposure to noise from these other forms of transit could also present a risk of noise induced hearing loss given sufficient exposure duration," notes Mr. Neitzel. "The risk rises quickly with even small increases in noise levels. For example, 95 dBA is 10 times more intense than 85 dBA and 100 times more intense than 75 dBA." The U.S. Environmental Protection Agency and the World Health Organization recommend daily exposures of no more than 70 dBA for a 24 hour average. Noises that register below 70 dBA generally have no impact on hearing health and don't cause people to exceed the daily recommendations.

### Multiple Consequences that Sprout from Hearing Loss

Touchette ’11- (Deborah, “Dr. Touchette Addresses Some of the Effects of Hearing Loss on the Quality of Life.”, Paradise Hearing and Balance Clinics, 2011, http://www.paradisehearing.com/pages/consequences-of-hearing-loss)//sp

Untreated hearing loss can lead to social, physical and psychological problems. The effects of hearing loss is different for each individual but most hearing-impaired people suffer some social, psychological and physical problems as a result of their hearing loss.

Some Social consequences are:

Reduced social activity or problems participating in social activities

Problems communicating with your spouse, friends or relatives

Problems communicating at work

Isolation and Withdrawal

Lack of Concentration

## Hearing Link Extn

### Hearing Loss a Factor of Mass Transit

Deitzel ’09- (Richard Et.Al Robyn R. M. Gershon, Marina Zeltser, Allison Canton, Muhammed Akram, “Noise Levels Associated with New York City’s Mass Transit Systems”, US National Library of Medicine, August, http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2707461/?tool=pubmed)//sp

Conclusions

Our results confirm that, given sufficiently long exposure durations, noise levels associated with mass transit are high enough to produce NIHL in riders. We noted significant differences between the mean levels of various transit types evaluated and between subway lines, stations, and station types. One borough (Manhattan) consistently had the highest associated Leq levels. Subways (including cars and platforms) had the highest associated mean Leq and Lmax noise levels (80.4 and 90.4 dBA, respectively) of all transit types evaluated. At the noise levels measured in the subway, exposures of a few hours to as little as 2 minutes a day (in the case of the highest Lmax level measured, 102.1 dBA) would be expected to cause hearing loss for some people given chronic exposure. Other types of transit had mean Leq noise levels 3 to 5 dBA lower than the subway system but still above the NIHL risk threshold of 70 dBA averaged over a 24-hour period.37

## Hearing Impact Extn

### Hearing loss leads to social collapse

Torres ’08- (Katherine, “Can You Hear Me Now? The Impacts of Hearing Loss”, EHS Today, 2/1/08, http://ehstoday.com/ppe/hearing-protection/ehs\_imp\_78692/)//sp

With hearing loss, the physical impact almost always leads to an emotional effect, Schulz adds. As the vast majority of our interactions are either in person or over the phone, a person who loses his hearing will experience stress when he constantly has to ask others to repeat themselves. This can cause strain among family relationships, and even has been the cause of divorce among some couples, according to Schulz. As a result, individuals with hearing loss often socially alienate themselves from others, Schulz says.

# \*\*States CP\*\*

## States CP – Generic

### More mass transit funding comes from the States than the USFG

Gordon, 11 – Economic Analyst at Charles River Associates (Michael, “Funding Urban Mass Transit in the United States”, Boston College Economics Honor’s Thesis, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2007981, p. 11-13, 3-23-11)//AWV

Urban mass transit systems also rely on other government sources of funding beyond federal contributions. For example, in 2008 Boston’s MBTA derived about 15% of its funding from each the federal and local government, while almost 40% of its total funding came from the state, and the remaining 30% from other sources, such as fare revenues and private contributions.20 In fact, federal funding sometimes conditions on the state or local governments matching its funding.21 Federal funds also often require agencies to spend on specific items. For example, ARRA funds capital improvements, even though many systems cannot cover their operating costs. This is especially true during the recent recession – many agencies have cut service, laid off employees, and raised fares in an attempt to cover operating costs. It may make more sense in these cases for government subsidization to target operating losses instead of capital improvements.22 However, funding does not appear to be increasing in the wake of the recession. Only 10% of public transportation agencies expected an increase in local/regional funding in 2010, while 66% expected a decrease. Meanwhile, only 11% expected an increase in state funding while 56% expected a decrease.23 As a result, 69% of urban transit agencies expected budget shortfalls in 2011, indicating that these systems do not expect the current combinations of funding to adequately cover their costs.24 State and local funding may be more effective than federal funding because the dollars are more centralized. A system applying for federal funding does so at the expense of general taxpayers; however, a system applying for state and/or local funding does so at the expense of taxpayers closer to the system. As such, the requested funds may need to have more of an effect to satisfy the taxpayers because they can more easily see the results. If a system must raise funds to avoid a deficit, for example, local and state sources may be more willing to help on this account in order to keep the system running and equitable. This follows the idea of fiscal federalism, which states that providing services at more local levels “in turn improves the efficiency of the public sector by providing a better match between the public services people desire and the public services provided to them.”25 However, the federal government still gives larger funds that the state and local governments cannot afford to replace.

### States are much more important to mass transit funding

Gordon, 11 – Economic Analyst at Charles River Associates (Michael, “Funding Urban Mass Transit in the United States”, Boston College Economics Honor’s Thesis, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2007981, p. 23-24, 3-23-11)//AWV

Hess and Lombardi first provide a history of urban mass transit, noting important developments throughout the years and how they affected funding. They note that state approaches to funding urban mass transit often influence local government funding.77 Furthermore they find that “federal support has become proportionately less significant while local and state governments have grown increasingly responsible for transit’s operating and capital expenses.”78 They also discuss the importance of dedicated state and local taxes, in particular, local option transportation taxes (LOTTs). These LOTTs “include levies on sales, property, and income that often require voter approval but provide reliable and ongoing sources of revenue.”79 These dedicated funds provide a stable source of revenues for urban mass transit systems. Furthermore, Hess and Lombardi note the prevalent impact of politics on the funding and spending process. They write that politicians often prefer to contribute towards the more visible capital expenses instead of the more necessary operating expenses. Ideally, capital funding would improve efficiency so that operating funding becomes less necessary, but this is often not the case.80 Instead, funding capital expenses encourages overcapitalization and does not necessarily improve efficiency.81 Despite this overcapitalization, Hess and Lombardi then transition to note that some transit agencies have started using local funding to bypass the federal and state new starts criteria, which require years of planning.82 Overall, they find that local and state funding has and will become more relevant.83

### State funding is more efficient

Gordon, 11 – Economic Analyst at Charles River Associates (Michael, “Funding Urban Mass Transit in the United States”, Boston College Economics Honor’s Thesis, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2007981, p. 42-43, 3-23-11)//AWV

In spite of the large amount of federal funding, this finding implies that state and local funds are more efficient than federal funds, which could happen for a number of reasons. First, the idea of fiscal federalism states that a centralist federal government should have less control and influence than more localized sources because it is further removed from the system needs.140 The federal government may not know as well as more localized governments how to best use the funds, but it may attach restrictions to them anyways. Additionally, urban mass transit agencies often apply for federal funds for projects that they may not need. For example, the federal ARRA program funds capital improvements, while state and local sources may instead fund more necessary operating measures. Agencies may choose to apply for federal funds (e.g. ARRA) for projects simply because the funds are available, even if the agency would not undertake these projects otherwise.

### Federal funding is inefficient

Gordon, 11 – Economic Analyst at Charles River Associates (Michael, “Funding Urban Mass Transit in the United States”, Boston College Economics Honor’s Thesis, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2007981, p. 45-46, 3-23-11)//AWV

Including only total capital funding with a breakdown of operating funding levels produces similar results regarding levels of funding.144 Again, the federal operating funding term has a very large coefficient (2.146). This implies that the total federal funding term coefficient of the earlier regression is not greater than one solely due to capital funding considerations. This exemplifies that federal funding is also less effective than other levels of government at providing operating funding. An increase in one dollar of federal funding for operating expenses increases total expenses by over two dollars according to this regression, demonstrating that increasing federal funding would not help decrease urban mass transit agency deficits.

### States comparatively better for mass transit funding

Gordon, 11 – Economic Analyst at Charles River Associates (Michael, “Funding Urban Mass Transit in the United States”, Boston College Economics Honor’s Thesis, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2007981, p. 53, 3-23-11)//AWV

However, the federal government should continue to stay away from funding operating expenses unless it gives funds through the state and local governments in a similar proportional process. The state and local governments appear best equipped to handle operating funding. Local governments should continue to heavily fund operating expenses to ensure that the systems continue to operate, as urban mass transit systems provide an important service. State governments, however, must further consider equity concerns when funding the urban mass transit systems since often many of the state residents do not live near the systems and do not necessarily benefit from its operation. For example, citizens of western Massachusetts do not benefit greatly from continued MBTA operations in Boston. Yet, state dollars are extremely important to keep these systems running, and state funding reduces the deficit effectively.

### More ev – states comparatively better for mass transit funding

Gordon, 11 – Economic Analyst at Charles River Associates (Michael, “Funding Urban Mass Transit in the United States”, Boston College Economics Honor’s Thesis, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2007981, p. 54, 3-23-11)//AWV

Alternatively, the state could increase the gas tax to help fund urban mass transit. According to this study’s regressions, each additional dollar of funding from the gas tax would increase total expenses by less than one dollar, so this would reduce system deficits. It would also encourage substitution towards urban mass transit for automobile commuters, as driving to work would become increasingly expensive. Although data was unavailable for funding from tolling or congestion taxes, these would likely have similar results because of their substitutability. These may also solve equity problems better than a gas tax, which could apply to an entire state. Local gas taxes could be effective, but state tolling and congestion taxes would accomplish a similar goal while applying the burden to the urban commuters that could choose to use urban mass transit. For example, a congestion tax for vehicles entering Philadelphia could be earmarked for SEPTA, while an increase in the bridge tolls of Manhattan could raise additional funds for the MTA. Each of these would effectively raise funds for their urban transit systems while encouraging commuters to use these systems instead of driving. Local and state authorities should therefore focus on determining how to fund urban mass transit systems both efficiently and equitably. Local and state government funding is needed for the systems to survive day to day operations, as they have a better idea of how to help the systems. Meanwhile, the federal government should continue to fund capital projects, but it should require a certain percentage of state and local funding for these projects in order to make these governments choose projects responsibly.

### State aid for mass transit is already available

**Runde 11** (Al, “Urban Mass Transit Assistance”, Wisconsin Legislative Fiscal Bureau, January 2011,

State assistance is available to help finance transit systems in areas of the state with populations of 2,500 or more. Transit systems currently receiving state aid are primarily bus systems or shared-ride taxicab service systems. Shared-ride taxicab operators provide public transportation service, under contract, in areas of the state with insufficient population to support bus service. Kenosha also receives aid for its downtown trolley system.

## States CP – Greenhouse

### States can partner with businesses to reduce emissions from mass transit

Prum and Catz, 11- \* Assistant Professor, The Florida State University AND \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine (Darren and Sarah, “GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?” 51 Santa Clara L. Rev. 935, 979-980)//AWV

As part of our recommendations, we also expect the state and local governments to partner with businesses to lay the foundation for accomplishing both goals of encouraging mass transit and reducing greenhouse gas emissions. We believe a solution must utilize the strongest tools available to government through its ability to strategically fund projects and transit operations as well as exercise its authority over land use and zoning in ways that do not run afoul of the constitutional challenges presented by the commerce clause or preemption.

### State action on mass transit key to green transit

Prum and Catz, 11- \* Assistant Professor, The Florida State University AND \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine (Darren and Sarah, “GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?” 51 Santa Clara L. Rev. 935, 985-986)//AWV

Thus, a state and local government approach to land use and zoning must begin with strong enabling statutes that compel servient jurisdictions to address and incorporate strategies that advance transportation options. The approach also needs to simultaneously reduce greenhouse gases and encourage policymakers to find the correct mix of targeted incentives that motivate private developers to build transit- oriented communities that benefit the environment.

### Regional, state, and local policies are key to switch to green mass transit

Prum and Catz, 11- \* Assistant Professor, The Florida State University AND \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine (Darren and Sarah, “GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?” 51 Santa Clara L. Rev. 935, 986)//AWV

To accomplish the national and local goals of reducing greenhouse gas emissions through the transportation sector, government at all levels and industry must attempt to change course. Mass transit options are the most effective tools available to promote aggressive environmental policies within the transportation sector. However, the approach to mass transit requires new strategies and changes to long established processes. While the federal government appears as a late participant, many states have taken leadership positions to forge ahead towards a solution. The approaches taken by Florida and California to force local governments to directly evaluate and determine environmental impacts from transportation sources that require reductions in VMTs demonstrate that the dual goals are compatible. California takes these requirements a step further by monitoring compliance against identifiable targets. The approaches of both Florida and California show regulatory actions can start the process of identifying the best opportunities for mass transit alternatives and reducing greenhouse gas emissions. Likewise, the regional “cap-and-trade” initiatives demonstrate the willingness across international borders and amongst states to work collectively to affect climate change. While the current targets for decreasing greenhouse gas emissions mainly focus on electricity generators, the indirect benefit for some mass transit alternatives, such as fixed guideway systems, will also contribute.

### State programs modeled on the California program can shift ridership to mass transit to reduce greenhouse gases

Prum and Catz, 11- \* Assistant Professor, The Florida State University AND \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine (Darren and Sarah, “GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?” 51 Santa Clara L. Rev. 935, 951-952)//AWV

In other parts of the Scoping Plan, CARB supports the implementation of high-speed rail as approved by California voters in November 2008.86 The plan extrapolates the ridership projections that estimate between 86 and 117 million riders will switch travel modes by 2030, and forecasts the 2020 greenhouse gas reduction target based on its initial phase of San Francisco to Anaheim at 26 percent of the full system ridership.87 Consequently, CARB notes that the high- speed rail system will deliver more reductions in greenhouse gases over time as new lines are completed and as land use strategies are incorporated into this new infrastructure.88 Finally, the plan sets forth targets for medium and heavy-duty vehicles.89 The board points out that these vehicles account for about 20 percent of transportation- related greenhouse gas emissions.90 To achieve reductions in this area, the plan proposes tackling the issue by requiring retrofits of existing fleets and replacing current vehicles with new hybrid ones.91 The plan explains that the overall effect of the retrofits will lead to increased mileage performance and greater aerodynamic performance while reducing friction with the road.92 Moreover, by increasing the deployment of hybrid vehicles in transit situations, the greatest benefits will occur very rapidly due to the stop-and-go nature of these activities like picking up and dropping off passengers.93 Ultimately, the Scoping Plan is merely the beginning of the process, and represents a method for determining the plausibility of setting targets for different sources. By 2012, CARB will have issued extensive regulations for virtually every sector of California’s economy across all geographic regions that set forth specific actions for the reduction of greenhouse gas emissions. This undoubtedly will have a great impact upon the strategies for accomplishing mass transit objectives. Without the inclusion of a “state implementation plan,” however, AB 32 provides little overall change to the goal of reducing greenhouse gas emissions.94

## States CP – Urban Sprawl

### States can model Georgia’s GRTA to solve transit and land use issues

Pollard, 4’ – Senior Attorney and Director, Land and Community Program at Southern Environmental Law Center (Trip, “Article: Follow the money: transportation investments for smarter growth,” Temple Environmental Law & Technology Journal, Spring, 2004, 22 Temp. Envtl. L. & Tech. J. 155)//AWV

At the state level, a potential model for linking transportation, land use, and air quality planning is the Georgia Regional Transportation Authority (GRTA), a transportation "super-agency" that must approve state and local transportation investments in areas that violate air quality standards. GRTA's broad authority includes the power to veto regional transportation plans, build and operate public transportation systems, and to withhold transportation funds from large development projects. n55 Although it has yet to live up to its potential and has been hobbled by political changes, n56 GRTA nonetheless offers a promising new approach.

# \*\*Off-Case Links\*\*

## Spending Link

### Plan would cost a LOT of money

Fitzgerald et.al. ’10- professor and director of the graduate program in Law, Policy and Society and a Senior Research Fellow at the Kitty and Michael Kukakis Center for Urban and Regional Policy at Northeastern University (Joan, Granquist, Khatiwada, McLaughlin, Renner, “Reviving the U.S. Rail and Transit Industry: Investments and Job Creation”, WorldWatch Institute)//AWV

The Federal Transportation Administration’s 2010 National State of Good Repair Assessment estimates that $13.5 billion is needed to replace U.S. buses and $16.2 billion to replace U.S. railcars that have exceeded their useful life or whose conditions fall below the acceptable minimum threshold.23 To remedy the bus backlog and maintain the existing fleet, annual investments of $6.8 billion over six years would be needed, or a total of almost $41 billion. For rail, remedying the backlog and maintaining the existing fleet would require $5.8 billion annually over six years, or almost $35 billion. This combined investment of $76 billion would do nothing to actually expand bus and rail and meet the pent up demand for additional transit services. Addressing the needs for both maintenance and expanded service would require even further investments.

## Coercion Link

### Using federal tax dollars on mass transit makes people pay for services they don’t use

Gordon, 11 – Economic Analyst at Charles River Associates (Michael, “Funding Urban Mass Transit in the United States”, Boston College Economics Honor’s Thesis, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2007981, p. 28, 3-23-11)//AWV

Charles takes a different approach to the highway vs. transit funding debate. He writes that market-based reforms can solve the United States’ transportation funding problems. Charles uses the state of Oregon as an example and notes that it is unclear how much service actually costs because the government earns revenues through a “mishmash of fuel taxes, federal grants, payroll taxes, vehicle registration fees, and forest harvest receipts.”104 Additionally, because the system is centralized, tax money does not always support the area that it comes from. This forces people to “subsidize systems they don’t use.”105 As such, Charles recommends switching to an electronic tolling system that could adjust fees based on direction and time of day, which would reduce congestion.106 While this congestion pricing does not directly support transit, it would help solve one of the major problems with American public transportation through a different approach. Meanwhile, the urban areas could choose to use some of the tolling revenues to support urban mass transit.

## Carpooling CP

### Carpooling is very advantageous, and provides the same benefits as mass transit

Minett and Pearce, 11-Co-Founder and Managing Director, Trip Convergance Ltd (Paul and John, “Estimating the Energy Consumption Impact of Casual Carpooling”, Energy-Friendly Transportation, 1/14/11, http://www.mdpi.com/1996-1073/4/1/126)//LP

Introduction 1.1. Background The transportation sector is a significant user of energy. Encouragement of carpooling is one known strategy for reducing traffic that some suggest is second only to a driving ban in its potential for reducing energy use [1]. However, in Moving Cooler, An Analysis of Transportation Strategies for Reducing Greenhouse Gas Emissions, carpooling is discounted as being an expensive strategy, and given little emphasis [2]. The authors’ interest in traffic reduction had led them (in 2002) to hypothesize a high volume “express” carpooling solution that, when it happens, will look like “park-and-ride” but without the buses, using carpoolers’ own vehicles instead, leaving two thirds of the carpoolers’ vehicles in suburban parking lots, and carpooling either for the full trip to the employment destination or as a feeder to transit services. The key difference between the envisaged system and existing carpooling systems will be that the express carpooling system will involve no trip-by-trip pre-arrangement of rides. It will operate to high volume destinations on routes that are attracting lots of single occupant vehicle (SOV) drivers, and people will form fuller cars in the order they arrive at a convergence-point meeting-place [3]. Each meeting-place would serve in the order of 300 people each morning. Implementation of a large number of such routes would collectively make a measurable difference to the total traffic in a metropolitan area. This approach was found to resemble, to some extent, the casual carpooling systems which arose, apparently spontaneously, in Washington DC and in San Francisco, California, during the early 1970s, and had spread to Houston, Texas during the 1990s and which continue to operate successfully in all three cities. The approach also resembles, to some extent, the “park and share” concept in use in Ireland, parts of the UK, the US, and Canada, where “car pool parking” is provided as a meeting place for pre-arranged car pools. The authors had proposed to the Auckland Regional Council (ARC) that ARC support the introduction express carpooling in Auckland, and ARC had estimated the likely impact on local congestion costs. The ARC used the Auckland Traffic Model, and used as inputs the origins and destinations of 5000 SOVs that the authors predicted the system could take off the road (in 2500 three person carpools). The output from the model had suggested significant reductions in energy use by the remaining traffic [4]. A feasibility study is underway funded by the Transit IDEA program of the Transportation Research Board, entitled “Flexible Carpooling to Transit Stations”, developing a methodology for assessing the potential for express carpooling routes and developing an implementation proposal for one such route including estimates of the costs and benefits of such an implementation, but not including actual implementation [5]. 1.2. Objective of the Paper The authors’ objective in writing this paper was to find out if casual carpooling reduces final energy use, and if so by how much. The authors had been unable to find any evidence of such a calculation Energies 2011, 4 128 being carried out before, and many disputed their contention that this form of carpooling would in fact reduce total energy consumption. 1.3. Outline Section 2 reviews literature about casual carpooling and calculations of transportation energy consumption. Section 3 uses simple models to estimate the energy impacts of casual carpooling. Section 4 provides discussion and draws conclusions. 2. Literature and Research 2.1. Casual Carpooling A carpool is usually an ongoing arrangement amongst a group of individuals to regularly share rides for a particular purpose, often for traveling to work, using a car belonging to the driver. Carpooling systems typically involve “turn about” driving (each person taking a week in turn, for example), or sharing of costs. Establishing a carpool involves finding people with matching schedules and routes. Other criteria may also be considered, such as matching tastes in radio stations, preferences for smoking, or mixes of genders. There is a relatively long-term relationship between members of the carpool, which may involve two, three, or four people. Members must usually be ready at the agreed time and place to ride with the carpool, regardless of what else is happening. A casual carpool retains the feature of shared rides, but is very different in the way it is created. Casual carpooling systems (operating only in San Francisco CA, Washington DC, and Houston TX, and called “slug lines” in the latter two locations) are based around morning pick-up points. Riders queue at these pick-up points, as if they are waiting at a taxi stand. Drivers pick up the appropriate number of riders that allows them to access the 3+ high occupancy vehicle (HOV) lane to drive to the pre-determined destination. Many of the pick-up points are located in commuter parking lots. Pick-up points and destinations are “local knowledge”, or can be located using websites that have been developed for each of the systems [6,7]. When multiple destinations are served from a single pick-up point, drivers might call out their destination and the person at the front of the line might repeat it loudly for the rest of the line to hear [8]. The characteristics of these three casual carpooling systems are summarized in Table 1. A New Zealand Transport Agency review suggested implementation of casual carpooling as a strategy for managing transport challenges when oil prices rise [9]. Concern has been expressed that casual carpooling takes passengers from public transport, and that if casual carpooling did not exist there would be fewer cars on the road. This is supported by survey data from San Francisco in 1998 (2010 update in brackets) that found that, if casual carpooling were not available, 87% (90%) of riders would otherwise be public transport passengers, and 46% (77%) of drivers would switch to an alternative all or most of the time [10,11]. The following sections show that even with more cars on the road, total energy consumption is probably being reduced. Energies 2011, 4 129 Table 1. Casual Carpooling Locations and Characteristics [10–12]. Location Morning Pick-up Pts After-noon Pick-up Pts Average Daily Car-pools Per Pick-up Point Participants Per Day (Year of Last Report) Extent of Payment by Riders Washing-ton, DC 24 16 134 9689 (2006) Nil San Francis-co, CA 22 1 approx. 150 8000–10,000 (1999) 6800–8500 (2010) Some riders on some routes pay $1.00 or $1.25 towards cost of discounted bridge toll since July 2010 Houston, TX 3 1 100 approx. 900 (2007) Nil 2.2. Transportation Energy Consumption Calculations Estimating transportation energy consumption is very complex. This is largely because the range of relevant factors is extensive. Time of travel, mode of travel, costs of travel at different times of the day, options regarding parking, toll rates, the convenience of alternatives, friendliness of carpool partners (whether casual or otherwise), and the ebb and flow of everyone’s individual decisions leading to varying levels of congestion, will all have an impact. Further, every segment of road has characteristics that lead to different assumptions about traffic speed, and the combination of all the segments is a large modeling exercise. Such models exist. For example, the Auckland Regional Council has the Auckland Region Traffic (ART) Model. This is described as: “a fairly conventional four-step transportation demand model. It is a regional strategic model covering the whole of the Auckland Region urban area (population >1 million) with a relatively coarse zoning structure (203 internal zones) and having largely only the major arterial and motorway roading systems in its networks. It was designed to be sensitive to a range of urban dynamics and to undertake the investigation and evaluation of a range of regional transport policies and issues. It provides input to the development of regional transport plans and to regional urban form planning.” In 2005 the ARC had modeled the potential impact of 2500 three-person express carpools in Auckland, using the ART Model. The modeling assumed that the source of the 5000 carpool riders would be existing SOV drivers. It predicted trip-time savings of 8539 hours per peak period, an increase in average speed from 37.81 kilometers per hour (km/h) to 40.44 km/h, and a reduction in annual energy consumption of 9.5 million liters of fossil fuel, or about 4% of existing consumption levels. The results of this modeling have been compared with the amount of energy consumption that would be avoided by the participants themselves (about 2.5 million liters). Compared with “all SOV driving”, these results suggest reduced energy consumption by all the traffic (the express carpoolers and everyone else) in the order of four times the reduced energy consumption by the express carpoolers themselves [4].