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## 1AC

#### OBSERVATION ONE: THE STATUS QUO

#### THE RECENT TRANSPORTATION BILL GUTTED FUNDING FOR ACTIVE TRANSPORTATION

Jeff Levi, June 28, ‘12

Executive Director of TFAH, who also serves as Chair of the Advisory Group on Prevention, Health Promotion, and Integrative and Public Health, <http://www.marketwatch.com/story/trust-for-americas-health-statement-on-the-surface-transportation-bill-misses-the-opportunity-to-promote-active-transportation-and-improve-health-2012-06-28>, “Trust for America's Health Statement on the Surface Transportation Bill: Misses the Opportunity to Promote Active Transportation and Improve Health,” PR Newswire, ACC. 7-7-12, JT

"The agreement announced today on the surface transportation reauthorization bill will take our nation's transportation policy several steps backwards. In addition, the bill does not adequately fund active transportation programs, falling short of promoting activities known to keep people happy, healthy and productive.

By weakening review protections for new highway projects aimed at promoting transparency and public oversight of taxpayer dollars, this agreement makes it more difficult for local officials to have their voices heard in favor of protecting public safety and curbing harmful vehicular emissions.

In addition, the approach taken by this bill in reducing funding available for safe bicycle and pedestrian projections, the Safe Routes to School program, and other community projects aimed at promoting active transportation choices represents a failure to take advantage of the opportunity to ensure transportation policy achieves it mission and improves public health.

PLAN: The United State federal government will substantially increase investment in active transportation

### ADV.\_\_\_\_ECONOMY

#### THE U.S. ECONOMY IS HEADED FOR ECONOMIC COLLAPSE IN THE STATUS QUO

Snyder, 06/25

Michael Snyder (Undergraduate degree in Commerce from the University of Virginia and I have a law degree from the University of Florida law school. LLM from the University of Florida law school.) The Economic Collapse: Too Much Debt: Our Biggest Economic Problem. <http://theeconomiccollapseblog.com/archives/too-much-debt-our-biggest-economic-problem>. 06/25/2012. DA- 06/26/2012

Running up debt at a much faster rate than our GDP is rising is a recipe for national financial suicide. Our politicians continue to steal about 150 million dollars an hour from future generations and everybody just acts like this is perfectly normal. We are going down the same path that Greece, Portugal, Italy, Ireland and Spain have gone. In fact, we already have more government debt per capita than all of those nations do. Both political parties have been doing this to us, and it just keeps getting worse and worse. Incredibly, the national debt has grown more under Obama in less than 4 years than it did under George W. Bush during his entire 8 year term. Since Barack Obama entered the White House, we have accumulated more than five trillion dollars of additional debt. We are on the road to national financial oblivion, and most Americans don't seem to care. Debt From Sea To Shining Sea Now let's add up all the debt in the country. When you total up all household debt, business debt and government debt, it comes to more than 300% of our GDP.... In fact, if current trends continue we will hit 400% of GDP before too long. As you can see from the chart, there was a little "hiccup" during the last recession, but now the debt bubble is growing again. So how high can it go before the entire system collapses? Total credit market debt owed is roughly 10 times larger than it was about 30 years ago. How in the world did we accumulate 10 times more debt in just 30 years? If we do that again in the next 30 years, our total debt will be more than 500 trillion dollars in the 2040s. Unfortunately, that is the way that debt spirals work. They either have to keep expanding or they collapse. So will the U.S. debt spiral continue to expand? Or will we soon see a collapse? Sadly, this exact same thing is happening all over the world. The government debt to GDP ratio in Japan (the third largest economy in the world) blew past the 200% mark quite a while ago, and almost every country in the EU is absolutely drowning in debt. The world has never faced anything quite like this. There is way, way too much debt in the world, but the only way we can continue to enjoy this level of prosperity under the current system is to pile up a lot more debt. The western world is like a debt addict in a deep state of denial. Some debt addicts end up with dozens of credit card accounts. They will keep opening more accounts as long as someone will let them. Most debt addicts actually believe that they will be able to get out of the hole at some point, but most never do. Most Americans still believe that we are experiencing "temporary" economic problems that will eventually go away. Most Americans still believe that even greater prosperity is still ahead. Sadly, what the mainstream media and the two major political parties are telling them is a bunch of lies. We have enjoyed the greatest prosperity that we will ever see in the United States, and when the debt bubble bursts there is going to be an immense amount of pain. That is a very painful truth, but it is better to come to grips with it now than be blindsided by it later.

#### THE U.S. IS KEY TO THE GLOBAL ECONOMY

Ian C. Sayson and Jason Webb, June 22, 2012

<http://mobile.bloomberg.com/news/2012-06-22/emerging-stocks-fall-to-one-week-low-on-u-s-slowdown?category=>, Bloomberg, Emerging Stocks Fall to One-Week Low on U.S. Slowdown, ACC. 6-26-12, JT

“A U.S slowdown hits [emerging markets](http://mobile.bloomberg.com/topics/emerging-markets/) much harder,” Kit Juckes, head of currency research at Societe Generale SA in London, said in an e-mail. “The U.S. is the engine of global growth and therefore of commodities, raw materials and emerging- market assets. A lot of money may be taken off the table in emerging markets in a hurry.”

#### ADV.\_\_\_\_ECONOMY

#### THE PLAN IS AN IMMEDIATE AND LONG-TERM STIMULUS FOR THE ECONOMY

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

In times of economic hardship and fiscal constraint, investing in infrastructure for active transportation offers a highly affordable opportunity to create an immediate and long-lasting stimulus for our economy. Savings at the gas pump and reduced oil dependence, higher productivity of healthier workers and lower health care expenses, flourishing businesses and more valuable real estate, shorter commutes and reduced needs for road expansions are among the many economic benefits for us individually and as a nation.

#### SAVINGS FROM THE PLAN COULD FUND THE ENTIRE TRANSPORTATION BUDGET

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Assuming substantially increased growth of bicycling and walking, similar to conditions already present in cities like Minneapolis, New York, or Portland, nationwide benefits from fuel savings, congestion relief, health cost reductions, and reduced CO2 emissions would skyrocket to a magnitude approaching that of total federal surface transportation spending. Add to that the economic benefits in the form of increased real estate values and commercial activity, and it becomes apparent that federal investments in bicycle and pedestrian infrastructure and programs are one of the most cost-effective transportation policy interventions available.

#### Active transportation billions in savings and generates $1 million a day

Cohen 12

Larry, Founder and Executive Director of Prevention Institute, a non-profit national center dedicated to improving community health and equity, Prevention Institute, “Creeps and Weirdos: the auto industry agenda for keeping you on four wheels,” 2 February 2012, <http://www.nationofchange.org/creeps-and-weirdos-auto-industry-agenda-keeping-you-four-wheels-1328193397>, accessed 7/8/12, CD

And, despite what these ads would have you believe, biking and active transportation are a solid investment in health, communities and prevention. Bikes could save our nation as much as $3.8 billion a year by promoting physical activity, decreasing chronic disease and reducing healthcare costs. An increase to 15% active transportation in the Bay Area would result in 2,236 fewer deaths, and a gain 22,807 total years of life. Bike commuting costs as little as five cents per mile, reduces water and noise pollution, road wear and traffic congestion. In Portland OR—known for its biking culture—researchers found that bike-related industry contribute significantly to the local economy—providing somewhere between 850 to 1150 jobs and generating about $90 million a year. A new report shows that bikes saved Iowa $70 million in healthcare costs, and generate $1 million each day.

#### ADV.\_\_\_\_ECONOMY

#### Extinction

Kerpen 8

Phil, National Review Online, October 29, , Don't Turn Panic Into Depression, http://www.cbsnews.com/stories/2008/10/29/opinion/main4555821.shtml

It’s important that we avoid all these policy errors - not just for the sake of our prosperity, but for our survival. The Great Depression, after all, didn’t end until the advent of World War II, the most destructive war in the history of the planet. In a world of nuclear and biological weapons and non-state terrorist organizations that breed on poverty and despair, another global economic breakdown of such extended duration would risk armed conflicts on an even greater scale. To be sure, Washington already has stoked the flames of the financial panic. The president and the Treasury secretary did the policy equivalent of yelling fire in a crowded theater when they insisted that Congress immediately pass a bad bailout bill or face financial Armageddon. Members of Congress splintered and voted against the bill before voting for it several days later, showing a lack of conviction that did nothing to reassure markets. Even Alan Greenspan is questioning free markets today, placing our policy fundamentals in even greater jeopardy. But after the elections, all eyes will turn to the new president and Congress in search of reassurance that the fundamentals of our free economy will be supported. That will require the shelving of any talk of trade protectionism, higher taxes, and more restrictive labor markets. The stakes couldn’t be any higher.

### ADV.\_\_\_\_WARMING

#### A vast scientific consensus warming exists, and is human induced

Monbiot 7 – Professor @ Oxford

George, Professor @ Oxford Brookes University, Heat: How to Stop the Planet from Burning, pg. 5

But the link has also been established directly. A study of ocean warming over the past forty years, for example, published in the journal Science in 2005, records a precise match between the distribution of heat and the intensity of manmade carbon dioxide emissions. Its lead author described his findings thus: The evidence is so strong that it should put an end to any debate about whether humanity is causing global warming." This sounds like a strong statement, but he is not alone. In 2004, another article in Science reported the results of a survey of scientific papers containing the words 'global climate change." The author found 928 of them on the database she searched, 'None of the papers, she discovered, disagreed with the consensus position…Politicians, economists, journalists and others may have the impression of confusion, disagreement, or discord among climate scientists, but that impression is incorrect. In 2001 the Royal Society, the United Kingdom's pre-eminent scientific institution, published the following statement: Despite increasing consensus on the science underpinning predictions of global climate change, doubts have been expressed recently about the need to mitigate the risks posed by global climate change. We do not consider such doubts justified. It was also signed by the equivalent organisations in fifteen other countries."' Similar statements have been published by the US National Academy of Sciences, the American Meteorological Society, the American Geophysical Union" and the American Association for the Advancement of Science."

#### Now is the key time-slowing warming is key to avoid positive feedbacks

James E. Hanson, Head, NASA Goddard Institute, Testimony before House Select Committee on Energy Independnece and Global Warming, 6—23—08, www.columbia.edu/~jeh1/2008/TwentyYearsLater\_20080623.pdf

Fast feedbacks—changes that occur quickly in response to temperature change—amplify the initial temperature change, begetting additional warming. As the planet warms, fast feedbacks include more water vapor, which traps additional heat, and less snow and sea ice, which exposes dark surfaces that absorb more sunlight. Slower feedbacks also exist. Due to warming, forests and shrubs are moving poleward into tundra regions. Expanding vegetation, darker than tundra, absorbs sunlight and warms the environment. Another slow feedback is increasing wetness (i.e., darkness) of the Greenland and West Antarctica ice sheets in the warm season. Finally, as tundra melts, methane, a powerful greenhouse gas, is bubbling out. Paleoclimatic records confirm that the long-lived greenhouse gases— methane, carbon dioxide, and nitrous oxide—all increase with the warming of oceans and land. These positive feedbacks amplify climate change over decades, centuries, and longer. The predominance of positive feedbacks explains why Earth’s climate has historically undergone large swings: feedbacks work in both directions, amplifying cooling, as well as warming, forcings. In the past, feedbacks have caused Earth to be whipsawed between colder and warmer climates, even in response to weak forcings, such as slight changes in the tilt of Earth’s axis.2 The second fundamental property of Earth’s climate system, partnering with feedbacks, is the great inertia of oceans and ice sheets. Given the oceans’ capacity to absorb heat, when a climate forcing (such as increased greenhouse gases) impacts global temperature, even after two or three decades, only about half of the eventual surface warming has occurred. Ice sheets also change slowly, although accumulating evidence shows that they can disintegrate within centuries or perhaps even decades. The upshot of the combination of inertia and feedbacks is that additional climate change is already “in the pipeline”: even if we stop increasing greenhouse gases today, more warming will occur. This is sobering when one considers the present status of Earth’s climate. Human civilization developed during the Holocene (the past 12,000 years). It has been warm enough to keep ice sheets off North America and Europe, but cool enough for ice sheets to remain on Greenland and Antarctica. With rapid warming of 0.6°C in the past 30 years, global temperature is at its warmest level in the Holocene.3 The warming that has already occurred, the positive feedbacks that have been set in motion, and the additional warming in the pipeline together have brought us to the precipice of a planetary tipping point. We are at the tipping point because the climate state includes large, ready positive feedbacks provided by the Arctic sea ice, the West Antarctic ice sheet, and much of Greenland’s ice. Little additional forcing is needed to trigger these feedbacks and magnify global warming. If we go over the edge, we will transition to an environment far outside the range that has been experienced by humanity, and there will be no return within any foreseeable future generation. Casualties would include more than the loss of indigenous ways of life in the Arctic and swamping of coastal cities. An intensified hydrologic cycle will produce both greater floods and greater droughts. In the US, the semiarid states from central Texas through Oklahoma and both Dakotas would become more drought-prone and ill suited for agriculture, people, and current wildlife. Africa would see a great expansion of dry areas, particularly southern Africa. Large populations in Asia and South America would lose their primary dry season freshwater source as glaciers disappear. A major casualty in all this will be wildlife.

#### ADV.\_\_\_\_WARMING

#### These positive feedback loops ensure that climate change will be abrupt and rapid—like flipping a switch—and makes ice and wars inevitable

John Carey, 8—30—04, journalist, “Global Warming,” BUSINESS WEEK, p. 48.

More worrisome, scientists have learned from the past that seemingly small perturbations can cause the climate to swing rapidly and dramatically. Data from ice cores taken from Greenland and elsewhere reveal that parts of the planet cooled by 10 degrees Celsius in just a few decades about 12,700 years ago. Five thousand years ago, the Sahara region of Africa was transformed from a verdant lake-studded landscape like Minnesota's to barren desert in just a few hundred years. The initial push -- a change in the earth's orbit -- was small and very gradual, says geochemist Peter B. deMenocal of Columbia University's Lamont-Doherty Earth Observatory. ``But the climate response was very abrupt -- like flipping a switch.'' The earth's history is full of such abrupt climate changes. Now many scientists fear that the current buildup of greenhouse gases could also flip a global switch. ``To take a chance and say these abrupt changes won't occur in the future is sheer madness,'' says Wallace S. Broecker, earth scientist at Lamont-Doherty. ``That's why it is absolutely foolhardy to let CO2 go up to 600 or 800 ppm.'' Indeed, Broecker has helped pinpoint one switch involving ocean currents that circulate heat and cold (table, page 68). If this so-called conveyor shuts down, the Gulf Stream stops bringing heat to Europe and the U.S. Northeast. This is not speculation. It has happened in the past, most recently 8,200 years ago. Can it happen again? Maybe. A recent Pentagon report tells of a ``plausible...though not the most likely'' scenario, in which the conveyor shuts off. ``Such abrupt climate change...could potentially destabilize the geopolitical environment, leading to skirmishes, battles, and even war,'' it warns.

#### THE BEST WAY TO OFFSET CLIMATE CHANGE IS IMPROVING EFFICIENCY LIKE THE PLAN

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Climate change and oil dependence are among the biggest challenges we face. Some measures to overcome these problems could pose a serious burden on our economy and society as a whole. Others will offer great opportunities to improve our economic competitiveness and our overall quality of life. Bicycling and walking can significantly contribute to reducing oil consumption and CO2 emissions within the transportation sector. To minimize the economic costs of mitigating the impacts of climate change, it will be crucial to aggressively pursue the most cost-effective measures to reduce greenhouse gas emissions. Increased bicycling and walking are capable of achieving greenhouse gas reductions at no extra costs to the economy, because fuel savings alone will offset the investment costs, and additional benefits make it a “no regrets” strategy. Americans will demand a fiscally responsible approach to addressing climate change that achieves maximum results at minimal costs, which is why increasing bicycle and pedestrian use through investments in safe and convenient infrastructure should rank high on any list of measures we consider to reduce greenhouse gas emissions and our dependence on oil.

#### Bicycling and other forms of non-motorized transportation are vital to reducing emissions

McGrath 8

Patrick, Cascade Bicycle Club, 1/14/2008, Benefits of Bicycling Climate Change and Beyond, <http://www.adventurecycling.org/resources/benefitsofbicycling.pdf> TL

Unfortunately, we cannot rely completely on biofuels or plug-in hybrids to eliminate our transportation sector greenhouse gas emissions. That is because, in addition to vehicle efficiency and fuel type, emissions from America’s vehicle fleet are influenced by a third factor: the total amount of driving (also known as vehicle miles traveled or VMT). Together, these three factors are sometimes referred to as the “three-legged stool” of transportation carbon emissions. Clean cars shore up the first two legs (efficiency and, potentially, fuel type), but our stool collapses for weakness in the third; until every car on the road is 100% non-polluting, our collective rate of driving will influence the amount of carbon we emit. And Americans are driving more each year. Even if the United States immediately mandates aggressive fuel efficiency standards for the automobile industry, projected increases in VMT will likely overwhelm any resulting emissions reductions. This is the finding of Growing Cooler (3), an Urban Land Institute published review of recent transportation, development, and energy trends. The authors of Growing Cooler note that with decisive Congressional action the efficiency of the United States’ vehicle fleet could rise 12% by 2030, but that vehicle miles traveled are predicted to increase by 59% over the same period. If nothing is done to curb driving rates, CO2 from transportation sources will jump dramatically by 2030 – even with a cleaner vehicle fleet (see Figure 1). An effective solution must address all three legs of the stool. We need to embrace new technology but also look past it to plan for a reduction in the number of miles we drive. To do that, we will have to explore new approaches for how we plan for population growth and manage our transportation infrastructure. A successful response to global warming will involve the cultivation of compact neighborhoods and an empowerment of residents to choose transportation modes beyond the private automobile. Fortunately, there is a readily-available transportation mode that is well suited to the compact neighborhoods of the future. It is affordable and takes up little space. It addresses all three “legs” of the “stool,” emitting no pollution whatsoever and cutting driving rates. Parking is a breeze. It is the bicycle.

#### **Even Small reductions in emissions can slow global warming.**

Hansen 4

James Hansen Scientific American March 04 [http://planetforlife.com/gwarm/globpolitics.html accessed on 7/8/12](http://planetforlife.com/gwarm/globpolitics.html%20accessed%20on%207/8/12) SA

Politically, that’s the rub. As time slips by, our leverage over the problem melts away. Even small reductions in gas and aerosol emissions today forestall considerable warming and damage in the long run. In our view, the international community needs a leader, but the obvious nation for the job still has its head in the sand.

#### Acting now is key to avoiding tipping points

Strom 7 – Professor of Planetary Science @ U of Arizona

Robert Strom, studied climate change for 15 years, the former Director of the Space Imagery Center, Professor of planetary sciences @ U of Arizona, "Hot House", SpringerLink, p. 123

We do not have time to spare. We must act now. Delaying action will require a much greater effort later to achieve the same temperature target. Even a 5-year delay is significant, given the current increase in C02 emissions. If action is delayed 20 years, rates of emission reduction will need to be 3 to 7 times greater to meet the same temperature target (Schellnhuber et al., 2006). In the absence of urgent and strenuous reduction in greenhouse gas emissions, the world will be committed to at least a 0.5 to 2 °C rise by 2050, and it could be considerably more because of the factors mentioned earlier. None of the greenhouse gas or temperature projections take into account the possibility of crossing a threshold that leads to an abrupt climate warming by the catastrophic release of natural greenhouse gases or some other cause. Although this is considered unlikely, we do not know in detail how these abrupt changes are triggered. Could the rise of atmospheric greenhouse gases and the complex interactions of other warming conditions set one of these events into motion? We do not know, but if it happened we would be in the worst trouble imaginable.

#### Warming causes extinction

Tickell 2008 (Oliver Tickell, Climate Researcher, The Gaurdian, August 11, 2008, “On a planet 4C hotter, all we can prepare for is extinction”, http://www.guardian.co.uk/commentisfree/2008/aug/11/climatechange)

We need to get prepared for four degrees of global warming, Bob Watson told the Guardian last week. At first sight this looks like wise counsel from the climate science adviser to Defra. But the idea that we could adapt to a 4C rise is absurd and dangerous. Global warming on this scale would be a catastrophe that would mean, in the immortal words that Chief Seattle probably never spoke, "the end of living and the beginning of survival" for humankind. Or perhaps the beginning of our extinction. The collapse of the polar ice caps would become inevitable, bringing long-term sea level rises of 70-80 metres. All the world's coastal plains would be lost, complete with ports, cities, transport and industrial infrastructure, and much of the world's most productive farmland. The world's geography would be transformed much as it was at the end of the last ice age, when sea levels rose by about 120 metres to create the Channel, the North Sea and Cardigan Bay out of dry land. Weather would become extreme and unpredictable, with more frequent and severe droughts, floods and hurricanes. The Earth's carrying capacity would be hugely reduced. Billions would undoubtedly die.

### OBSERVATION TWO: SOLVENCY

#### THE FEDERAL GOVERNMENT SHOULD USE SUBSTANTIALLY MORE TRANSPORTATION INFRASTRUCTURE FUNDS TO BOOST ACTIVE TRANSPORTATION. THIS MAXIMIZES THE BENEFITS OF ALL STATUS QUO MODES, WHILE SAVING MONEY ON HEALTH CARE AND REDUCING OIL DEPENDENCE AND CO2

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Federal transportation spending did not support bicycle and pedestrian projects until the early 1990s, totaling only $4.5 billion by 2007.(74) Not until the year 2000 did federal spending for bicycling and walking grow to more than $1 per resident per year. For highways, in contrast, average federal spending was over $100, and total spending nationwide over $400 per resident every year for over 50 years, or a total of $5 trillion (federal, state and local, in 2006 dollars).(63) The $4.5 billion dollars in federal funding to date for bicycling and walking, approximately one thousand times less than total nationwide highway funding over time, is far from sufficient to make up for the historic neglect of bicycling and walking. Just like the building of the interstate highway system, offering Americans the choice not to drive will require significant, sustained and focused investment in bicycle and pedestrian infrastructure.

It is in our national interest to fund our mobility needs in a manner that provides the greatest benefits to Americans for each tax dollar. Consequently, active transportation should be a higher federal priority for two reasons:

1. An increased share of federal transportation dollars devoted to bicycling and walking would achieve greater transportation benefits than spending the same dollars on highway infrastructure, and would maximize the return from our investment in public transportation by facilitating convenient access to trains and buses.

2. Federal dollars spent on active transportation will yield additional social benefits beyond mobility that will save taxpayers millions of dollars and improve quality of life across the United States. Increased use of active transportation will result in substantial savings in health care expenditures, lessen our oil dependence and reduce climate emissions. Continued overreliance on automobiles, on the other hand, would exacerbate these same problems.

#### FEDERAL INVESTMENT IN ACTIVE TRANSPORTATION IS A RESPONSIBLE TRANSPORTATION POLICY THAT MAXIMIZE RETURNS AND IMPROVES THE QUALITY OF LIFE

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

The enormous benefits from bicycling and walking justify federal expenditures at least several times greater than the status quo. Investment in bicycle and pedestrian infrastructure is a highly cost-effective means for meeting a sizable portion of our transportation needs, while positively contributing to the solution of important problems—such as oil dependence, climate change, and the obesity epidemic—that have been exacerbated by past transportation policies.

Given the great return on investment from active transportation, fiscally responsible federal transportation policy must strive to maximize the amount that Americans bicycle and walk. Given all the measurable and immeasurable benefits of bicycling and walking for the nation as a whole, as well as the improvement of individual quality of life, it becomes indisputable that Americans deserve the option of active transportation. It is time to give each American the choice to bicycle or walk by providing safe and convenient infrastructure that connects the places where we live, work, shop, learn and play.

#### ACTIVE TRANSPORTATION WILL GET PEOPLE TO SWITCH—IT’S THE BEST ALL-IN-ONE PACKAGE

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Half of the trips in America can be completed within a 20-minute bike ride, and a quarter of trips are within a 20-minute walk. Yet, the vast majority of these short trips are taken by automobile. Bicycling and walking can also improve public transportation by providing fast and well-planned access to it. Given the availability of safe and convenient infrastructure, more people will choose bicycling or walking for short trips and in combination with public transportation for longer trips. Further, communities conducive to bicycling and walking promote a richer and denser mix of residences and businesses, leading to shorter trip distances, even for those who drive.

But the advantages of bicycling and walking reach beyond transportation alone. Savings in fuel costs, a smaller carbon foot print, and a practical way to achieve recommended levels of physical activity are among the benefits that make active transportation an irresistible all-in-one package.

## Inherency – Transpo Bill

#### New transportation bill bad for biking

Laing 12

(Keith, Congressional reporter for The Hill, The Hill, 6/28/12, <http://thehill.com/blogs/transportation-report/highways-bridges-and-roads/235427-bicyclists-oppose-bad-bill-for-biking-and-walking-in-highway-funding-compromise>,

“Bicyclists oppose 'bad bill for biking and walking' in highway funding compromise” 7/2/12, CD)

The agreement reached by lawmakers this week on a $105 billion surface transportation bill is a "bad bill for biking and walking," a bicycle advocacy group said Wednesday. The America Bikes coalition said the agreement that was negotiated by the House and Senate after a two-month conference would cut funding for biking and pedestrian programs by 60 to 70 percent because it would allow states to opt out of spending money in the highway bill on things other than roads and transit. Democrats on the conference committee framed the opt-out provision of giving more control over bike and pedestrian funding to local governments, but America Bikes argued Thursday that the compromise "allows states to opt-out of half of the funds potentially available for small-scale biking and walking projects. "Whereas the bipartisan Senate bill allowed local governments and planning entities to compete for 1 percent of transportation funds, the new bill allows states to opt-out of the local grant program completely," the coalition said in a post on its website. The group also complained that the transportation compromise combines several biking and pedestrian program into a single "transportation alternatives" program. The decision "drastically" reduces funding that would have been available under the Senate's original $109-billion proposal for the transportation bill, America Bikes said. "Eligibilities such as road uses and environmental mitigation have been added to Transportation Alternatives, making it harder for local communities to compete for funding for local biking and walking projects," the group said. "This two-year bill represents a major step backwards in transportation policy for transportation choices and healthy physical activity." Lawmakers are reviewing the conference committee's report on the transportation bill, which was released early Thursday morning. They have until Saturday to approve the measure in both chambers of Congress before the scheduled expiration of the current funding for transportation projects

#### The recent transportation bill eliminated all dedicated funding for bicycling and walking paths- eligibility isn’t enough.

Bike League 11

(“Why “Eligibility” Isn’t Enough: The case for dedicated bicycle and pedestrian funding in the federal transportation bill” 7/26/11. Accessed 7/2/12. <http://www.bikeleague.org/resources/reports/pdfs/eligibility_isnot_enough.pdf>) WK

Representative John Mica (R‐FL), chairman of the House Transportation and Infrastructure Committee, recently introduced an outline of his proposed transportation bill. The proposal eliminates all dedicated funding for bicycling and walking – programs such as transportation enhancements, recreational trails and safe routes to schools program – and maintains “eligibility” for these activities only if states choose to spend their funds on these kinds of activities and these meet [undetermined] performance measures and are in the national interest. As supporters of these programs attempt to preserve dedicated funding for bicycling and walking, they may well hear an argument along the lines of “don’t worry, these are still eligible activities, so if States think they are important they will continue”. While it is true that basic eligibility for federal transportation funds is important (it at least removes the argument that “we aren’t allowed to use these funds for bicycling and walking projects”), all the evidence of the past 20 years and beyond suggests that mere eligibility is totally insufficient: most states will simply stop spending any of their Federal transportation funds on anything related to bicycling and walking.

## Inherency – Transpo Bill

#### The recently passed transportation bill has curtailed bicycle and pedestrian projects, and the projects it kept had 1/3 of their funding cut

Higashide 7/2/12

(Steven Higashide, Federal Advocate; holds a Masters in Urban Planning from NYU, “Federal Transportation Bill a Disappointment, Leaving States to Take Up Mantle of Reform” 7/2/12. Accessed 7/2/12. <http://blog.tstc.org/2012/07/02/federal-transportation-bill-a-disappointment-leaving-states-to-take-up-mantle-of-reform/>) WK

Among the most disappointing aspects of the bill is its treatment of the small federal programs that fund pedestrian and bicycle projects. The Transportation Enhancements, Safe Routes to School, and Recreational Trails programs are combined into a new “Transportation Alternatives” program that cuts funding by about a third ($1.1 billion went to these three programs last year; under MAP-21 $750 million will go to these projects in the new program). The bill sends half of the funding from this program directly to metropolitan planning organizations (MPOs), an improvement over current law because MPOs are generally more responsive to local needs. However, the bill makes the other half of this funding optional, allowing states to “opt out” of the program. Currently, less than 3% of federal transportation funding is dedicated for pedestrian and bicycle projects, and local communities rely on these small programs to improve safety and promote economic development.

#### The Transportation bill slashed funding for bicycle and walking programmes by 70%

Reid 7/1/12

(Carlton Reid, Executive Editor for bikebiz.com, “US politicians slash bike funding” 7/1/12. Accessed 7/2/12. <http://www.bikebiz.com/news/read/us-politicians-slash-bike-funding>) WK

The US House and Senate has approved a three-year transportation bill which maintains current funding for building major highways but the cash for "transportation enhancements" - such as cycling and walking programmes - has been cut by up to 70 percent. The Safe Routes to School programme has been eliminated completely. A majority of US politicians wanted to see bike funding reduced from $790m to zero but had to compromise on savage cuts instead. In March, 800 US cycle advocates at the National Bike Summit had lobbied politicians to maintain federal funding for bicycle projects. Industry folks joined advocates and all were keen to stress that more bicycling equals more bikes sold, more jobs, more tax revenue and less reliance on the healthcare system (this last point piques the interest of even hardened libertarians). However, as John Burke, president of Trek, reports on his blog, cycling will no longer get a "fair shake in the transportation bill". He said industry and advocacy lobbying had failed: "we lost". Burke said the fight goes on: "Bicycles are a simple solution to congestion problems, energy dependence, environmental issues, and health issues. We have won a lot of battles over the last 15 years and while we lost a big one this week, we will be back. Lesson learned, if everyone who really cared about making America a cycling friendly country got involved, we would have easily won this battle. Too many people sat on the sidelines and as a cause we need to be better organized next time around. We will be.

## Inherency – Transpo Bill

#### The Transportation bill cuts funding for bicycle and pedestrian projects by hundreds of millions of dollars

Lovaas 6/29/12

(Deron Lovaas, Federal Transportation Policy Director, Washington, D.C., “Congress Takes Up a Throwback Highway - Not Transportation – Bill” 6/29/12. Accessed 7/2/12. <http://switchboard.nrdc.org/blogs/dlovaas/congress_takes_up_a_throwback.html>) WK

The bill also discards commitments to other transportation options for passenger and goods movement. It cuts dedicated funding for bicycle and pedestrian projects by hundreds of millions of dollars and allows highway agencies to transfer the remainder under certain conditions. It removes a rail title written into the Senate bill, including planning for rail as a viable alternative to highways. Looking to the cutting room floor, we see that the Senate also conceded flexibility to use transit funding for operating expenses and parity between parking and transit commuter benefits. A focus on rail and transit are priorities of the OneRail coalition (of which I am a member) To add insult to injury, state planning improvements included in the Senate bill that would have improved management of their programs, provisions based on recommendations from the Bipartisan Policy Center, as well as a requirement that road designs accommodate those of us who walk and bike (see here for details), were cut out as well. These last were not as robust as I’d like them to be, but I guess highway agencies and contractors considered it too much of an imposition to show they’re improving performance of the system funded by our federal taxpayer dollars. Another set of wins for highway agencies and contractors less interested in accountability and transportation choices than in paving.

#### Current infrastructure is the root to many problems

CDC ‘12

Centers for Disease Control and Prevention, http://www.rictc.org/platform/resources/reports-files/transportation%20and%20public%20health%20policy%20recommendations%20from%20the%20cdc.pdf, “Transportation and Public Health Policy Recommendations,” Accessed 7/2/12. CD

The current U.S. transportation infrastructure focuses on motor vehicle travel and provides limited support for other transportation options for most Americans. As a result: 􀂃 Opportunities for physical activity and active transport continue to decline; lack of physical activity is a major contributor to the steady rise in rates of obesity, diabetes, heart disease, stroke, and other chronic conditions in the U.S. 􀂃 Motor vehicle crashes continue to be the leading cause of injury death for most Americans, and pedestrians and bicyclists are at an even greater risk of death from crashes than those who travel by motor vehicles. 􀂃 Many Americans view bicycling and walking within their communities as unsafe because of traffic, the lack of sidewalks, crosswalks and bicycle lanes/paths. 􀂃 A lack of efficient alternatives to automobile travel disproportionately affects vulnerable populations such as the poor, the elderly, and children, by limiting access to jobs, health care, social interaction, and healthy foods. 􀂃 Air pollution from motor vehicles has contributed to the degradation of our environment and adverse respiratory and cardiovascular health effects. The transportation sector also accounts for approximately one-third of all U.S. greenhouse gas emissions contributing to climate change.

## SOLVENCY ADVOCATES

#### FEDERAL INVESTMENT IN ACTIVE TRANSPORTATION ENCOURAGES USE & IMPROVES HEALTH

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

An increasing number of Americans have been voting with their feet to increase the use of active transportation. A quiet trend of increased bicycling and walking has been building for years among those seeking an affordable, healthy, clean and enjoyable way to get around. This trend has rapidly accelerated in the past year in response to the high costs of driving. The trend has been most pronounced in communities that have already invested in systems to facilitate safe and convenient bicycling and walking.(1, 2) Because few communities have had sufficient resources to build truly functional active transportation systems, most Americans have been left standing on the sidelines looking for safer and more convenient ways to join this movement. The pent-up demand for safe and convenient places to bicycle and walk will only be satisfied by concentrated federal investments in coherent networks of bicycle paths, trails, sidewalks and other facilities. Just as our nation invested in the interstate system and extensive road networks during the past half century, our current era of concern over oil dependence, traffic congestion, climate change, and rising obesity rates calls for creating a new balance in which mobility for every American is convenient, safe, affordable, and last but not least, enjoyable. Those Americans privileged to live in communities that accommodate bicyclists and pedestrians appreciate their built environment. Health is improved; stress levels are reduced. Streets have become places where people meet on a human scale. Commutes create a relaxing end to workdays, and active transportation can save people the challenge of making time to stay fit. While this report quantifies many of the benefits of active transportation, it is impossible to put a price tag on the increases in quality of life generated from the opportunity to ride a bicycle or walk. The only way to value this aspect of active transportation sufficiently is to provide all Americans with the opportunity to find out for themselves.

## SOLVENCY – PLAN IS COMPARATIVELY CHEAP

*\*ALSO SEE SPENDING ANS.*

#### FEDERAL INVESTMENTS INACTIVE TRANSPORTATION ARE COMPARATIVELY INEXPENSIVE. PORTLAND PROVES ONLY $57 MILLION CAN YIELD ALMOST $4 BILLION IN SAVINGS

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

According to the Federal Highway Administration, the basic cost of a single mile of urban, four-lane highway is between $20 million and $80 million. In urban bottlenecks where congestion is the worst, common restrictions such as the high costs of right of ways and the needs to control high traffic volumes can boost that figure to $290 million or more.(27)

By contrast, the costs of bicycle and pedestrian facilities range anywhere from a few thousand dollars per mile to rarely more than $1 million, with great variability between types of infrastructure local circumstances.(29)

Portland, Ore., has developed a network of bicycle infrastructure at an average per mile cost of $300,000, with bicycle boulevards and lanes at a fraction of that cost ($30,000 to $40,000 per mile). The cost of one mile of sidewalk is about $100,000.(68) Multi-use trails typically cost between $50,000 and $300,000 per mile, depending on acquisition costs of rights-of-way and the surface material used.(69, 70) Similarly, the costs for a bike rack that parks two bikes, about $200, is dwarfed next to the costs of car parking at $3,500 to $12,000 for each space of surface parking and $10,000 to $31,000 for each space of garage parking.(30)

That doesn’t mean that we can stop investing in road infrastructure and only build bike paths instead. But it becomes clear how wasteful it is to focus almost exclusively on road infrastructure when it would be much more cost-effective to meet some of our mobility needs through bike or pedestrian infrastructure.

Dozens of communities across the country are ready to start building or expanding their bicycle and pedestrian infrastructure. Investments comparable to the cost of a single mile of urban highway can significantly alter the landscape for bicycling and walking in a mid-sized city.

Portland’s investments in bicycling infrastructure of $57 million in total have helped city residents drive less than average Americans, resulting in a savings of $2.6 billion in travel and time and redirecting more than $800 million to their local economy every year.(71)

## SOLVENCY – INVESTMENT = USE / SWITCH

#### EMPIRICALLY, FEDERAL INVESTMENT SPURS USE AND REDUCES CO2

[JEFF MCINTIRE-STRASBURG](http://sustainablog.org/author/jeffmcintirestrasburg/), MAY 4, 2012

<http://sustainablog.org/2012/05/bike-paths-sidewalks/>, “Bike Paths and Sidewalks: Transportation Investments that Work,” ACC. 6-30-12, JT//JEDI

A [new report out from the Federal Highway Administration](http://www.fhwa.dot.gov/environment/bicycle_pedestrian/ntpp/2012_report/page00.cfm) shows that these investments do work, though: essentially, build it and they will come. The [Nonmotorized Transportation Pilot Program](http://www.fhwa.dot.gov/environment/bikeped/ntpp.htm) started in 2005 in four communities: Columbia, MO; Marin County, CA; Minneapolis, MN; and Sheboygan County, WI. Each community received $25 million dollars to build biking and walking infrastructure: bike paths and lanes, sidewalks, trails, etc. According to [Secretary of Transportation Ray LaHood](http://fastlane.dot.gov/2012/05/bike-month.html), those investments produced some impressive numbers:

Over four years, people in these four communities alone walked or bicycled an estimated 32 million miles they would have otherwise driven;

The communities saw an average increase of 49 percent in the number of bicyclists and a 22 percent increase in the number of pedestrians;

The percentage of trips taken by bike instead of car increased 36 percent, and those taken on foot increased 14 percent; While each pilot community experienced increases in bicycling and walking, fatal bicycle and pedestrian crashes held steady or decreased in all of the communities; and

The pilot communities saved an estimated 7,701 tons of CO2 in 2010.

People will use bike lanes if they’re available

Good Cities News 12

(Good Cities News: If You Build Bike Lanes They Will Ride. <http://www.good.is/post/if-you-build-bike-lanes-they-will-ride/>. 04/27/2012. DA- 07/01/2012. AW)

Science has verified something that may appear obvious at first glance: The direct connection between the presence of bike lanes and the number of bike commuters. The more infrastructure exists to encourage biking, the more people bike—and the more society reaps the public health, energy, and lifestyle benefits that come with an increasing share of people-powered transportation. Beyond the availability of bike friendly-infrastructure, other hypotheses explain why people bike more or less—whether a city is wet or dry, hot or cold, has high gas prices, is densely constructed or sprawling, is populated with young or old people. All of these variables play some role in motivating people to get on two wheels, but until now, we didn’t have a good sense of which was the most important. A new study [PDF] of 90 of the 100 largest cities in the U.S. helps answer the question of what makes a city bicycle-friendly—and it turns out that the most important factor affecting the number of cyclists is the prevalence of bike paths.

#### Infrastructure investment in active transportation key to increase use

Dill 9

(Jennifer, Ph.D., is an associate professor in the Nohad A. Toulan School of Urban Studies and Planning at Portland State University, Journal of Public Health Policy, 2009, http://www.palgrave-journals.com/jphp/journal/v30/nS1/pdf/jphp200856a.pdf, “Bicycling for Transportation and Health: The Role of Infrastructure,” Accessed 7/2/12, CD)

The study demonstrated that bicycling for transportation can be used by adults to meet the recommendations for daily physical activity. A supportive environment, like that found in the Portland region, appears necessary to encourage bicycling for everyday travel, allowing more adults to achieve active living goals. The first part of that environment is bicycle infrastructure that addresses people’s concern about safety from motor vehicles. In Portland, this includes a network of bike lanes, paths, and boulevards. Building such a network requires a comprehensive plan, funding, and political leadership. In Oregon, state law requires that both bicycle and pedestrian infrastructure be built whenever roads are built or rebuilt (with few exceptions), and that cities, counties, and the State spend a reasonable share of their state highway funds, usually defined as 1%, on pedestrian and bicycle features. A network of different types of infrastructure appears necessary to attract new people to bicycling. Simply adding bike lanes to all new major roads is unlikely to achieve high rates of bicycling. For people concerned with safety and avoiding traffic, a well-connected network of low-traffic streets, including some bicycle boulevards, may be more effective than adding bike lanes on major streets with high volumes of motor vehicle traffic. Opportunities to build separate paths are often limited in existing neighborhoods due to space constraints and costs. Public agencies can, however, look for such opportunities when building other infrastructure, such as new rail transit lines, along existing transportation corridors, and when expanding to new undeveloped areas. Finally, the role of bike lanes should not be dismissed in planning for a bicycle-friendly community. A disproportionate share of the bicycling occurs on streets with bike lanes, indicating their value to bicyclists. These facilities may provide important links in the network, connecting neighborhoods when low-volume streets cannot.

## SOLVENCY – INVESTMENT = USE / SWITCH

#### GIVEN THE CHOICE, THE PUBLIC WILL SWITCH

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Provided there are viable alternatives to driving, Americans are willing to change their travel habits, as the dramatic increases in gas prices in 2008 have shown. Every day, more commuters switch to public transportation, bicycling and walking in places where prior infrastructure investments have made these options safe and convenient. In a 2006 survey, the federal Non-motorized Transportation Pilot Program found that 28 percent of trips in Minneapolis, Minn., involve bicycling or walking.(23) Prior investment in urban trails and public transportation created the conditions to make this impressive use of active transportation possible. The Nonmotorized Transportation Pilot Program and high gas prices have combined to build on this success. In the summer of 2008, automatic counts of bicyclists on the Minneapolis Midtown Greenway showed a 30 percent increase over the same months in the previous year.(2)

#### More bike lanes means more riders

Fernholz, 12

Tim, Good Cites, 4/12/12, <http://www.good.is/post/if-you-build-bike-lanes-they-will-ride/>, If ou Build Bike Lanes They will Ride, 7/3/12, CD

Science has verified something that may appear obvious at first glance: The direct connection between the presence of bike lanes and the number of bike commuters. The more infrastructure exists to encourage biking, the more people bike—and the more society reaps the public health, energy, and lifestyle benefits that come with an increasing share of people-powered transportation. Beyond the availability of bike friendly-infrastructure, other hypotheses explain why people bike more or less—whether a city is wet or dry, hot or cold, has high gas prices, is densely constructed or sprawling, is populated with young or old people. All of these variables play some role in motivating people to get on two wheels, but until now, we didn’t have a good sense of which was the most important. A new study [[PDF](http://policy.rutgers.edu/faculty/pucher/bikepaths.pdf)] of 90 of the 100 largest cities in the U.S. helps answer the question of what makes a city bicycle-friendly—and it turns out that the most important factor affecting the number of cyclists is the prevalence of bike paths. That makes sense to me: When I lived in Washington, D.C. last year, I rode my bike to work and nearly everywhere else, despite the city’s crushing summer humidity and chilly winters. Now that I’ve moved to Los Angeles, which boasts temperate weather basically every day, I barely ride at all—the absence of road shoulders, much less real cycle paths, makes bike commuting here a rather dicey prospect. Indeed, depending on how you judge what [makes a city best](http://www.good.is/post/where-do-people-walk-and-bike-the-most-it-s-not-where-you-think/) for cycling, it’s often the colder ones that win out: Frozen Minneapolis [is one of the best](http://www.bicycling.com/news/featured-stories/1-bike-city-minneapolis) biking cities, thanks to well-built infrastructure and a bike share system. Rainy Portland continues to have the largest percentage of its population commuting by bike, a fact that should continue to shame city managers whose polities stay pleasant all year round. Still, Portland’s 4.2 percent of commuters biking [is nothing](http://www.washingtonpost.com/blogs/ezra-klein/post/want-more-bikers-build-more-bike-lanes/2012/04/16/gIQAcVQQLT_blog.html?wprss=rss_ezra-klein) compared to Copenhagen’s 37 percent. Reaching that level of bicycle penetration in American cities would have numerous positive effects for society, and judging by this study, demands increased investment in the bike lanes that will bring cyclists out in droves. It’s also an opportunity to kill two birds with one stone: It turns out that building bike lanes actually [employs more people](http://www.good.is/post/building-bike-paths-is-great-for-the-economy/) than projects like road resurfacing, since it is labor-intensive, not machine-reliant, business. In cities where NIMBY activists and budget cuts are raising the political cost of laying bike lanes, the employment argument is a powerful case for additional investment. on top of all the other benefits that come with bike commuting. Less traffic for folks who stay in fossil fuel vehicles is part of the argument, too. With this research in hand, the prescription for cities is clear: Want bikes? Build lanes.

## SOLVENCY – INVESTMENT = USE / SWITCH

#### HALF THE TRIPS WE TAKE EVERYDAY COULD BE DONE ON BIKES OR WALKWAYS. THE PLAN CAN CAUSES AT LEAST A 25% SHIFT

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

This report provides quantitative assessments and an overall estimation of the monetary value of the benefits of current and future bicycling and walking in the United States. The main premise of these calculations is that short trips of three miles or less, which currently make for about half of all trips taken in the United States, can, to some extent, be shifted from driving to bicycling and walking. This report does not quantify the costs of investment necessary to achieve future increases in bicycling and walking nationwide, but based on ample local experience,(1–5) costs would be relatively low compared to the resulting benefits. Benefits from bicycling and walking are quantified in the areas of transportation, oil dependence, climate change, and public health. Benefits are quantified for the Status Quo (Mode share 9.6 percent), and for prospective increases in bicycling and walking under a Modest Scenario (13 percent) and a Substantial Scenario (25 percent) for the future. The Status Quo is exclusively based on direct benefits from short bicycling and walking trips, while the future scenarios in addition include secondary benefits from increasing the bicycling and walking mode share relative to the Status Quo.

#### IT WE MAKE IT SAFE, THEY WILL RIDE

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

For decades, governments have neglected the need for bicycle and pedestrian infrastructure. Further, the volume and speed of motorized traffic in many places has reached levels that make it difficult and dangerous to ride a bicycle or walk. But in those communities that provide access to convenient and safe facilities for bicycling and walking, people use them by the thousands.(1, 2, 8)

#### Investments in bike infrastructure results in increased riding

McGrath 8

Patrick, Cascade Bicycle Club, 1/14/2008, <http://www.adventurecycling.org/resources/benefitsofbicycling.pdf> Benefits of Bicycling Climate Change and Beyond, TL

When cities build multiuse paths and bicycle lanes, people use them. That is the finding of a series of studies in recent years, beginning with Nelson and Allen’s aptly-name study If You Build Them, Commuters Will Use Them (9). The authors found that every new mile of bikeway per 100,000 people is associated with a .069 percent increase in bicycle commuting, though they stopped short of interpreting the correlation as a cause-effect relationship. More recent investigations by Dill and Carr (10) and Barnes (11) strengthen the case that bike lanes lead to more people riding more often. Both studies found significant increases in bicycle traffic where facilities were installed. In fact, bikeways have been found to stimulate riding beyond the facilities themselves; Krizek and Barnes found increased bike trips up to 1.5 miles from the ends of recently installed bikeways (12). Conversely, it appears that the installation of new automobile capacity can depress walking, biking, and transit rates (13). Bicycle lanes have benefits beyond merely stimulating riding. They contribute to more traffic flow (14), are liked by cyclists (15), and create a safer riding environment (16).

## SOLVENCY – INVESTMENT = USE / SWITCH

#### People will use bike paths if available

Good Cities News, ‘12

Good Cities News: If You Build Bike Lanes They Will Ride. <http://www.good.is/post/if-you-build-bike-lanes-they-will-ride/>. 04/27/2012. DA- 07/01/2012. AW

Science has verified something that may appear obvious at first glance: The direct connection between the presence of bike lanes and the number of bike commuters. The more infrastructure exists to encourage biking, the more people bike—and the more society reaps the public health, energy, and lifestyle benefits that come with an increasing share of people-powered transportation. Beyond the availability of bike friendly-infrastructure, other hypotheses explain why people bike more or less—whether a city is wet or dry, hot or cold, has high gas prices, is densely constructed or sprawling, is populated with young or old people. All of these variables play some role in motivating people to get on two wheels, but until now, we didn’t have a good sense of which was the most important. A new study [PDF] of 90 of the 100 largest cities in the U.S. helps answer the question of what makes a city bicycle-friendly—and it turns out that the most important factor affecting the number of cyclists is the prevalence of bike paths.

#### STUDIES PROVE AT LEAST A 20% SHIFT TO ACTIVE TRANSPORTATION

Pucher, Et al, ‘10

John Pucher, Bloustein School of Planning and Public Policy, Rutgers Univ., Jennifer Dill, Toulan School of Urban Studies and Planning, Portland State Univ., Susan Handy, Dept. of Environmental Science and Policy, Univ. of California, “Infrastructure, programs, and policies to increase bicycling: An international review,” Preventive Medicine 50 (2010) S106–S125, JT

Most of the aggregate-level studies found a positive and statistically significant relationship between bike lanes and levels of bicycling, whereas the individual-level studies had mixed findings. A cross-sectional study at the city level of over 40 US cities found that each additional mile of bike lane per square mile was associated with an increase of approximately one percentage point in the share of workers regularly commuting by bicycle (Dill and Carr, 2003). A study of Seattle, Washington residents found no relationship between the presence of a bike lane (objectively measured) and the odds of bicycling, but did find that being near a path mattered. For example, people living within a half-mile of a path were at least 20% more likely to bicycle at least once a week, compared to people living between one-half and one mile away from a path (Vernez-Moudon et al., 2005).

#### People are willing to change transportation habits given the choice

Rails to Trails, 08

Rails to Trails Conservatory: Active Transportation for America. <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>. 2008. DA- 07/03/2012.

Provided there are viable alternatives to driving, Americans are willing to change their travel habits, as the dramatic increases in gas prices in 2008 have shown. Every day, more commuters switch to public transportation, bicycling and walking in places where prior infrastructure investments have made these options safe and convenient. In a 2006 survey, the federal Non-motorized Transportation Pilot Program found that 28 percent of trips in Minneapolis, Minn., involve bicycling or walking. (23) Prior investment in urban trails and public transportation created the conditions to make this impressive use of active transportation possible. The Nonmotorized Transportation Pilot Program and high gas prices have combined to build on this success. In the summer of 2008, automatic counts of bicyclists on the Minneapolis Midtown Greenway showed a 30 percent increase over the same months in the previous year. (2)

#### PLAN INCREASES BYCYCLING

Pucher, Et al, ‘10

John Pucher, Bloustein School of Planning and Public Policy, Rutgers Univ., Jennifer Dill, Toulan School of Urban Studies and Planning, Portland State Univ., Susan Handy, Dept. of Environmental Science and Policy, Univ. of California, “Infrastructure, programs, and policies to increase bicycling: An international review,” Preventive Medicine 50 (2010) S106–S125, JT

Stated preference studies almost uniformly found that both cyclists and non-cyclists preferred having bike lanes to riding in mixed traffic. The findings from the studies of off-street paths were varied, with some showing positive associations and others showing no statistically significant relationship. Only four studies examined bicycle boulevards and traffic-protected cycletracks, types of roadway infrastructure less common in the US. The findings generally showed a positive association between these facilities and bicycling, though without good estimates of the quantitative effects on actual bicycling rates.

## SOLVENCY – MAXIMIZES OTHER INVESTMENTS

#### INVESTMENTS IN ACTIVE TRANSPORTATION ARE ESSENTIAL TO MAXIMIZING CURRENT MODES OF PUBLIC TRANSPORTATION—THE STATUS QUO IS NOT SUSTAINABLE

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Public transportation plays an important role in mitigating congestion because of its capacity to move large numbers of people swiftly over expansive distances, without requiring much land.(9) Transportation experts agree that public transportation will play an expanded role in our transportation system in the future.(6, 9, 14) However, the benefits of public transportation related to reducing congestion, fuel consumption, and highway infrastructure costs diminish when occupancy rates of trains and buses are low. Increasing total ridership and occupancy rates must therefore be a top priority to maximize return on existing and future infrastructure investments.

To be efficient, public transportation requires effective bicycle and pedestrian networks. Bicycling and walking provide the most convenient ways to access public transportation. Ninety percent of all public transportation trips start with walking. Seventy-five percent of people who walk to a bus or train walk for less than nine minutes, and 42 percent walk for less than four minutes.(7) If improvements for pedestrians in areas surrounding bus stops and train stations could encourage people to increase the time they are willing to walk by as little as two minutes, public transportation could serve twice as many people. Improvements that will make the walk to public transportation more pleasant and safe will also draw more people to public transportation.

#### BICYCLING BENEFITS PUBLIC TRANSPORTATION INVESTMENTS

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Bicycling in particular has great potential to allow more people to access public transportation conveniently. Accessing public transportation by bicycle can shorten travel times significantly. Because bicyclists travel about four times as fast as pedestrians, convenient access by bicycle can increase the geographic area served by one transit station 16-fold (see figure on page 16). These benefits are mutual: Public transportation is also ideal for bicyclists and pedestrians to extend the range of their trips.

## SOLVENCY – WE REDUCE DRIVING

#### STATUS QUO INVESTMENT ONLY CLOGS THE SYSTEM--ENCOURAGING ACTIVE TRANSPORTATION REDUCES DRIVING AND IMPROVES EFICIENCY

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Improving current highway conditions and performance measures has been estimated to require annual investments exceeding $200 billion. Current fuel tax revenue projections, however, suggest that the amount available will only be half of that.(6) It is now conventional wisdom that the dominant approach to enhancing mobility in post-war America—heavy investment in road infrastructure with little regard to alternatives—will only make congestion worse. To significantly reduce traffic congestion during a period of fiscal constraint, our transportation system must meet two basic challenges: efficiently connecting people with their destinations and doing so in a cost-effective manner. One major strategy to accomplish this is to encourage significant “mode shift;” reducing miles driven by shifting some automobile trips to bicycling, walking and public transportation.

#### THE PLAN REDUCES DRIVING 3 WAYS

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Investments to encourage increased bicycling and walking can reduce miles driven in three ways:

• Because a majority of car trips are short, bicycling and walking can often be as fast and convenient as driving.

• More car trips can be shifted to public transportation when well-integrated networks of bicycle and pedestrian infrastructure provide convenient access to bus stops and rail stations.

• Investments to make communities conducive to bicycling and walking promote a richer and denser mix of residences, businesses and amenities, leading to shorter trip-distances even for those who drive.

#### 3 WAYS THE PLAN CAN REDUCE DRIVING

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

There are three different mechanisms through which bicycling and walking reduce miles driven. First, bicycling and walking can directly replace cars on short trips. Second, bicycling and walking increase the convenience of public transportation and, therefore, increase ridership. Lastly, public infrastructure investment that increases the numbers of bicyclists and pedestrians also stimulates local forms of compact, mixed-use development which results in destinations that are closer to each other, thereby shortening travel distances for all modes.

#### Bicycling reduces miles driven

Rails to Trails, 08

Rails to Trails Conservatory: Active Transportation for America. <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>. 2008. DA- 07/03/2012.

There are three different mechanisms through which bicycling and walking reduce miles driven. First, bicycling and walking can directly replace cars on short trips. Second, bicycling and walking increase the convenience of public transportation and, therefore, increase ridership. Lastly, public infrastructure investment that increases the numbers of bicyclists and pedestrians also stimulates local forms of compact, mixed-use development which results in destinations that are closer to each other, thereby shortening travel distances for all modes.

#### THE PLAN ELIMINATES ALMOST 200 BILLION MILES OF DRIVING A YEAR

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Currently, short bicycling and walking trips account for 23 billion miles traveled every year. Modest increases in bicycling and walking mode share for trips of three miles or less could double that figure, and more substantial increases could yield four times more miles bicycled or walked. Taking into account secondary effects from synergies with public transportation and mixed-use development, modest increases in active transportation could avoid 69 billion miles driven, and substantial increases could lead to 199 billion miles of avoided driving (See “Do the Math 1/4,” page 14).

#### A five percent transition from cars to bicycles can be the equivalent of taking 160,000 cars off the road

McGrath 8

Patrick, Cascade Bicycle Club, 1/14/2008, <http://www.adventurecycling.org/resources/benefitsofbicycling.pdf> Benefits of Bicycling Climate Change and Beyond, TL

Along with walking, bicycling is the climate protection champion of the transportation world. While a solo driver in an average car releases about 1.1 pounds of CO2 per mile, a bicyclist releases none (beyond the negligible amount of carbon in her breath). Thus every trip shifted to bicycle results in an effectively 100% reduction in direct greenhouse gas emissions. Even a Toyota Prius releases about .6 pounds of CO2 per mile (see Figure 2). In the Puget Sound region there were about 81,534,000 vehicle miles traveled per day in 2006 (4). If just 5% of those trip-miles were shifted to bicycle, we would prevent the release of 4,484,370 pounds of CO2 every day. Over the course of a year, that’s like taking 160,000 cars off the road (1).

## SOLVENCY - GENERAL

\*\*\*CAN ALSO USE SOME OF THESE FOR A CRITICAL CARS ADD-ON

#### THE CURRENT MODEL OF TRANSPORTATION IS A CAR-CENTRIC MONOPOLY OF INEFFICIENCIES THAT OVERBURDENS GOVERNMENTS

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Transportation has become a one-dimensional affair. Half of all trips we take are only three miles or less—yet we drive almost everywhere we need to go, even to the closest destinations.(7) Rates of car ownership in the United States are the highest in the world, and the number of cars per household now exceeds the number of drivers.(7) For most Americans, the predominance of the car and the lack of adequate infrastructure for bicycling and walking have basically eliminated all transportation options except for one—driving.

As with any monopolized market sector, our transportation system now offers a single brand of mobility developed without incentives to provide the best possible product, and without competition that would assure the best price. Compared to a truly multi-modal transportation system, our current system produces less mobility at an inflated price. The inefficiencies of this car-centered monopoly become more apparent every day: congested roads that cost us precious time, gasoline prices that shrink our disposable income, road infrastructure projects that place massive burdens on state and federal budgets, and an over-dependence on oil that leaves our economy at the mercy of the world oil market and its suppliers.

#### THE TRANSITION IS FEASIBLE AND THE PLAN DIVERSIFIES TRANSPORTATION

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

To choose the transportation mode that is most efficient for them, Americans need an attractive menu of transportation options. Bicycling and walking should and will play a bigger role if we make it a priority to build active transportation systems, functional networks of bicycle lanes and boulevards, bicycle paths, shared use trails and sidewalks, connecting the places where substantial numbers of people live, work, shop and play.

Half of the trips in America can be completed within a 20-minute bike ride, and a quarter of trips are within a 20-minute walk. Yet, the vast majority of these short trips are taken by automobile.(7) Active transportation offers a viable means to reduce driving—and associated congestion, oil dependence, air pollution, and greenhouse gas emissions—especially in synergy with public transportation and policies to encourage mixed-use development patterns. Bicycling and walking also offer a convenient and cost-effective way to integrate physical activity into daily routines, thereby helping Americans control their weight and improve their health.

## LAUNDRY LIST IMPACTS

#### INVESTMENT IN ACTIVE TRANSPORTATION CREATES GREATER EFFICIENCY, LOWER BILLS, AND MITIGATES CLIMATE CHANGE

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

In this era of traffic congestion, high gas prices, climate change, an obesity epidemic, and fiscal constraints, federal transportation funding has reached a critical crossroads. Decades of car-centered transportation policies have dead-ended in chronic congestion, crippling gas bills, and a highly inefficient transportation system that offers only one answer to most of our mobility needs—the car.

Investment now in a more diverse transportation system—one that provides viable choices to walk and bike, and use public transportation in addition to driving—will lead to a far more efficient use of transportation resources. Active transportation is the missing piece in our transportation system.

#### Active transport leads to a full spectrum of cost benefits and savings

Frank 11

Dr. Lawrence, Bombardier Chairholder in Sustainable Transportation at the University of British Columbia and Senior Non-resident Fellow of the Brookings Institution, Metro, November 4, 2011

[http://www.oregonmetro.gov/index.cfm/go/by.web/id=30078](http://www.oregonmetro.gov/index.cfm/go/by.web/id%3D30078) CD

There is a growing body of research that confirms the strong link between the built environment, transportation, physical activity and health. People that bike and walk for daily trips are less likely to be overweight and less likely to suffer from chronic diseases and mental depression. There are also quantifiable cost benefits associated with active transportation – everything from lower health care costs, savings in fuel and other transportation costs and increased property values.

#### Cars Suck – noise pollution, Co2, massive amount of death, Obesity, air pollution, wasted farmland, Peak oil

Shannon 12(Phil, February 5th ) (Capitalism's destructive car mania detailed)( [http://www.greenleft.org.au/node/49946)(GWL](http://www.greenleft.org.au/node/49946%29%28GWL) author) ZB

**Cars are the single largest contributor to US noise pollution and 40,000 people in the US die from car accidents each year (one million across the globe).Traffic congestion creates stress and induces aggression, particularly towards cyclists, pedestrians,** traffic lights and speed limits ― anything that might slow the mighty car down.**Toxic pollutants from tailpipe and particulate matter from tyre rubber (treated with dozens of carcinogens, neurotoxins and heavy metals) create health havoc from respiratory disease to cancer. Cars also “make you fat”, with all the attendant diseases of obesity.** The car is a huge devourer of space ― roads, garages, petrol stations and parking make up between one-third and one-half of the total space in US cities.**The two million cars added to the US automotive fleet each year require asphalting space equivalent to 400,000 football fields,** **paving over prime farmland.** Parking is an omnipresent visual blight on the urban landscape and the car promotes an ugly urban housing sprawl.**The car is economically wasteful, chewing up 20% of GDP in the US (compared with 9% in Japan with its mass transport system). The cost of running a car soaks up one third of the working life of the average US citizen.**Inefficiency is its byword ― only 30% of a car’s petrol is turned into actual motion to carry just 10% of its weight, so only “3% of the fuel’s energy actually moves what needs to be moved”, Mugyenyi and Engler write.The ecological tyre-print of the car is huge even before it leaves the sales yard. **Each car requires huge quantities of water, metal and rubber, while generating tonnes of solid and airborne, often toxic, waste.The car’s life-blood, oil, is one of the most environmentally dirty industries globally. The transport sector in the US is the nation’s leading source of greenhouse gas emissions.**The petrol-driven, internal combustion engine guzzles 63% of the 20 million barrels of oil consumed each day in the US. **“Peak oil” and rising petrol prices are spurring on the rise of even dirtier “unconventional” fuels** such as tar sands, shale oil, genetically-modified ethanol, deep sea oil and liquefied coal

## WARMING ADV. -EXT.

#### A SUBSTANTIAL INCREASE IN ACTIVE TRANSPORTATION INVESTMENT REMOVES 70 BILLION MILES BY CAR, WHICH CUTS OIL CONSUMPTION AND GREENHOUSE GAS EMISSIONS BY 8%

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

This report quantifies, for the first time, the benefits that America can expect from elevating the priority of bicycling and walking in our nation’s transportation system. This case statement for increased investment in bicycling and walking infrastructure evaluates benefits in the areas of transportation, oil dependence, climate change, and public health, and puts dollar estimates to the economic value of these benefits. Benefits from bicycling and walking are quantified for the status quo, and for prospective increases in bicycling and walking under a Modest Scenario and a Substantial Scenario for the future. The analysis concludes that modest increases in bicycling and walking could lead to an annual reduction of 70 billion miles of automobile travel. More substantial increases could lead to the avoidance of 200 billion miles per year (see textbox on page 5).

This volume of decreased auto travel is equivalent to cutting oil dependence and greenhouse gas emissions from passenger vehicles by 3 percent (Modest Scenario) to 8 percent (Substantial Scenario). For gas-electric hybrid cars to match this impact, their share in the U.S. passenger vehicle fleet would need to increase from currently less than 1 percent, to 8 percent under the Modest Scenario, or more than 20 percent under the Substantial Scenario.

#### Bicycling significantly reduces CO2 emissions

Rails to Trails, 08

Rails to Trails Conservatory: Active Transportation for America. <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>. 2008. DA- 07/03/2012.

The following illustrates fuel and CO2 savings from reduced miles driven due to bicycling and walking, based on the mechanisms outlined previously, such as directly replacing cars on short trips; inducing increase in public transportation ridership; and shortening trip distances by spurring mixed-use development. Fuel and CO2 savings from shifting short car trips to bicycling and walking The total savings that would result from shifting more short trips to bicycling or walking could amount to 2.4 billion gallons of fuel for the Modest Scenario, to five billion for the Substantial Scenario, and between 21 and 45 million tons of CO2 a year, respectively. Fuel and CO2 savings from improving public transportation by bicycling and walking Currently, U.S. public transportation is estimated to reduce CO2 emissions by 3.9 million tons per year by displacing personal vehicle travel. (37) These figures are based on current performance, with 25 percent higher fuel efficiency than private vehicles, and a mode share of 2 percent of all trips. The total savings that would result from improving public transportation by bicycling or walking would amount to modest 100 million to substantial 1.6 billion gallons of fuel, and one million to 14 million tons of CO2 a year. Fuel and CO2 savings from richer mix of residences, businesses, and amenities induced by the availability of pedestrian and bicycle infrastructure The potential for CO2 reductions from increasing the compactness of new development has been estimated to be 78 million tons annually. (21) Nationwide, the CO2 savings from the density in development around public transportation have been estimated to be 30 million tons. (15)

## WARMING ADV. -EXT.

#### PERSONAL TRANSPORTATION ACCOUNTS FOR 12.3% OF TOTAL CO2 EMISSIONS

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Annual greenhouse gas emissions in the United States are projected to rise from 7.2 billion tons in 2005 to 9.7 billion tons in 2030.(32) Reducing emissions to 80 percent below 1990 levels, as scientists suggest is necessary, would require reducing annual emissions to 1.2 billion tons per year. Annually, personal transportation accounts for approximately 136 billion gallons of gasoline,(33) or 1.2 billion tons of CO2.

#### CAN OFFSET 8% OF CO2 FROM TRANSPORTATION

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

A secondary benefit from reducing miles driven is the improved performance of vehicles currently stuck in congestion. This effect could amount to 500 million to two billion gallons of fuel saved, and up to 18 million tons of CO2 reductions. Overall savings from increased bicycling and walking amount to between four and 10 billion gallons in fuel, and between 30 million and more than 90 million tons of CO2 annually, for the Modest and Substantial Scenarios, respectively. As such, bicycling and walking could offset between 3 percent and 8 percent of the effects of all U.S. cars and trucks.

#### THE BEST WAY TO OFFSET CLIMATE CHANGE IS IMPROVING EFFICIENCY LIKE THE PLAN

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Climate change and oil dependence are among the biggest challenges we face. Some measures to overcome these problems could pose a serious burden on our economy and society as a whole. Others will offer great opportunities to improve our economic competitiveness and our overall quality of life. Bicycling and walking can significantly contribute to reducing oil consumption and CO2 emissions within the transportation sector. To minimize the economic costs of mitigating the impacts of climate change, it will be crucial to aggressively pursue the most cost-effective measures to reduce greenhouse gas emissions. Increased bicycling and walking are capable of achieving greenhouse gas reductions at no extra costs to the economy, because fuel savings alone will offset the investment costs, and additional benefits make it a “no regrets” strategy. Americans will demand a fiscally responsible approach to addressing climate change that achieves maximum results at minimal costs, which is why increasing bicycle and pedestrian use through investments in safe and convenient infrastructure should rank high on any list of measures we consider to reduce greenhouse gas emissions and our dependence on oil.

## WARMING ADV.-EXT.

#### THE PLAN CREATES ESSENTIAL LINEAR REDUCTIONS IN CO2 & OIL DEPENDENCE

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

As gasoline prices topped $4 per gallon in 2008 for the first time, our nation became painfully aware of the problems associated with our oil dependence. Americans’ private cars and trucks burn 40 percent of the oil consumed in the United States, equivalent to 10 percent of world demand. The economic, national security and environmental implications of our oil dependence are enormous.

Among the top concerns, each gallon of gas burned produces 19.4 pounds of carbon dioxide (CO2), nearly a pound per mile driven. This heat-trapping gas is forming a blanket around the earth causing global climate change, which leads to extreme weather events, loss of harvests, spread of disease and numerous other problems. Automobiles are responsible for about 20 percent of the United States’ CO2 emissions and are the fastest growing major source of greenhouse gases.

There is no silver bullet that will make us independent from oil or neatly resolve the problem of climate change. However, every mile not driven reduces both oil dependence and greenhouse gas emissions. Reducing emissions enough to mitigate climate change will require a diverse portfolio of measures, with each contributing a fraction of the overall reduction. As part of an integrated approach to provide alternatives to driving, bicycling and walking can help our nation address the twin challenges of oil dependence and climate change.

#### Federal infrastructure for bikes reduces baseline emissions by .5% - solves warming

Flusche 10

(Darren, policy analyst, League of American Bicyclists, September 2010 <http://www.bikeleague.org/resources/reports/pdfs/climate_change_bicycling.pdf>, Climate Change and Bicycling: How bicycling advocates can help craft comprehensive Climate Action Plans, TL)

A report by Cambridge Systematics called “Moving Cooler: An Analysis of Transportation Strategies for Reducing Greenhouse Gas Emissions’ estimated emissions reductions for a wide range of transportation interventions" They developed reduction estimates for bicycling based on three different levels of "deployment" - expanded, aressive, and maximum. They conclude that "combined pedestrian and bicycle infrastructure and policies applied nationally would result in a cumulative 0.2 percent to 0.5 percent reduction in baseline emissions, but can be achieved at a relatively low implementation cost, and with positive public health beneﬁts.’ There is also precedent among state Departments of Transportation to measure GHG reductions. Many state applications for Congestion Mitigation and Air (ability Improvement Program (CMAQ) a federal funding program, ask applicants to estimate the congestion and GHG reduction impacts of their bicycle and pedestrian projects. A federal review of C0 bike/ped projects found CO reductions of up to 38.4 kg emissions reductions each day. They note that these projects are “more effective when designed to enhance access to transit, so that longer trip lengths may be reduced.In Cincinnati, OHM “planners calculated the amount of emissions they could avoid if their bicycle mode share was that of St. Paul, MN: “There are currently approximately 5,000 —bike to work trips per day in Hamilton County [.15 percent]. If this number were increased to 23,000 trips per day [.67 percent, still considerably below the national average, the resulting greenhouse gas swings would be 6,300 tons per year."

## WARMING ADV.-EXT.

#### Transportation by bike mitigates the climate change

Examiner, 11

Examiner: Greening the roads: Commuting by bike. <http://www.examiner.com/article/greening-the-roads-commuting-by-bike>. 05/28/20122. DA-07/01/2012.

Riding a bicycle not only transforms commuting to work--it can also play an important part in conserving the nation's energy, combatting pollution, and diminishing the rate of climate change. May has been National Bike Month. The League of American Bicyclists (formerly the League of American Wheelmen) is the national sponsor of this annual event. The league has undertaken groundbreaking research on bicycle commuting in 244 American communities with populations greater than 65,000. Boulder, Colorado, leads American cities with 12.3% of commuters using bicycles. Over a third of them are women. The other Top Ten cities are Eugene, OR, Fort Collins, CO, Berkeley, CA, Cambridge, MA, Missoula, MT, Gainesville, FL, Portland, OR, Somerville, MA, and finally Madison, WI, with 5% participation. Many of these places are university towns.The American Community Survey data from the U.S. Census indicates that Scottsdale, Arizona, has the greatest number of bike lane and bike path miles (400) in the nation, followed by other western cities, Orlando, and Anchorage. Renewable energy vs. polluting nonrenewable fuels The largest benefit of substituting bicycles for automobiles as personal work transportation is a cleaner, safer world. Women, men, and children all benefit from this trade-off. According to the Environmental Protection Agency, driving a car is typically a person's most polluting daily activity. Less burning of fossil fuels (gasoline) reduces the carbon dioxide emissions that cause global climate change. Human pedaling is an infinitely renewable resource; gasoline is not. Low energy and positive environmental impacts of bicycle commuting A decade ago, three local environmental organizations put out a joint report on energy and environmental impacts of motor vehicles versus those of bicycling. The group discovered that Automobiles driven by conventional fossil fuels are responsible for almost one-third of nitrogen oxides (which contribute to acid rain) and CO2 emissions (responsible for the greenhouse effect and climate change). About the same amount of smog-forming compounds come from transportation by car. Auto emissions account for at least half of the cancer-causing pollution we breathe every day. And almost all (90%) of the poisonous carbon monoxide in the air comes from cars. Toxic substances from automobiles also pollute the ground and water, and cars produce considerable noise pollution. Cycling advocates can learn about strategies and actions they can take to reduce injury and deaths associated with bike incidents from the National Strategies for Advancing Bicycle Safety. A group of bicycle advocates, injury prevention specialists, and government representatives drew up these guidelines in the year 2000. Other positive effects of cycling Greening the roads benefits the individual as well. These positive effects include health benefits, an improved commuting atmosphere, financial savings, and even tax breaks for bike commuters. It's important for cyclists to be careful to learn how to use the shared roads safely, and for drivers to get used to bicycling signals and develop good road manners. Given widespread knowledge and respect for bicycle commuters, the trend toward transportation via renewable energy can turn commuting time from an unproductive necessity (driving) to an earth-saving, healthy, financially beneficial, and very often pleasurable ride.

## WARMING ADV.-EXT.

#### Bicycle paths reduce CO2 emissions

UNITED STATES BICYCLE ROUTE SYSTEM 10

(UNITED STATES BICYCLE ROUTE SYSTEM: report. [http://www.adventurecycling.org/routes/nbrn/resourcespage/USBRS\_Benefits.pdf. 2010. DA- 07/01/2012](http://www.adventurecycling.org/routes/nbrn/resourcespage/USBRS_Benefits.pdf.%202010.%20DA-%2007/01/2012).)

Perhaps the two greatest environmental benefits of bicycling are that it produces no pollution and consumes no fossil fuel. Annual emissions of greenhouse gases (GHG) in the U.S. are projected to increase by 35 percent between 2005 and 2030, from 7.2 to 9.7 billion tons CO2 equivalent, a standardized measure of GHG emissions 1 . The greater the number of trips made by bicycle, the slower the rate of increase. The designation of bicycle routes helps: Decrease CO2 and Fuel Usage by Increasing Cycling: Increasing pedestrian and bicycling trips, with a corresponding decrease in automobile trip lengths, by as little as 1 to 3 miles on average, can have a significant effect on both emissions and fuel consumption. 2 Amount of CO2 and fuel bicycling could save each year with moderate increases: 6 to 14 million tons of CO2 700 million to 1.6 billion gallons of fuel Utilize Existing Infrastructure Resources: Bicycles in general use very few natural or community resources; bicycle resources needed for traveling or parking place very few new demands on public spaces, including roads and highways. 3 By establishing U.S. Bicycle Routes primarily on existing facilities, the amount of new construction and development will be minimal, causing little threat to current undeveloped areas.

#### Cars are the main contributors of CO2 emissions in the US

Cecil ‘06

Jon Cecil; 27 August 2006; AICP, contributing editor for Planetizen; “The Impact Of Autos On Global Warming;” Planetizen; http://www.planetizen.com/node/20997

A staggering amount of global warming pollution comes from U.S. cars. Our new report, Global Warming on the Road, shows that in 2004, our carbon dioxide (CO2) emissions from personal vehicles totaled 314 million metric tons. That’s equal to the amount of carbon in a coal train 55,000 miles long, enough to circle the world twice. General Motors cars alone account for more carbon pollution than that from America’s largest electric-generating company, American Electric Power. Emissions from Toyota vehicles, fourth among car companies, edge out those from the Tennessee Valley Authority, third among power companies.

#### Cars are the largest source of air pollution

Service Transportation Policy Project ‘04

Service Transportation Policy Project; 2004; retrieved 7-7-12; “Transportation and the Environment;” http://www.transact.org/library/factsheets/environment.asp

Motor vehicles are the largest source of urban air pollution, generating more than two-thirds of the carbon monoxide in the atmosphere, a third of the nitrogen oxides (which react to form smog), and a quarter of the hydrocarbons (which also form smog). Some pollutants emitted by cars and trucks are known or likely to cause cancer, including toxic substances such as soot (fine particulates), benzene, arsenic compounds, formaldehyde, and lead. In the 1996 National Toxics Inventory, EPA estimates that mobile sources such as cars, trucks, and buses release about 3 billion pounds of cancer-causing, hazardous air pollutants each year.

## WARMING ADV.-EXT.

#### Small reductions in carbon dioxide solve

McKibbin and Wilcoxen 95

Warwick J. and Peter J. Brookings institute writers. “ECONOMIC IMPLICATIONS OF GREENHOUSE GAS POLICY” September 7 1995. Accessed on 7/8/2012

Finally, although most studies have focused on carbon taxes, Nordhaus (1989, 1991a) has assessed the following additional global warming policies using rough estimates of the costs and benefits of each: controlling CFCs, reforestation, and imposing a tax on gasoline. Comparing estimates of the marginal cost of reducing greenhouse emissions by the equivalent of one ton of carbon dioxide, Nordhaus argues that the optimal reduction in emissions of greenhouse gases could be achieved with a large reduction in CFCs and a comparatively small reduction in carbon dioxide emissions. Reforestation and gasoline taxes are found to be excessively expensive for the amount of carbon they remove from the atmosphere.

#### Small attainable reductions would solve

Jardine 09

Chris Jardine Methane UK project leader. “Methane UK” April 2009. [http://www.eci.ox.ac.uk/research/energy/downloads/methaneuk/chapter02.pdf Accessed on 7/8/12](http://www.eci.ox.ac.uk/research/energy/downloads/methaneuk/chapter02.pdf%20Accessed%20on%207/8/12) SA

It is therefore important to reduce global emissions to such a level that they are outweighed by methane sinks, so that the concentration of methane in the atmosphere decreases and its subsequent warming effect is reduced. A reduction of global emissions by just 22 Mt per year would result in stabilisation of methane concentrations in the atmosphere. Such a reduction represents just 3.6% of total methane emissions, or 6.1% of anthropogenic emissions. Such small reductions should be attainable. Obtaining a reduction in atmospheric methane concentrations would provide an encouraging example in the fight against global warming.

## WARMING ADV.-A2: WAR TURNS

THEIR AUTHOR ADMITS HIS RESEARCH IS ONLY A FIRST STEPP AND NOT CONCLUSIVE

Gartzke 11

March 16, Erik, “Could Climate Change Precipitate Peace?” printed in Journal of Peace Research, January 2012, vol. 49 no. 1, pages 177-192

While the evidence reported below clearly reveals that the rise in global temperatures has not (yet) led to an increase in interstate conflict, there remains room for debate about whether global warming might have other deleterious, or even beneficial, effects. Under some circumstances climate change appears to reduce the frequency of interstate disputes, though there is no compelling rationale for why such a relationship should exist, even as these findings are not robust with respect to the broadest set of coincident explanations. It may be too soon to provide a definitive answer to whether warming increases, reduces, or has no effect on interstate conflict, though of course waiting for more data also poses tradeoffs. Conversely, the consequences of global warming may well differ across countries and regions. Some states may become more violent under the pressure of a warmer planet, even as other states or regions may find greater cause for cooperation. For now, I focus on detailing global patterns of climate change and interstate conflict, a necessary first step.

### Warming I/L – Environmental Amnesia

#### Environmental amnesia as a result of the human disconnection from nature is an ideological blockade on progress to resolve climate change – aff solves

Kahn 9

([Peter H. Kahn, Jr., Ph.D.](http://www.psychologytoday.com/experts/peter-h-kahn-jr-phd), Associate Professor of Psychology at the University of Washington and the author of The Human Relationship with Nature, September 7, 2009, Why Do We Destroy the Nature We Love?, <http://www.psychologytoday.com/blog/human-nature/200909/why-do-we-destroy-the-nature-we-love>, accessed 5/3/12, PE)

If that's true - and I'm sure it's true, though the research evidence is only beginning to catch up to it - then why are we degrading and destroying nature at such an astonishingly quick pace? The partial answer I'd like to discuss here focuses on a problem that drives me half crazy. It's the problem of what I've called "environmental generational amnesia."

I started recognizing the problem some years ago. I was interviewing African-American children in the inner-city of Houston, Texas about their environmental views and values. In some respects, these children brought forward surprisingly rich accounts of their interactions with, and indeed [moral](http://www.psychologytoday.com/basics/morality) regard for, nature close at hand. But I was especially surprised by one finding. A significant number of the children interviewed understood about the idea of air pollution; but they did not believe that Houston had such a problem even though Houston was then (and still remains) one of the most polluted cities in the United States. In interpreting these results, I suggested that these children may have lacked a comparative experiential baseline from places with less pollution by which to recognize that Houston was itself a polluted city. Building on these results, I proposed in my book The Human Relationship with Nature that people across generations experience psychologically something quite similar to the children in Houston, that people construct a conception of what is environmentally normal based on the natural world encountered in [childhood](http://www.psychologytoday.com/basics/child-development). The crux is that with each ensuing generation, the amount of environmental degradation can increase, but each generation tends to take that degraded condition as the non-degraded condition, as the normal experience. That's what I'm calling the problem of environmental generational amnesia.

A similar amnesia can happen within a generation, too. I've seen it enacted first hand over three decades, on mountain land in Northern California - land that has been my home, and where I reside when possible. Here is a synopsis of what I have seen. A family moves to a piece of forested land, say 640 acres, a square mile, which has already been logged numerous times in the last century. These are usually good people. They might well view themselves as environmentalists. They might be members of the Sierra Club. But like most of us, they need to make ends meet, and so they look around at the natural resources, the timber, and they say: "Well, there should be a way of taking some timber here, and still leave some good trees. You know, all of us use wood products, so it's kind of hypocritical to be saying no logging." So they log. Then they say, "You know, 640 acres, what are we really going to do with that much land? And if we sell some, then we can make our land payments." So they subdivide the land into four 160 acre parcels, keeping the nicest parcel for themselves. Families from more urban areas now buy each of the remaining 160 acre parcels. These, too, are usually good people, even environmentalists. And they say something like: "Well, there should be a way of taking some timber here, and still leave some good trees. You know, all of us use wood products, so it's kind of hypocritical...." So these families log the land, and afterward subdivide into 40 acre parcels, if the zoning laws allow. Notice how relative is the concept of "good." Each logging and subdivision degrades the land more, but each person assesses the health and integrity of the land relative to a more environmentally degraded urban setting, and not to the land's condition as it was even a year before.

The land above my cabin had been old growth when I was an adolescent. After it was logged for the fourth time, I cried. It has been logged since. The "big" trees that remain? - at their base, they measure 11 inches in diameter.

When people relocate and compare a degraded nature to a more degraded nature from where they came, the baseline shifts. But I think the baseline shifts most when it occurs across generations. For then an entire generation shifts its baseline downward.

I think environmental generational amnesia helps explain why we degrade and destroy the nature that we depend on for our physical and psychological wellbeing. But I recognize the evidence for it has not been as strong as it should be, which allows people to ignore the problem further. As an example, the National Park Service commissioned a report titled: A Critical Review of the Concepts of "Environmental Generational Amnesia" and "Nature Deficit Disorder." The latter is a term Richard Louv uses in his widely read book, Last Child in the Woods. The Park Service asked me to respond to their critique of environmental generational amnesia. Their critique was that I did not have strong enough scientific evidence. In my response I said that that was true. However, I also noted that in their document title they say they are reviewing the "concept" of environmental generational amnesia. But in their review they only examined its empirical base. I also reminded them that for more than 20 years the U.S. [government](http://www.psychologytoday.com/basics/politics) said that there was not enough scientific evidence to substantiate the hypothesis about global warming. I pleaded with them to take a [leadership](http://www.psychologytoday.com/basics/leadership) role in enhancing the human relationship - both domestic and wild - with the wonderful park lands that are within their trust. My words fell short.

### Cosby Was Right

Humanity is losing touch with nature – Bill Cosby was right

Cross 9

Al Cross, director of the Institute for Rural Journalism and Community Issues in August 2004 after more than 26 years as a reporter at The Courier-Journal, the last 15½ as the Louisville newspaper's chief political writer, August 5th, 2009, http://www.ruralvotes.com/thebackforty/?p=2026, Americans Losing Touch With Nature, accessed 2/23/12, PE

Will baby boomers “constitute the last generation of Americans to share an intimate, familial attachment to the land and water,” as suggested by Richard Louv in his book Last Child in the Woods? Nicholas Kristof of The New York Times ponders that question after a hike with his daughter, cut short by lack of money to maintain the Timberline Trail around Mount Hood in Oregon. “Only 2 percent of American households now live on farms, compared with 40 percent in 1900,” Kristof writes. “Suburban childhood that once meant catching snakes in fields now means sanitized video play dates scheduled a week in advance. One study of three generations of 9-year-olds found that by 1990 the radius from the house in which they were allowed to roam freely was only one-ninth as great as it had been in 1970. A British study found that children could more easily identify Japanese cartoon characters like Pikachu, Metapod and Wigglytuff than they could native animals and plants, like otter, oak and beetle.” Louv argues that this “nature deficit disorder” is partly responsible for depression, obesity and attention deficit disorder in young people. Kristof isn’t sure about that, but does worry that “The American environmental movement has focused so much on preserving nature that it has neglected to do enough to preserve a constituency for nature. It’s important not only to save forests, but also to promote camping, hiking, bouldering and white-water rafting so that people care about saving those forests.” He notes that visits to national parks have been declining for more than a decade. Maybe next month’s Ken Burns PBS series on the parks will help boost the parks. But more visitation will increase the need for maintenance, much of which has been deferred. And the private sector has a role to play, too. Rural Americans can help their citified cousins get back in touch with the natural world through agri-tourism, for example.

## HEALTH ADV.

#### AMERICAN CULTURE IS TRENDING TOWARD A SEDENTARY LIFE—THE PLAN FOSTERS ACTIVE LIVING

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

During the past century, the benefits of an increasing standard of living were accompanied by ever-decreasing amounts of physical activity in all aspects of life. This reduction in physical activity was due to a reduction in manual labor on the job and the adoption of labor-saving devices in the home. Many Americans have benefited from this trend in the form of better paying jobs, safer and healthier work conditions and more leisure time. Unfortunately, much of this newly found leisure time is spent in sedentary activities such as watching television and increasingly using computers, or playing video games. Taken together, this trend away from physical activity at work, at home and at play has contributed to an imbalance between our energy intake and energy output.

#### INFUSING PHYSICAL ACTIVITY INTO EVERYDAY ACTIVITIES, LIKE TRANSPORTATION, IMPROVES HEALTH AND QUALITY OF LIFE

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Physical activity provides additional health benefits independent of body weight, such as the prevention of cardio-vascular disease, osteoporosis, arthritis and mental disorders like anxiety and depression. In short, active people are likely to be healthier and happier people. Active workers are also more productive and have significantly lower health costs than their obese colleagues.(53) To date, attempts to increase physical activity have mostly focused on leisure time activity for adults and physical education in school for children. Neither approach has succeeded with the majority of Americans.

When we reduce physical activity to “exercise” that is separate and apart from our daily routines, we encounter obstacles related to time, money or motivation that make it difficult to maintain such activity over time. Reintroducing activity into daily routines is a practical way to overcome such obstacles.

Imagine a weight loss solution that requires little extra time, relatively small amounts of effort, no additional motivation, no major expenses, no specific skills and no particular qualifications. Bicycling and walking offer a compellingly simple remedy. Take a routine we all engage in every day—getting from Place A to Place B, also known as transportation. By leaving the motor at home, one can get to a destination while being active at the same time. Active transportation drives active living.

## HEALTH ADV.

#### STUDIES PROVE ACTIVE TRANSPORTATION LEADS TO BETTER HEALTH AND SAFETY

Pucher, Et al, ‘10

John Pucher, Bloustein School of Planning and Public Policy, Rutgers Univ., Jennifer Dill, Toulan School of Urban Studies and Planning, Portland State Univ., Susan Handy, Dept. of Environmental Science and Policy, Univ. of California, “Infrastructure, programs, and policies to increase bicycling: An international review,” Preventive Medicine 50 (2010) S106–S125, JT

Bicycling is healthy. That is the conclusion of an increasing number of scientific studies assessing the impacts of bicycling on levels of physical activity, obesity rates, cardiovascular health, and morbidity (Anderson et al., 2000; Bassett et al., 2008; Bauman et al., 2008; BMA, 1992; Cavill et al., 2006; Dora and Phillips, 2000; Gordon-Larsen et al., 2009; Hamer and Chida, 2008; Hillman, 1993; Huy et al., 2008; Matthews et al., 2007; Roberts et al., 1996; Shephard, 2008). The combined evidence presented in these studies indicates that the health benefits of bicycling far exceed the health risks from traffic injuries, contradicting the widespread misperception that bicycling is a dangerous activity. Moreover, as bicycling levels increase, injury rates fall, making bicycling safer and providing even larger net health benefits (Elvik, 2009; Jacobsen, 2003; Robinson, 2005).

#### ACTIVE LIVING CREATES A FEEDBACK LOOP OF HAPPINESS AND GOOD HEALTH

Scheve, 12

Tom Scheve. TLC: What Makes People Happy. <http://tlc.howstuffworks.com/family/what-makes-people-happy3.htm>. 2012. DA- 07/08/2012.

When it comes to health and happiness, either one can be the cause or effect. Research shows that when we feel happy, we're more likely to be healthy and stay healthy [source: University of Kansas]. The improving effect of happiness on health has been found in both industrialized and impoverished regions of the world. While being happy won't cure us of an ailment, it does have preventive qualities that are as important to our health as factors such as smoking, age and exercise [source: Center for the Advancement of Health]. Exercise has a positive effect on our body as well as our mental health. Exercise prompts the pituaritary gland to produce and release endorphins, neurotransmitters that bind themselves to opiate receptors in the brain, diminishing our perception of pain. Additionally, the presence of endorphins prompts our bodies to release additional sex hormones such as norepinephrine into our systems, which enhance our mood and sense of well-being. The exercise doesn't need to be intense. Walking, for instance, increases your energy and improves your mood. Research shows that the number of steps we take each day directly affects our happiness, self-esteem and even conscientiousness about our health and diet [source: Gloady]. Intriguingly, although mental fatigue doesn't affect the functioning of the heart or muscles, our physical performance and endurance decrease when we begin working out following a period of mental exertion [source: American Physiological Society]. This may partly explain why we're less inclined to exercise when we feel stressed out or depressed, even though our emotional well-being would benefit from it. And it's not just about exercise -- increased happiness may be just a sound night's sleep away. Poor sleep patterns have long been viewed as a product of poor mental health, but much like the two-way cause-and-effect street that links health and happiness, it seems that poor sleep may also be a strong contributing factor to depression and ADHD. In fact, sleep disorders -- and their effects on mood, cognitive ability, and behavior.

## HEALTH ADV.

#### THE IMPACT IS VALUE TO LIFE

Mental Health Foundation, 12

Mental Health Foundation: Exercise and Mental Health. <http://www.mentalhealth.org.uk/help-information/mental-health-a-z/E/exercise-mental-health/>. 2012. DA- 07/08/2012.

Physical activity is also good for your mental health. Experts believe that exercise releases chemicals in your brain that make you feel good. Regular exercise can also boost your self-esteem and help you concentrate, sleep, look and feel better. "When I left the gym that morning I felt as if someone had given me a million pounds – it was the sense of achievement." Being active doesn’t have to mean going to the gym, taking up jogging or wearing lycra. There are lots of ways to be active - and they don’t need to cost much money. As well as releasing natural chemicals that improve your mood and make you feel happier, having an active lifestyle can do more to help your mental health. Taking part in physical activities offers many opportunities. It’s a great way to meet people. And it can be a chance to give yourself a well-deserved break from the hustle and bustle of daily life – to find some quiet time. Leading an active life can help raise your self-worth and improve your confidence. It can help you feel valued – and value yourself. Exercise and physical activity can provide something worthwhile in your life. Something that you really enjoy, that gives you a goal to aim for and a sense of purpose.

## HEALTH ADV.—ext.

#### INVESTMENTS IN TRANSPORTATION INFRASTRUCTURE SHOULD BE TEMPERED BY THEIR PUBLIC HEALTH EFFECTS

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Therefore it is important to think of our transportation system as more than just a means to get around. Transportation infrastructure defines the built environment we live in, and as such has a tremendous influence on our levels of activity and our general well-being. For this reason, the impact of transportation projects on public health should be taken into consideration just as routinely as we evaluate the financial costs of a project or its effects on the environment.

#### THE PLAN WOULD SUBSTANTIALLY INCREASE PHYSICAL ACTIVITY FOR GOOD HEALTH

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Bicycling and walking also portend tremendous benefits for Americans’ health. Because transportation is a routine in which we all engage, active transportation has great potential to increase our levels of physical activity and help reverse current obesity trends. Modest increases in bicycling and walking for short trips could provide enough exercise for 50 million inactive Americans to meet recommended activity levels, erasing a sizeable chunk of America’s activity deficit.

#### THE PLAN PROMOTES GOOD HEALTH BY INCREASING PHYSICAL ACTIVITY

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

America’s car-focused transportation system is a major contributor to our sedentary life styles. Not only are cars now used for almost all trips, including the shortest, but the large volumes of motorized traffic combined with the lack of adequate infrastructure have made bicycling and walking difficult and dangerous in many communities. Investing in bicycling and walking offers a unique opportunity to re-integrate physical activity into our daily routines.

## HEALTH ADV.—ext.

#### THE PLAN SUBSTANTIALLY IMPROVES PHYSICAL ACTIVITY

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Transportation offers opportunities to routinely engage in physical activity because many trips are short and ideal for bicycling and walking. About half of all trips taken in the United States are three miles or less.(7)

By replacing some of these short car trips with bicycling or walking, many Americans could significantly increase their activity levels. Using the CDC recommendation of 30 minutes of daily activity as a benchmark, it is a reasonable estimate that insufficiently active Americans would, on average, need to increase their daily level of activity by 15 minutes. Shifting some of these trips as outlined in our scenario calculations would result in an average of 5 (Modest Scenario) to 9 minutes (Substantial Scenario) of additional exercise for each American, every day or the recommended 30 minutes of daily exercise for 50 (Modest) to 90 million (Substantial) Americans.

#### Bike paths improve health- multitude of reasons

UNITED STATES BICYCLE ROUTE SYSTEM, 10

UNITED STATES BICYCLE ROUTE SYSTEM: report. <http://www.adventurecycling.org/routes/nbrn/resourcespage/USBRS_Benefits.pdf>. 2010. DA- 07/01/2012.

During the past four decades, obesity levels in the United States have risen dramatically. The rates of chronic disease – including heart disease, stroke, diabetes, some types of cancer, sleep disorders, joint pains, mental illness and depression – have similarly risen while the amount of physical activity that Americans participate in has steadily decreased. Fortunately, cycling offers a low-impact form of physical activity that appeals to a wide range of the population. Cycling and the implementation of bicycle routes can help: Reduce Health Risks and Improve Well-Being Each year in the United States, sedentary lifestyles are estimated to contribute to as many as 255,000 preventable deaths. Scientific studies have shown that moderate levels of physical activity provide clear health benefits. 1 Endurance types of physical activity, such as cycling, reduce the risk of developing obesity, osteoporosis, and depression; 2 such activities may improve quality of life and psychological well-being. 1

#### Infrastructure encourages physical activity

Dill 9

Jennifer, Ph.D., is an associate professor in the Nohad A. Toulan School of Urban Studies and Planning at Portland State University, Journal of Public Health Policy, 2009, http://www.palgrave-journals.com/jphp/journal/v30/nS1/pdf/jphp200856a.pdf, “Bicycling for Transportation and Health: The Role of Infrastructure,” Accessed 7/2/12, CD

Several studies have tried to assess the relative effects of specific types of infrastructure, including bike lanes (a striped lane on a roadway) and paths separated from motor vehicle traffic, using both stated and revealed preference methods. Stated preference methods ask participants what they would do given a hypothetical situation. Revealed preference methods collect data on how participants actually behave. Simple stated preference studies usually find that people prefer bike paths and lanes or indicate that having such infrastructure would encourage them to bicycle more (19,22). Some studies present respondents with two options, trading off a higher quality facility (e.g., a dedicated bike lane) with a longer travel time. At least two such studies have found that bicyclists value bike lanes and off-street paths (23,24).

## HEALTH ADV.—ext.

#### Infrastructure results in an increase of physical activity

Cradock et al 9

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In 1990, the US Department of Transportation adopted a new national transportation strategy that sought to increase walking and bicycling and encourage planners and engineers to accommodate the needs of pedestrians and bicyclists in designing transportation infrastructure in urban and suburban areas (12). There is growing scientific evidence that features of the built environment such as sidewalks, accessible trails and parks, lighting, and traffic patterns are associated with participation in activities such as walking and bicycling (18,19). Providing safe, convenient places for walking and bicycling can reduce barriers to using regular physical activity for transport or leisure. The specific goals of the US Department of Transportation strategy, later outlined in the 1994 National Bicycling and Walking Study, were to double the percentage of total trips made by bicycling and walking and to simultaneously reduce by 10% the number of bicyclists and pedestrians killed or injured in traffic crashes (12).

#### Preferred biking infrastructure encourages activity

Dill 9

Jennifer, Ph.D., is an associate professor in the Nohad A. Toulan School of Urban Studies and Planning at Portland State University, Journal of Public Health Policy, 2009, http://www.palgrave-journals.com/jphp/journal/v30/nS1/pdf/jphp200856a.pdf, “Bicycling for Transportation and Health: The Role of Infrastructure,” Accessed 7/2/12, CD

The participants were using the bicycle infrastructure (lanes, paths, and bicycle boulevards) to a great extent – for about half of their bike travel. Where participants bicycle is determined to some extent by where they live. If participants live in neighborhoods with more bicycle infrastructure, that would account for some of the difference between use (half of the bicycling) and the infrastructure (8% of the network). However, there are no neighborhoods where even 25% of the network has a bike lane, path, or boulevard. Therefore, the difference indicates that bicyclists are probably traveling out of their way to use the bicycle infrastructure. An analysis comparing the routes taken to the shortest path routes would confirm the extent to which this is occurring. The preference for traveling on bike paths and boulevards is consistent with the priority the bicyclists placed on routes that avoid streets with lots of vehicle traffic. However, the participants placed almost equal importance on minimizing trip distances. Without a well-connected network of bike lanes, paths, and boulevards, along with low-traffic neighborhood streets without specific bicycle infrastructure, meeting these two priorities simultaneously would be difficult.

## HEALTH ADV.—ext.

#### Infrastructure key to increase bicycling

Dill 9

Jennifer, Ph.D., is an associate professor in the Nohad A. Toulan School of Urban Studies and Planning at Portland State University, Journal of Public Health Policy, 2009, http://www.palgrave-journals.com/jphp/journal/v30/nS1/pdf/jphp200856a.pdf, “Bicycling for Transportation and Health: The Role of Infrastructure,” Accessed 7/2/12, CD

The study demonstrated that bicycling for transportation can be used by adults to meet the recommendations for daily physical activity. A supportive environment, like that found in the Portland region, appears necessary to encourage bicycling for everyday travel, allowing more adults to achieve active living goals. The first part of that environment is bicycle infrastructure that addresses people’s concern about safety from motor vehicles. In Portland, this includes a network of bike lanes, paths, and boulevards. Building such a network requires a comprehensive plan, funding, and political leadership. In Oregon, state law requires that both bicycle and pedestrian infrastructure be built whenever roads are built or rebuilt (with few exceptions), and that cities, counties, and the State spend a reasonable share of their state highway funds, usually defined as 1%, on pedestrian and bicycle features. A network of different types of infrastructure appears necessary to attract new people to bicycling. Simply adding bike lanes to all new major roads is unlikely to achieve high rates of bicycling. For people concerned with safety and avoiding traffic, a well-connected network of low-traffic streets, including some bicycle boulevards, may be more effective than adding bike lanes on major streets with high volumes of motor vehicle traffic. Opportunities to build separate paths are often limited in existing neighborhoods due to space constraints and costs. Public agencies can, however, look for such opportunities when building other infrastructure, such as new rail transit lines, along existing transportation corridors, and when expanding to new undeveloped areas. Finally, the role of bike lanes should not be dismissed in planning for a bicycle-friendly community. A disproportionate share of the bicycling occurs on streets with bike lanes, indicating their value to bicyclists. These facilities may provide important links in the network, connecting neighborhoods when low-volume streets cannot.

#### Lack of active transportation causes pedestrian fatalities—the impact disproportionately affects minorities

Lifsey ‘12 (Sarah, 6/21)New Federal Transportation Spending Bill Could Jeopardize the Vitality of Our Communities (http://healthpolicyforum.org/post/new-federal-transportation-spending-bill-could-jeopardize-vitality-our-communities)(Policy Associate, Altarum Institute)ZB

Safe streets. Improving pedestrian conditions—sidewalks, traffic crossings, traffic speed and other elements of safe streets—can help prevent pedestrian accidents. According to research gathered by Transportation for America, the third leading cause of death by unintentional injury for children under the age of 15 is pedestrian injury. Hispanic children have a pedestrian fatality rate more than 40 percent higher than that of white children, and the rate is twice as high for African American children. (7) Both a California Complete Streets report and a research synthesis by the Robert Wood Johnson Foundation found that streets are less safe in low-income areas (2) and that low-income and racial and ethnic minorities have fewer sidewalks or sidewalks of poorer quality.(8) A California study reported by California Complete Streets showed that children living near busy roads gained more weight than those in low-traffic neighborhoods. (2)

## HEALTH ADV.—ext.

#### **Active transportation lowers health care costs**

Landman ’12. [Wendy Landman](http://www.smartgrowthamerica.org/author/wlandman/), Executive Director of SGA. [May 20, 2011](http://www.smartgrowthamerica.org/2011/05/20/walkboston-good-walking-is-good-business/). Smart Growth America. Date Accessed: July 7, 2012. LY

There’s also evidence that walking can lower health care costs. In Massachusetts, if just 1 out of 10 adults started walking regularly, the Commonwealth would [save $121 million](http://www.walkboston.org/resources/links.htm) in heart disease expenditures.

#### Greater physical activity leads to longer life

Cegavske 12

Carisa, The News-Review, 6/21/12, [http://www.nrtoday.com/article/20120621/NEWS/120629965/1063/NEWS&ParentProfile=1055](http://www.nrtoday.com/article/20120621/NEWS/120629965/1063/NEWS%26ParentProfile%3D1055), Environmental health expert discusses healthy city planning, Accessed: 7/8/12, CD

Regular exercise adds about eight years to a person's life — more even than quitting smoking does. That's why a community should design an environment in which people want to walk and bike rather than drive. That's the message Dr. Richard Jackson, the host of the Public Broadcasting Service series “Designing Healthy Communities,” gave Wednesday to about 80 people who crowded into a room at the Douglas County Library to hear him speak. Afterward, Jackson, the chairman of environmental health sciences at the University of California, Los Angeles, toured the city with about a dozen residents. He recommended improvements along Washington Avenue and gave the city high marks for its bicycle trail along the South Umpqua River. “I think it's a treasure. I think this should be the diamond which you should build a filigree necklace around,” he said. A former director of the federal Centers for Disease Control and Prevention's National Center for Environmental Health, Jackson has written two books, “Urban Sprawl and Public Heath” and “Making Healthy Places,” on the connection between community planning and well-being. Jackson noted that more than a quarter of Oregonians are obese, twice the percentage of that 25 years ago, Jackson said. The national picture isn't pretty, either. Two of seven applicants to the military can't get in because they don't meet physical fitness standards, and the average life span of the American male ranks 49th compared to other nations, he said. It's not just the adults who are suffering, he said. Jackson said pediatricians are seeing more overweight children with medical problems such as high blood sugar and signs of depression. The root cause of these problems is a lifestyle revolving around the car, he said. “I'm asserting that what we've done is taken environmental disease and turned it into medical disease,” Jackson said. “The environment is rigged against this child and in many ways it's rigged against the doctor.” He said the American dream has come to mean living in the suburbs, but long commutes mean more fast food and less time for exercise and socializing. Physical and mental health suffers, he said. “If you want to devise a way in America for people to be depressed, isolate them in a steel box.” Following his speech, Jackson headed out of the library for a walk, giving his impressions of Roseburg's design along the way. While he thought Southeast Jackson Street was beautiful, Jackson found some areas a less lovely upon turning down Washington Avenue.

## HEALTH ADV. EXT.– OBESITY

#### **Overweight people means weaker military**

Cegavske 12

Carisa, The News-Review, 6/21/12, [http://www.nrtoday.com/article/20120621/NEWS/120629965/1063/NEWS&ParentProfile=1055](http://www.nrtoday.com/article/20120621/NEWS/120629965/1063/NEWS%26ParentProfile%3D1055), Environmental health expert discusses healthy city planning, Accessed: 7/8/12, CD

Regular exercise adds about eight years to a person's life — more even than quitting smoking does. That's why a community should design an environment in which people want to walk and bike rather than drive. That's the message Dr. Richard Jackson, the host of the Public Broadcasting Service series “Designing Healthy Communities,” gave Wednesday to about 80 people who crowded into a room at the Douglas County Library to hear him speak. Afterward, Jackson, the chairman of environmental health sciences at the University of California, Los Angeles, toured the city with about a dozen residents. He recommended improvements along Washington Avenue and gave the city high marks for its bicycle trail along the South Umpqua River. “I think it's a treasure. I think this should be the diamond which you should build a filigree necklace around,” he said. A former director of the federal Centers for Disease Control and Prevention's National Center for Environmental Health, Jackson has written two books, “Urban Sprawl and Public Heath” and “Making Healthy Places,” on the connection between community planning and well being. Jackson noted that more than a quarter of Oregonians are obese, twice the percentage of that 25 years ago, Jackson said. The national picture isn't pretty, either. Two of seven applicants to the military can't get in because they don't meet physical fitness standards, and the average life span of the American male ranks 49th compared to other nations, he said. It's not just the adults who are suffering, he said. Jackson said pediatricians are seeing more overweight children with medical problems such as high blood sugar and signs of depression. The root cause of these problems is a lifestyle revolving around the car, he said. “I'm asserting that what we've done is taken environmental disease and turned it into medical disease,” Jackson said. “The environment is rigged against this child and in many ways it's rigged against the doctor.” He said the American dream has come to mean living in the suburbs, but long commutes mean more fast food and less time for exercise and socializing. Physical and mental health suffers, he said. “If you want to devise a way in America for people to be depressed, isolate them in a steel box.” Following his speech, Jackson headed out of the library for a walk, giving his impressions of Roseburg's design along the way. While he thought Southeast Jackson Street was beautiful, Jackson found some areas a less lovely upon turning down Washington Avenue.

#### **Being overweight is common, leading cause of death**

CDC 10

 Centers for Disease Control and Protection, 2010, <http://www.cdc.gov/obesity/data/adult.html/>, Adult Obesity Costs, Accessed: 7/8/12, CD

More than one-third of U.S. adults (35.7%) are obese. No state has met the nation's [Healthy People 2010](http://www.healthypeople.gov/2010/document/html/objectives/19-02.htm) goal to lower obesity prevalence to 15%. The number of states with an obesity prevalence of 30% or more has increased to 12 states in 2010. In 2009, nine states had obesity rates of 30% or more. In 2000, no state had an obesity prevalence of 30% or more. [[Read article](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5930a4.htm?s_cid=mm5930a4_w)] Obesity-related conditions include heart disease, stroke, type 2 diabetes and certain types of cancer, some of the leading causes of death. [[Read guidelines](http://www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.htm)] In 2008, medical costs associated with obesity were estimated at $147 billion; the medical costs paid by third-party payors for people who are obese were $1,429 higher than those of normal weight. [[Read summary](http://content.healthaffairs.org/cgi/reprint/28/5/w822)]

## ECONOMY ADV. EXT. / ECONOMY LINK TURNS

\*ALSO SEE SPENDING ANS…..

#### An increase in bicycling can give Americans savings of $2 trillion every year

Flusche 9

(Darren, policy analyst, League of American Bicyclists, June 2009 <http://www.bikeleague.org/resources/reports/pdfs/economic_benefits_bicycle_infrastructure_report.pdf>, The Economic Benefits of Bicycle Infrastructure Investments, TL)

Riding a bicycle instead of driving a car has economic impacts that are not always obvious, often because the costs and benefits are borne and accrued by society in general rather than the individual user. Researcher Todd Litman of the Victoria Transport Policy Institute has attempted to quantify the benefits of switching from driving to bicycling. He looked at the benefits of congestion reduction, roadway cost savings, vehicle cost savings, parking cost savings, air pollution reduction, energy conservation, and traffic safety improvements. Litman estimated that replacing a car trip with a bike trip saves individuals and society $2.73 per mile. (A typical two-mile bike trip would save $5.56.)xxxv The benefits would be enormous if even a small fraction of the more than 200 billion miles Americans drive each month – nearly three trillion a year – were shifted to bike. (For an indication of just how enormous, consider that nearly 30 percent of all trips in Copenhagen, Denmark are by bicycle. A 30 percent mode-share in the U.S. would lead to an estimated savings of $163.8 billion a month, nearly two trillion dollars a year.)

EVEN A SMALL SHIFT CAN HAVE BIG SAVINGS

McGrath 8

Patrick, Cascade Bicycle Club, 1/14/2008, <http://www.adventurecycling.org/resources/benefitsofbicycling.pdf> Benefits of Bicycling Climate Change and Beyond, TL

Small increases in the cycling rate can mean big money for your city. Why? Because cars are an extraordinarily expensive form of travel when compared to bikes, even when one only considers the costs that the drivers themselves bear. An average midsize car driven 10,000 miles in a year costs its driver about $.76 per mile, or $7,574 for the year. The estimate includes gasoline, oil, maintenance, tires, insurance, license, registration, taxes, depreciation, and finance charges (6). Unfortunately, the $.76 figure only tells part of the story. Automobiles incur many costs that are not covered directly by the driver, including time lost to congestion, health expenses from air pollution-caused illnesses, road construction, and crashes. Called “externalities,” they boost the true cost of driving a car to about $1.20 per mile, according to one estimate (7). Replacing driving with bicycling saves money for the public. Gary Barnes at the University of Minnesota tallied the economic benefits of cycling to his state. In a state of about 5 million people, his conservative estimate found that Minnesota’s modest rate of bicycling – about 1.5% of adult trips and 5% of trips by children – led to fiscal benefits in excess of $300 million per year (8).

## ECONOMY ADV. EXT. / ECONOMY LINK TURNS

The plan saves gas and money

Flusche 9

(Darren, policy analyst, League of American Bicyclists, June 2009 <http://www.bikeleague.org/resources/reports/pdfs/economic_benefits_bicycle_infrastructure_report.pdf>, The Economic Benefits of Bicycle Infrastructure Investments, TL)

Meanwhile, employees are losing productive hours of their day while stuck in traffic. According to the Texas Transportation Institute, “Gridlock costs the average peak period traveler almost 40 hours a year in travel delay, and costs the United States more than $78 billion each year…traffic jams are wasting 2.9 billion gallons of gas every year.” There is reason to believe, however, based on the recent decline in driving, that a relatively small shift from cars to other modes could have an outsized impact on congestion. According to the Federal Highway Administration (FHWA), there was a 3 percent drop in traffic on “urban interstates” from 2007 to 2008. This has translated to a nearly 30 percent reduction in peak hour congestion, indicating that “when a road network is at capacity, adding or subtracting even a single vehicle has disproportionate effects for the network.”

#### COSTS EFFECTIVE THAN MORE HIGHWAYS

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

This analysis does not include several less easily quantified, but undeniably valuable additional benefits derived from investment in bicycle and pedestrian infrastructure, such as increases in real estate values; economic stimulus from infrastructure construction and businesses profiting from pedestrians and bicyclists; time savings by pedestrians and cyclists, as well as drivers on less congested roads; increased productivity due to improved health, and general gains in quality of life and more livable communities.

For the price of a single mile of a four-lane urban highway, approximately $50 million, hundreds of miles of bicycle and pedestrian infrastructure can be built, an investment that could complete an entire network of active transportation facilities for a mid-sized city.

#### THE PLAN SAVES MORE THAN $65 BILLION A YEAR

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

The financial value of improved mobility, fuel savings, greenhouse gas reductions, and health care savings amounts to more than $10 billion annually under our Modest Scenario. For the Substantial Scenario, benefits would add up to more than $65 billion every year. These benefits dwarf historic spending for bicycling and walking which was $453 million per year for 2005–2007 under SAFETEA-LU, and a mere $4.5 billion cumulative federal investment in these modes since 1992, when bicycling and walking first received documentable federal funding.

## ECONOMY ADV. EXT. / ECONOMY LINK TURNS

#### TRANSITIONING AWAY FROM A CAR-CENTERED TRANSPORTATION MODEL REFILLS GOVERNMENT TREASURIES AND CREATE MASSIVE SAVINGS

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Our car-focused transportation system is reaching its physical and financial limitations. Ever-expanding road networks have stimulated demand faster than they have increased capacity, creating congestion while leaving government treasuries empty. It is time to give Americans back control over their mobility. If given a choice, Americans know which transportation mode is best suited for each trip they want to take. Millions will choose to walk or ride a bicycle if safe and convenient infrastructure is made available. Being able to choose the best-suited travel mode for each trip will introduce an unprecedented force for efficiency into our transportation system, saving our citizens billions of dollars in fuel costs and millions of hours of wasted time in congestion. In addition, investments in bicycle and pedestrian infrastructure will translate into direct savings for the federal highway trust fund by reducing the need for road capacity expansion projects, providing resources needed to repair and maintain our existing roads.

#### FAMILY SAVINGS

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

As Americans struggle to cope with the high costs of driving, including increased gas prices, balancing various modes of transportation has become of great relevance on a personal level, too. Transportation is second to housing as a percentage of household budgets, and it is the top expense for many low-income families. Gas expenditures as a portion of the average household budget, which averaged 3.4 percent from 1996 to 2006, were approaching 9 percent in the summer of 2008.(72) The number was even higher among low-income households.

For many of our daily trips, bicycling and walking are the most economical choice. During the course of a year, regular bicycle commuters that ride five miles to work, can save about $500 on fuel and more than $1,000 on other expenses related to driving. In addition, they may avoid a considerable amount of time stuck in traffic or in the gym.

As gas prices continue to rise, news reports nationwide show that consumers are changing their transportation to meet these new economic conditions.(2, 73) The affordability of bicycling and walking begins to look more and more appealing.

## ECONOMY ADV. EXT. / ECONOMY LINK TURNS

#### Investing in bicycle infrastructure projects spurs billions in growth

Flusche 9

(Darren, policy analyst, League of American Bicyclists, June 2009 <http://www.bikeleague.org/resources/reports/pdfs/economic_benefits_bicycle_infrastructure_report.pdf>, The Economic Benefits of Bicycle Infrastructure Investments, TL)

Regions that have invested in bicycling have seen a beneficial impact on their economies. Studies have shown that bicycle industry and bicycle tourism can boost local employment levels and economic activity. Colorado has capitalized on its reputation as an outdoor recreation destination to attract tourists and active residents, and manufacturers who want to be close to their customers. A study commissioned by the Colorado Department of Transportation in LEAGUE OF AMERICAN BICYCLISTS POLICY RESEARCH REPORTS This is an Advocacy Advance Project — a partnership between the League of American Bicyclists and the Alliance for Biking & Walking. 2000 determined that bicycling contributed $1 billion to the economy from manufacturing, retail, tourism and bike races. Retail and manufacturing employ 1,213 people with an annual payroll of $34.1 million. Half of all summer visitors at Colorado ski resorts spend time bicycling. Of those 699,000 people, 70 percent are from out of state and 40 percent said they would have altered their vacation destination if bicycling were not available. A state need not have Colorado’s outdoor recreation reputation, however, to benefit from the bicycling industry. Wisconsin accounts for 20 percent of bicycle manufacturing in the U.S. Overall, the bicycling industry – manufacturing, distribution, retail, and other services – contributes $556 million and 3,418 jobs to the Wisconsin economy. Wisconsin also hosts a number of popular bike races and attracts visitors to its trails, in part, through the availability of multi-day tours.]]

## ECONOMY ADV. - JOBS

#### Bicycle infrastructure investments increase jobs

Garrett-Peltier 11

Heidi, Assistant Research Professor Ph.D. in Economics from the University of Massachusetts, Political Economy Research Institute University of Massachusetts, Amherst, June 2011, <http://www.peri.umass.edu/fileadmin/pdf/published_study/PERI_ABikes_October2011.pdf>, PEDESTRIAN AND BICYCLE INFRASTRUCTURE: A NATIONAL STUDY OF EMPLOYMENT IMPACTS TL

The U.S. is currently experiencing high unemployment, unsustainable use of carbon-based energy, and a national obesity epidemic. All three of these problems can be partly addressed through increased walking and cycling. Providing pedestrian and cycling infrastructure for the purposes of commuting, recreation, and fitness, is arguably more important than ever before. In addition, this study finds that designing and building this infrastructure can also address the problem of unemployment, by creating jobs for engineers, construction workers, and workers who produce the asphalt, signs, and other construction materials. We collected data from departments of transportation and public works departments in 11 cities nationwide and evaluated 58 separate projects. These projects ranged from road construction and rehabilitation, to building new multi-use trails and widening roads to include bike lanes and sidewalks. Using an input-output model with state-specific data, we estimated the employment impacts of each project and presented the results by project, by city, and by type. We found that on average, these various transportation infrastructure projects create 9 in-state jobs for each $1 million of spending and an additional 3 jobs if we include out-of-state effects. In addition, we found that the highest level of job creation was for bicycle-only infrastructure such as building or refurbishing bike lanes. These projects created up to 11.4 jobs per $1 million when we consider only in-state effects. This was followed by pedestrian-only infrastructure (such as sidewalks and pedestrian crossings) and multi-use trails, which created close to 10 jobs for each $1 million spent on the project. These findings suggest that when confronted with a decision of whether or not to include pedestrian and/or bicycle facilities in transportation infrastructure projects, planning officials should do so, not only because of the environmental, safety, and health benefits but also because these projects can create local jobs.

## ECONOMY ADV. – SMALL BIZ

#### THE PLAN BOOSTS SMALL BUSINESSES

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Bicyclists and pedestrians are an important market segment for small, local business. Their tendency to travel for shorter distances, buy less at once and buy more frequently gives smaller businesses an edge over suburban mega-stores that cater to the motorized customer. The availability of local businesses can significantly reduce the amount people drive.

In such communities, a bicyclist has the choice of riding two miles to a local merchant instead of being required to drive to a mall several miles away to make the same purchases. In that case, two miles of bicycling may replace 10 miles of driving. Similarly, when pedestrians can safely walk the most direct route to their destination, they can replace car trips that are actually of longer distance. Just as importantly, the compact nature of mixed-use neighborhoods also reduces trip distances for those residents who choose to drive, because they equally profit from the opportunities to work or run errands closer by.(20)

Americans living in more compact, mixed-use communities typically drive about 20 to 40 percent less than those in highly car dependent suburbs.(16, 21, 22) Assuming that increasingly mixed land use patterns induced by bicycle and pedestrian infrastructure will reduce the length of car trips of 15 miles or less by as little as 1 (Modest Scenario) to 3 percent (Substantial Scenario), the resulting driven miles avoided would amount to 13 to more than 30 billion, respectively.

#### Small businesses are key to economic recovery- job creation

REDMOND 12

BILLIE REDMOND, Writer for US News and World Report, “Small Businesses Are Key to the Economy, Not Big Government” 6/18/12. Accessed 7/8/12.) WK <<http://www.usnews.com/opinion/blogs/economic-intelligence/2012/06/18/small-businesses-are-key-to-the-economy-not-big-government>>

The solution to the jobs problem is small business, not more government. Job Creators Alliance has laid out a roadmap to sustainable economic recovery—and that path is paved with commonsense regulatory reform, certainty about future taxes, and the return of spending sanity to our federal government. In recent years, the federal government has unleashed a regulatory onslaught on small businesses in the private sector and has made it much harder for the engine of our economy to function as it should. Until policymakers and elected officials start to listen to the voice of the entrepreneur and small business owner, it's hard to see how job creation will come back. A March Small Business Outlook Survey conducted by the U.S. Chamber of Commerce shows that concerns about over-regulation are the highest we've seen in the past year. Small business owners are hesitant to hire because of uncertainty created by the plethora of threatening regulations coming from and pending in Washington. There is something to be said about the correlation between the unemployment rate and the increasing concern about regulations coming out of Washington. America needs the government to step down and let true job creators lead the way to recovery.

## ECONOMY ADV. – SMALL BIZ KEY

#### Small Businesses are holding our economy together

MacDonald 12

Elizabeth MacDonald, writer for foxbusiness, “U.S. Economy Thrives on the Pearls of Small Business” 6/27/12. Accessed 6/8/12.) WK <http://www.foxbusiness.com/economy/2012/06/27/us-economy-thrives-on-pearls-small-business/>

There’s a bull market in doom and gloom these days. But small businesses are still chugging along, the heart and soul of the U.S. economy, the artisanal small shops who create the lion's share of jobs in the U.S. economy. These are the very same small businesses less than five years old that were responsible for nearly all net job creation between 1980 and 2005. And they’re still moving forward, despite the industrial-strength denial coming out of D.C. that wants to hit small businesses with higher taxes, because Washington, D.C. has a monopoly claim on taxpayer wallets -- and because Washington believes it can summon the growth fairy on its own with tax and spend policies. Ok, maybe that was too much journalism jaundice (I have a headache). Because I’m an optimist (I plan to have my epitaph on my tombstone read: “I’m in it for the long term"), I’d like to point out that, yes, the U.S. economy is hurting, but is healthy, vibrant and strong. “The Vintage Pearl” is evidence of that. Erin, Ryan and their team of 61 workers run a studio where they make customized jewelry out of sterling silver, freshwater pearls and birthstone crystals that incorporate names, dates or words of inspiration. The team hand crafts necklaces, bracelets, key chains, leather cuffs, earrings, even dog tags, baby spoons, and more. Plus, “The Vintage Pearl” even has time for charity, working closely with several nonprofits such as Christian Ministries, orphanages, food pantries, as well as groups that fight child trafficking. “We have a heart for people in need, and the success of the company allows us to give,” Ryan says. A bright spot in all the silly, self-indulgent doom and gloom talk about the U.S. economy. Yes, it’s dreadful the U.S. manufacturing base is being hollowed out by cheaper labor in China and elsewhere. Our workers deserve better. And yet we’ve got a solid small business sector and a thriving services economy in health care, legal, information technology, plus a powerful R&D culture.

#### Small businesses are the backbone of the economy and key to alternative energy breakthroughs

SmartMeters 12

(SmartMeters “Small Businesses Key to Energy Evolution” 7/5/12. Accessed 7/8/12) WK <http://www.smartmeters.com/the-news/3379-small-businesses-key-to-energy-evolution.html>

According to the Department of Energy (DOE), small businesses play a crucial role in solving energy, environmental, and nuclear challenges. Last week, the DOE announced new funding to more than 100 small businesses nationwide through the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. These investments, which total more than $102 million, are helping companies develop promising technologies. Energy Secretary Chu notes, “Small businesses are the backbone of our economy, employing half of all workers in America and creating two out of three new jobs in the U.S. Bringing these innovative technologies to market is just the latest step in the Energy Department’s efforts to support the critical role that small businesses are playing in creating jobs for American workers and expanding our country’s clean energy economy.”

## ECONOMY ADV. – SMALL BIZ

#### Small businesses are key to the economy

Danner and Quinlan 12

(Dan Danner, Staff writer for Phoenix Business Journal, and Farrell Quinlan, Staff writer for Phoenix Business Journal. “America trusts small business as key to economic recovery” Phoenix Business Journal, 3/16/12. Accessed 7/8/12.) WK <http://www.bizjournals.com/phoenix/print-edition/2012/03/16/america-trusts-small-business-as-key.html?page=all>

The solution to America’s biggest challenge is small. Small business, that is. Most Americans know and understand that the only way to put the nation’s economy back on its feet is to put people back to work. But that simple message has gotten muddled in the pandemonium that’s engulfed candidates of both parties in the race for the White House. Most Americans know and understand that the only way to put people back to work is to trust small-business owners to do what they do best: create jobs. Those who own and operate Main Street’s small companies can create jobs only if the federal government learns to trust them, as most citizens do, and stop putting obstacles in the way. State governments also like throwing their share of hurdles in the way of job creation. One in Arizona is a foolishly burdensome tax on machinery and equipment, the actual guts and muscle of healthy, job-producing small businesses. As of this writing, the Arizona House of Representatives and Senate have passed separate versions of the Small Business Job Creation Act. If approved by voters in November, this constitutional amendment would increase the business tax exemption for new machinery and equipment investments from the current $68,000 to $2.4 million. In a poll of Arizona NFIB members taken last year, 77 percent supported raising the exemption. The survey revealed that cutting the tax burden on a business’s machinery and equipment would lead to a burst of job creation among small businesses, with 46 percent of owners saying it could lead to them hiring new workers and 56 percent saying it could result in more machinery and equipment purchases. There would be a huge sense of betrayal if the state House and Senate failed to refer a measure giving Arizona voters the opportunity to roll back this job-killing tax. Small business is not an electorate to be taken lightly, as it all comes down to trust. “Americans put the most trust in the ideas and opinions of small-business owners and local business leaders on how best to create jobs,” the Gallup polling organization reported recently. By a wide margin — 79 percent — those who responded to a recent national Gallup poll put small-business owners at the top of their list of leaders whose ideas and opinions they trust to create jobs in the United States. Far down the list, at 45 percent, were executives of major corporations; and below them ranked members of Congress. Gallup noted that the high level of trust placed in small business is nothing new. When researchers studied Americans’ confidence in national institutions, they found greater reliance in small business than any institution other than the armed forces.

## SMART GROWTH ADV.--INTERNALS

#### STUDIES PROVE INVESTING IN ACTIVE TRANSPORTATION FOSTERS SMART GROWTH PLANNING

Frank et al. 9

Lawrence D. Frank, Michael J. Greenwald, Steve Winkelman, James Chapman, Sarah KavageSchool of City and Regional Planning, University of British Columbia, Center for Clean Air Policy, Urban Design 4 Health, Inc., 20 October 2009 <http://www.ncbi.nlm.nih.gov/pubmed/19850071> Carbonless footprints: Promoting health and climate stabilization through

active transportation

In this cross-sectional analysis, we found clear evidence that urban form strategies can have converging benefits for public health and climate change. Increasing transit accessibility, residential density, and street connectivity were all significantly associated with more energy expended from walking and less energy generated from motorized transport, and significantly increased the index of energy from walking to energy from motorized transport. The creation of a single metric, the energy index, increases the ability for policy makers and researchers to conceptualize the integration of health and climate change dimensions of transportation. Translating walking and motorized travel into energy metrics provides the ability to compare directly the utilization of healthy versus unhealthy or perhaps health neutral energy for travel. Results from this study make it clear that increased investment in transit and regional accessibility without the car coupled with increased walkability of local neighborhoods can collectively lead to a more active, healthier, and sustainable future.

#### THE PLAN LEADS TO “SMART GROWTH”

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Investments into bicycling and pedestrian infrastructure also lead to reduced driving by stimulating a richer more diverse type of development. Often referred to as “smart growth,” this pattern of compact, mixed-use development places destinations such as homes, workplaces, shopping and recreation closer together, while providing easy access by public transportation and infrastructure for bicycling and walking.

The availability of public transportation has been shown to increase the mix of residences, businesses and other amenities in communities.(15, 16) Similar effects have been described for bicycling and walking facilities, such as trails.(16–19)

## SMART GROWTH ADV.—GEN. GOOD

#### **Smart growth raises property values**

Landman ’12. [Wendy Landman](http://www.smartgrowthamerica.org/author/wlandman/), Executive Director of SGA. [May 20, 2011](http://www.smartgrowthamerica.org/2011/05/20/walkboston-good-walking-is-good-business/). Smart Growth America. Date Accessed: July 7, 2012. LY

 Homes in walkable areas [command a premium](http://www.uwex.edu/ces/cced/downtowns/ltb/lets/0703ltb.html) – on average $20,000-$34,000 – over similar homes in less walkable areas, and they have experienced less than half the average decline in value since the real estate peak in the mid-2000s. At the same time, walkable, higher-density neighborhoods [cost taxpayers less](http://www.ceosforcities.org/work/walkingthewalk.html): a home built in a low-density suburb requires, on average, $10,000 more in infrastructure than a home built in an urban core.

#### SMART GROWTH STRATEGIES ARE COST-EFFECTIVE AND MAXIMIZE RETURN ON CURRENT INVESTMENTS

Smart Growth America 10

2010 Smart Growth America, <http://www.smartgrowthamerica.org/issues/economic-prosperity/municipal-budgets/>, Smart growth benefits municipal budgets TL

Smart growth maximizes return on public investment. Compact development requires less public funds to build, maintain and operate than sprawl, but smart growth also generates more public revenue. Prince William County, Virginia, found that providing municipal services to a house on a large lot far from existing infrastructure costs the county $1,600 more than is returned in taxes and other revenues. Dispersed rural development in Colorado costs county governments and schools $1.65 for every $1.00 of tax revenue generated, while farms and forestland cost only 38 cents per $1.00 generated.

Repairing existing infrastructure saves money and resources. Keeping our existing roads and highways in good repair, rather than building new roads and attending to our current ones later, saves more money than one might think. According to the American Association of State Highway and Transportation Officials, every $1 spent in keeping a good road good precludes spending $6-$14 to rebuild one that has deteriorated. The same goes for water systems. Aging pipes means losing between 6% and 25% of drinking water to leaks and breaks. In 1995, an estimated 25.4 billion gallons of water leaked out of aging pipes across the every day.

#### THE PLAN FOSTERS URBAN RENEWAL

Smart Growth America 10

2010 Smart Growth America, <http://www.smartgrowthamerica.org/issues/economic-prosperity/municipal-budgets/>, Smart growth benefits municipal budgets TL

Smart growth helps eliminate the high cost of urban decline. When urban areas lose population to sprawl development, properties are abandoned, the tax base declines, and infrastructure falls into disrepair. This in turn leads to the deterioration of public services and deferral of capital improvements, raising the cost of doing business and living in the city and spurs further outmigration. The long-term consequence is damage to the regional economy. Investing in vacant and abandoned properties can revitalize a neighborhood and an economy. By encouraging investment in existing, underused properties municipalities can spur economic growth, increase neighboring property values and reduce crime simultaneously. Learn more about vacant property revitalization here.

## SMART GROWTH ADV.--EMISSIONS

#### Smart growth communities key to reduce emissions and other pollution—studies prove

EPA 12

May 09, 2012 <http://www.epa.gov/dced/topics/eb.htm> Environmental Benefits Of Smart Growth, TL

Many studies show the environmental benefits of smart growth. Development guided by smart growth principles can minimize air and water pollution, encourage brownfields clean-up and reuse, and preserve natural lands. The built environment — the places where we live, work, shop, and play — has both direct and indirect effects on the natural environment. Where and how we develop directly affects natural areas and wildlife habitat and replaces natural cover with impervious surfaces such as concrete or asphalt. Development patterns and practices also indirectly affect environmental quality since they influence how people get around. Separating land uses, spreading development out, and providing little or no public transportation or safe walking and biking routes foster greater reliance on motor vehicles. As development grows more dispersed, people must drive further to reach their destinations, leading to more and longer vehicle trips. These increased trips create more air emissions and greenhouse gases that contribute to global climate change. Ultimately, air pollution and climate change can also harm water quality and wildlife habitat. Smart growth practices can lessen the environmental impacts of development with techniques that include compact development, reduced impervious surfaces and improved water detention, safeguarding of environmentally sensitive areas, mixing of land uses (e.g., homes, offices, and shops), transit accessibility, and better pedestrian and bicycle amenities. In practice, these techniques have created tangible environmental improvements. A 2000 study found that compact development in New Jersey would produce 40 percent less water pollution than more dispersed development patterns.1 A 2005 Seattle study found that residents of neighborhoods where land uses were mixed and streets are better connected, making non-auto travel easier and more convenient, traveled 26 percent fewer vehicle miles than residents of neighborhoods that were more dispersed and less connected.2 While individual smart growth methods can yield significant environmental improvements, a synergistic approach combining policies and programs can deliver even greater environmental benefits. For more information on the environmental effects of development and the benefits of smart growth, see Our Built and Natural Environments: A Technical Review of the Interactions between Land Use, Transportation, and Environmental Quality. Air Quality — According to a 1999 EPA evaluation of the environmental benefits of infill versus greenfield development (PDF) (35 pp, 368K, About PDF), siting a new development in an existing neighborhood, instead of on open space at the suburban fringe, can reduce miles driven by as much as 58 percent. Communities that make it easy for people to choose to walk, bicycle, or take public transit can also reduce air pollution by reducing automobile mileage and smog-forming emissions.

## SMART GROWTH ADV.--EMISSIONS

#### Compact communities can cut 85 million metric tons of Co2 annually and save $24 billion each year

Local Government Commission ‘8

Local Government Commission January 25, 2008, <http://www.newpartners.org/2008/press_release3.html>, Smart Growth Seeks to Change “Climate Change” TL

Americans living in compact neighborhoods where cars are not the only transportation option, drive a third fewer miles than those in typical automobile-oriented suburbs. The study also cites real estate projections that two-thirds of development expected to be on the ground in 2050 is not yet built, meaning that the potential for change is profound. Shifting 60% of new growth to compact patterns would save 85 million metric tons of CO2 annually by 2030. Such compact development would also cut national fuel expenditures by $24 billion in 2030 or $250 billion on a cumulative basis. The conference’s Friday program begins with a dialogue on “Let’s Change the Climate: State Leadership for Achieving a Better Environment” that will focus on the elements of smart growth that can contribute to reducing greenhouse gases and their environmental impacts – featuring several governors who will share their insights on their state’s policies for accomplishing these changes.

#### Smart growth communities can reduce emissions by 15 percent

EPA 12

May 09, 2012, <http://www.epa.gov/dced/climatechange.htm>, Smart Growth and Climate Change TL

According to EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2006 (April 2008), roughly 20 percent of U.S. carbon dioxide (CO2) emissions come from passenger vehicles. Lower-carbon fuels and higher gas mileage standards can reduce the CO2 emissions from passenger vehicles, but the growth in population and in vehicle miles traveled would eventually outpace these reductions. An important third strategy to reduce CO2 from vehicles is to address the underlying development patterns that give people no choice but to drive. Growing Cooler, a study published in 2008 by the Urban Land Institute and partially funded by EPA, examined the research on compact development, vehicle miles traveled, and carbon dioxide emissions to determine how more efficient development patterns could help reduce our impact on the climate. The study concluded that compact development can reduce vehicle miles traveled by 20 to 40 percent compared to conventional development patterns. Based on the amount of development that will take place and the percentage of that development that could reasonably be expected to be compact infill, the study estimated that compact development could reduce CO2 emissions by 7 to 10 percent in 2050. A subsequent study, Moving Cooler , found that a combination of more compact development and investments in transit and other transportation options could reduce greenhouse gas emissions from transportation by 9 to 15 percent by 2050.

## SMART GROWTH ADV.--SPRAWL

#### **Smart Growth is a good alternative to sprawl—It has a host of health benefits that save billions**

Smart Growth America 10

2010 Smart Growth America, <http://www.smartgrowthamerica.org/issues/economic-prosperity/municipal-budgets/>, Smart growth benefits municipal budgets TL

Sprawl means more time in cars and less time walking or biking. This in turn means less physical activity, greater emissions rates and more traffic-related injuries and fatalities. Areas of sprawl development are more likely to have higher rates of obesity and hypertension, regardless of gender, age, education levels, smoking and eating habits. Children in neighborhoods lacking access to sidewalks or walking paths, parks or playgrounds, or recreation or community centers had 20-45% higher odds of becoming obese or overweight compared to children who had access to these amenities. The cost of these statistics to society is staggering. Obesity-related health problems like heart disease and diabetes account for 9% of total U.S. health care spending, amounting to $395 per year per person. Asthma costs over $30 billion each year, and traffic crashes cost an estimated $180 billion. Smart growth development can reduce those trends. Increasing walkability and giving people alternatives to driving can increase physical activity, decrease traffic injuries and reduce health care costs across the board.

## SMART GROWTH ADV.—LOCAL BUDGETS

#### **Smart Growth benefits local budgets**

Smart Growth America 10

2010 Smart Growth America, <http://www.smartgrowthamerica.org/issues/economic-prosperity/municipal-budgets/>, Smart growth benefits municipal budgets TL

Smart growth benefits municipal budgets by reducing the cost of infrastructure like roadways and water systems; smart growth reduces maintenance costs; and smart growth reduces the costs associated with urban decline, including the reuse of vacant properties and brownfields.

Smart growth costs less to build and maintain. By emphasizing dense development, smart growth puts existing capacity to work, lowers infrastructure costs per capita, and helps ensure infrastructure is maintained before repairs get expensive. Shifting roughly 25% of projected low-density growth to more compact development would result in a national savings of $4.2 billion, or 3.7%, for roads, water and sewer operations, and maintenance over a 25 year period.

#### **SMART GROWTH MAKES LOCAL BUDGETS MORE EFFICIENT**

Smart Growth America 10

2010 Smart Growth America, <http://www.smartgrowthamerica.org/issues/economic-prosperity/municipal-budgets/>, Smart growth benefits municipal budgets TL

Smart growth helps municipalities provide public services at a lower cost. Low-density development requires more fire and police stations – as well as more vehicles and safety equipment – per capita to adequately respond to emergencies. Similarly schools, libraries, parks and hospitals also require upfront infrastructure expenditures that are significantly less expensive in compact communities.

Smart growth helps eliminate funding for redundant capacity and makes the most of existing services. In Maine, between 1970 and 1995, the number of school children declined statewide by 27,000. Yet during that time the state government alone invested $338 million in new school construction to accommodate population shifts from older communities to fast growing regions. The cost of busing students to these new schools increased from $8.7 million to over $54 million during those years.

## SMART GROWTH ADV.--ECONOMY

#### **Smart growth k2 econ—boosts consumer spending**

Landman ’12. [Wendy Landman](http://www.smartgrowthamerica.org/author/wlandman/), Executive Director of SGA. [May 20, 2011](http://www.smartgrowthamerica.org/2011/05/20/walkboston-good-walking-is-good-business/). Smart Growth America. Date Accessed: July 7, 2012. LY

Massachusetts’ main pedestrian advocacy organization, is working to reach beyond active transportation and smart growth partners to recruit allies in the retail, employer and real estate worlds to promote walkable communities. WalkBoston’s latest publication, [Good Walking is Good Business](http://www.walkboston.org/resources/images/good%20walking-biz10.pdf) (PDF), presents a wide array of research that shows how walking benefits many elements of the economy. According to the [Urban Land Institute](http://www.uli.org/sitecore/content/ULI2Home/ResearchAndPublications/Fellows/McMahon/Commentaries/PlaceMakingDividend.aspx), vibrant, walkable retail areas attract people to stay longer, spend more money, and visit more often. According to Marlon Boarnet, director the Institute of Transportation Studies at the University of California-Irvine and author of Retrofitting Suburbia, the most walkable, densely-built shopping districts in Los Angeles have [four times the retail activity](http://www.infrastructurist.com/2011/01/10/new-report-commercial-density-not-street-geometry-facilitates-walkable-centers/) of “strip mall” shopping centers in less dense areas. For businesses, supporting improved walking conditions is a sound but sometimes overlooked investment. Here are some of the ways businesses can benefit from more walkable neighborhoods: Some of the country’s most popular tourist destinations – like the National Mall in Washington DC and the Las Vegas Strip – are also some of the most pedestrian-oriented places around. In Massachusetts, the $15.6 billion tourist industry thrives not just in Boston, which Frommer’s lists among [the 10 most walkable cities in the world](http://www.frommers.com/slideshow/index.cfm?p=9&group=391&cat_cd=FAMILY#slide), but also in the compact, historic town centers across the state. The economic impact of walkability affects homeowners and taxpayers, too.

## REDUCES FOSSIL FUEL USE / OIL DEPENDENCY

#### Bicycling helps solve oil dependence and climate change while being cost efficient

Rails to Trails, 08

Rails to Trails Conservatory: Active Transportation for America. <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>. 2008. DA- 07/03/2012.

Climate change and oil dependence are among the biggest challenges we face. Some measures to overcome these problems could pose a serious burden on our economy and society as a whole. Others will offer great opportunities to improve our economic competitiveness and our overall quality of life. Bicycling and walking can significantly contribute to reducing oil consumption and CO2 emissions within the transportation sector. To minimize the economic costs of mitigating the impacts of climate change, it will be crucial to aggressively pursue the most cost-effective measures to reduce greenhouse gas emissions. Increased bicycling and walking are capable of achieving greenhouse gas reductions at no extra costs to the economy, because fuel savings alone will offset the investment costs, and additional benefits make it a “no regrets” strategy. Americans will demand a fiscally responsible approach to addressing climate change that achieves maximum results at minimal costs, which is why increasing bicycle and pedestrian use through investments in safe and convenient infrastructure should rank high on any list of measures we consider to reduce greenhouse gas emissions and our dependence on oil.

#### Bike paths decrease fossil fuels use

ConnVERT, 12

ConnVERT: Renewable Energy. <http://conservect.org/energy/CleanEnergy/tabid/481/Default.aspx>. 2012. DA- 07/01/2012

Bike paths and pedestrian zones can not only decrease use of fossil fuels, they make us healthier! According to the EPA, each gallon of gasoline produces 8.8 kilograms (or 19.4 pounds) of CO2 which would occupy 4.9 cubic meters (172 cubic feet) of space. So, if you ride your bike instead of driving your car over a ten-mile round trip just 3 times, you have avoided putting at least 19.4 pounds of CO2 into the air, plus other, more potent greenhouse gases that also cause smog. If your car gets less 30 mpg, you have avoided even more. And that does not include the pounds you lost getting exercise!

#### Bike paths benefit economy and reduce fossil fuels

Good Cities News, ‘12

Good Cities News: If You Build Bike Lanes They Will Ride. <http://www.good.is/post/if-you-build-bike-lanes-they-will-ride/>. 04/27/2012. DA- 07/01/2012. AW

It’s also an opportunity to kill two birds with one stone: It turns out that building bike lanes actually employs more people than projects like road resurfacing, since it is labor-intensive, not machine-reliant, business. In cities where NIMBY activists and budget cuts are raising the political cost of laying bike lanes, the employment argument is a powerful case for additional investment. on top of all the other benefits that come with bike commuting. Less traffic for folks who stay in fossil fuel vehicles is part of the argument, too. With this research in hand, the prescription for cities is clear: Want bikes? Build lanes.

## Cars Bad – Environ

The era of cars, suburbs and shopping centers is ecologically devastating

Crawford 2

Crawford, Former Lecturer in Architecture at Universidade Independente, 2002, J.H., Carfree Cities, p.

Something momentous and rather sinister happened in the United States in the second half of the 20th century: we transformed our lovely New World landscape, and virtually all our townscapes, into an immense, uniform automobile slum, from sea to shining sea. In the process, we created an everyday environment that is ecologically catastrophic, economically futureless, socially poisonous, and spiritually degrading. We Americans like to think of ourselves as the avatars of progress. Fittingly, we have demonstrated that the national automobile slum is a failed experiment in human ecology, and now we must move on to create a better living arrangement. We didn't mean it to work out this way—but then the law of unintended consequences is always crudest to the well-intentioned. We meant to construct an automobile Utopia— a drive-in civilization of perfect comfort and ease—and it became instead "the fiasco of suburbia," in Leon Krier's apt phrase, a disaggregated wasteland of shrieking signage, throwaway architecture, and impoverished public space. Americans also have short attention spans, and so it is bitterly ironic that this enormous fiasco was inaugurated in the wake of the "City Beautiful" movement (roughly 1890-1918), a great patriotic effort to pull together the architecture and civic design of our nation in order to make our towns and cities worthy of what had suddenly, by the 1890s, become a great and powerful nation. The brief, bright era of the City Beautiful movement (sometimes called "American Renais­sance") gave us our most beloved public places—from the Copley Square library in Boston to the San Francisco Civic Center. But at the height of this era, Henry Ford perfected his Model T in a greasy Detroit workshop, and as soon as the terrible bother of World War One was concluded, America dropped the City Beautiful cold and embarked, with all our stupendous wealth, energy, and ingenuity, on a new campaign to retrofit every town, big and small, and all the countryside in between, for the accommodation of cars. By the eve of World War Two, we had accomplished the astounding feat of making all our cities look like the inven­tory yard of Henry Ford's greasy workshop. After World War Two, we resumed this operation with mad glee and an inflated sense of entitlement on account of having won such a decisive victory against the forces of man­ifest wickedness. We built the colossal Interstate highway system—including freeways through most city centers—and laid the armature for the ghastly explosion of suburban tract housing, shopping centers, franchise food sheds, and other accessories of the vaunted "world's highest standard of liv­ing" that ensued. And here we are, stuck with it all, at a time when ominous currents of world economic and political change suggest that we cannot possibly continue this mode of living. Now, a few points must be emphasized if anyone— particularly a non-American—might understand why we undertook this foolish campaign. One is that, the City Beautiful movement aside, American cities were never very nice. They were products of the industrial age, which was itself an economic and cultural experiment—something that the world had never seen before. American cities rapidly achieved a monstrous scale, and life within them assumed the flavor of an industrial nightmare. In fact, as soon as the railroad—the very herald of industrialism—came along in the 1850s, we got the first modern suburbs. They symbolized the impulse to flee the industrial city for its supposed antidote: country life. And indeed, for a few decades this kind of romantic railroad suburb composed of "picturesque villas," as they were advertised, probably was a lovely place to live for the fortunate few who could manage it. But city life itself in America just kept getting steadily worse, more de-natured, more oppressive in scale, more dominated by machines, noisier, smellier, more crowded, while it less and less embodied a setting for civilized human relations. The City Beautiful movement had been an organized attempt to correct all that, and, despite its signal achievements, must be considered a failure in the long run. Americans' disdain for cities persisted through the 20th century. Indeed, it only became more severe. Which brings us up-to-date to the current American pre­dicament at the turn of the 21st century. We have created too many places that are not worth caring about and not worth living in, and before long (if not already) they will add up to a civilization that is not worth carrying on. That the rest of the world, Europe in particular, has not wholeheartedly aped our behavior and trashed their cities is a fortunate thing, because we are going to need alternate models for assembling a human ecology that is worth living in, and Europe still has many excellent examples we can learn from. Personally, I feel that the future is going to require us to live differently, whether we like automobile-centered living or not, and that economic, political, and ecological forces are already underway that will compel us to change our behavior. I believe these forces will prompt us to recondense everyday life into the ecological community known as the town or city, a place that offers real spiritual rewards to its inhabitants, as well as a sound economic and social framework. There is no question that the role of the automobile will have to be reduced, perhaps even eliminat­ed, within the organism of the city.

## Cars Bad – Lethal Weapon

You drive a lethal weapon

Sloman 6

Sloman, Special Advisor to the Board of Transport for London, 2006, Lynn, Car Sick: Solutions for our Car-addicted Culture, p.

Cars are killing machines Today, and tomorrow, and the day after that, ten families in Britain will have their world turned upside down for ever, with the death of a child, parent, brother or sister in a car crash. Over 3,000 people are killed every year in Britain. Over 30,000 are seriously injured, in some cases losing their sight or their legs, or suffering permanent brain damage, so that their own lives and the lives of the people who care for them will never be the same again. There are also uncounted numbers of people who suffer from grief and depression for decades after the death of a loved one, sometimes themselves committing suicide years later. The charity RoadPeace supports victims of road crashes and their families. It was founded by Brigitte Chaudhry, whose own son was killed in a car crash. Five years ago, I worked with Brigitte to try to persuade the Government to toughen up the law on speeding, because it was clear that a great many avoidable deaths happened because vehicles were being driven much too fast. Through working with Brigitte, I met some of the members of RoadPeace who had suffered the loss of a close family member. Many of them wrote personal letters to Prime Minister Tony Blair to press for lower speed limits and stricter speed enforcement. These are two of their stories. Joanne Love's son, Thomas, was sixteen and a half when he was killed. He was on the pavement just outside the park in London where he had played all his life. The speed limit on the road was 30mph, but the driver of the car was travelling much faster. Joanne Love said in her letter: This is the first time I have ever written to you on an issue but this one is very dear to my heart as my son Thomas Love was killed by someone driving a stolen car at well over the SOmph speed limit. Thomas was killed on 14 May 1999 on Green Lanes, right next to Clissold Park. ... To add to the horror my younger son Josh was with his brother when he was hit by the car. I cannot imagine what my son and their friends went through in those terrible moments. I could write for pages about the effect the unlawful killing of my beautiful child has had upon myself and my family. Our lives have been completely destroyed by the actions of another person driving at speed. Speeding cars kill people every single day and we as a nation just don't seem to care very much about that at all. Of course it is always something that you hear about, not something that happens to you. Well, it happened to my son. He is dead and his brother Josh and I somehow have to exist in this world without him. Roger and Joanne Browning suffered the death of their five-month-old daughter in a car crash on a rural road in Surrey. They were driving on a winding country lane, with their daughter strapped in a car seat. They wrote: The road we were travelling on [had] a 60mph limit, clearly a lethal speed but, nevertheless, the blanket 'national' limit under which most rural roads fall. Because of the nature of the road, we were travelling at about 35mph, which we considered safe. The car that collided head-on with our vehicle on a bend was judged by police to be travelling at 60mph. Although our daughter was killed in the crash, the driver was only fined £250 because, as her lawyer pointed out, the driver had been travelling within the speed limit and so her standard of driving could be judged as merely careless. Almost six years after the crash our lives are still seriously blighted. Our daughter, who in her five months showed herself to be a happy and healthy child, has been robbed of life; one of the worst aspects of her death was how needless and preventable it was. Health-and-safety-at-work experts talk about the 'accident pyramid'. At the tip of the pyramid is someone's death or a serious injury. But below that there may be ten people who are slightly injured, and below that, perhaps a few tens of incidents where property is damaged but nobody is hurt, and below that again, perhaps several hundred near-miss incidents which could all too easily have led to a death, that are thought of as 'a lucky escape'. To stop people being killed, it is no good relying on luck. You have to change the unsafe working practices and bad habits at the base of the pyramid. These bad habits seem, on the face of it, trivial. Ninety-nine times out of a hundred they do not result in anyone being hurt, and so workers and managers may assume that they do not matter. In fact, 'accidents' are never accidental—they are the predictable one-time-in-a-hundred consequences of repeated potentially dangerous acts. The only way to reduce the number of accidents is to systematically change the risky behaviour that gives rise to them. The same approach should be applied to the roads, but it is not. Nearly ten people are killed in car crashes in Britain every day. Another 250 are seri-ously injured, and about 1,000 people are slightly hurt. Beneath these headline statistics there could be as many as 20,000 crashes where a vehicle is damaged but nobody is hurt. And beneath this again, there is an unknown, but very large, number of potentially dangerous practices and bad habits.14 Ninety-nine times out of a hundred, these do not result in a crash. People overtake on a blind bend and there is nothing coming the other way. They drive at 40 miles an hour in a 20 mile an hour zone outside a children's playground and no child steps off the road unexpectedly. But one time in a hundred there is a car driving the other way, or a child crossing the road. If we treated road safety as seriously as we treat health and safety at work, we would systematically make it impossible for drivers to behave in this risky way. We would use legislation, road design and law enforcement to ensure that drivers drove within their own capabilities and those of their vehicles, and made allowance for unpredicted actions by others. The most widespread risky behaviour is driving too fast. By this I do not only mean breaking the speed limit, although this is commonplace. As Roger and Joanne Browning found, the speed limit is sometimes far in excess of a safe speed. To eliminate the unsafe behaviour at the base of the accident pyramid, we would cut the speed limit to 20mph wherever people lived, played, shopped or went to school. The limit on narrow country lanes would be much lower than the current 60mph. Speed limiters in every vehicle would ensure everyone kept to the safe limits. Speed cameras would be widely used to enforce the law and drivers who persistently overrode their car's speed limiter and broke the limit would be banned from driving for life. If we did these things, thousands of people, including Joanne Love's son and Roger and Joanne Browning's baby daughter, could still be alive today. "Ah, but it just isn't reasonable to expect everyone to drive so slowly," people say. I do not really think there is any answer to this, except to ask, is it reasonable to tell a mother or father that their child has been killed for the sake of a few saved minutes? As it is, many schools and villages are on roads where speed limits are 40mph, 50mph or even 60mph, and peak speeds on these roads tend to be even higher than the legal limits. Parents keep children indoors because it is not safe to go out, and that in itself is a tragedy because it means that children are never allowed to do their own thing, away from adult supervision, as all previous generations did. Instead of biking round to a friend's house, or walking half a mile to the park to collect conkers, they have to wait for an adult to be free to take them. Speed cameras are effective at reducing speeds and saving lives, on average reducing deaths and serious injuries by more than a third. However, the Government sets guidelines which say that they may only be used where at least four people have already been killed or seriously injured. One, two or three deaths are not enough. Thousands of communities want a camera but have been told that they cannot have one because not enough people have been killed.15 Our society is paralysed with fear from taking effective action against this annual slaughter. Lower speed limits and wider use of speed cameras are labelled 'anti-motorist' by those who enjoy driving fast, who believe that their quick reactions, judgement and superior skill give them the right to decide their own speed. These speed merchants are, by the way, mostly male: men commit 97 per cent of dangerous driving offences, 94 per cent of offences causing death and serious injury, 85 per cent of careless driving offences and 83 per cent of speeding offences.16 The right to drive a car at a speed of your own choosing has become more important than the right of 3,000 people per year to stay alive. My father taught me to drive when I was 17. He impressed on me that as a driver you are in control of a dangerous machine. The unexpected will happen—a child will run into the road, a cyclist will wobble, or a driver will pull out of a side road without seeing you. In all these circumstances, you are the person in control of a potentially lethal weapon, and as such, you carry a special and heavy responsibility. In our society's growing addiction to the car, we seem to have lost sight of that point.

## Cars Bad – Obesity

Owning a car encourages a sedentary lifestyle

Sloman 6

Sloman, Special Advisor to the Board of Transport for London, 2006, Lynn, Car Sick: Solutions for our Car-addicted Culture, p.

Most people now lead inactive lifestyles. The amount of time we spend doing something physically active, like walking the dog, DIY around the house, or playing sport, is not enough to burn off the calories from the food we eat. In the past, more people had jobs that required physical effort, but now only a minority are engaged in manual work. The advent of 'labour-saving' devices like washing machines and vacuum cleaners has reduced the amount of effort needed for everyday household tasks, and we spend more leisure time than any previous generation in low-energy mode, watching television or using computers. Finally, mass car ownership has led most people to drive for short trips that previous generations would have walked or cycled. The result is that there is now an epidemic of obesity. To call it an epidemic is no exaggeration: nearly a quarter of all British adults are clinically obese, and amongst middle-aged people the proportion is even greater. Many more are overweight, even if they are not clinically obese. Average weights and average waistlines are bigger now than they have ever been. It is normal to be fat. Sedentary habits not only make us fat but also have wider effects on health. People who are physically inactive are more likely to die early. They face almost twice the risk of dying from coronary heart disease than more active people, and they have a greater risk of contracting cancer and diabetes. Physical inactivity is as significant a cause of chronic disease as smoking cigarettes, according to the Government's Chief Medical Officer.8 Obesity is good news for the dieting industry. According to market research by Mintel, about a quarter of adults in the UK are trying to lose weight most of the time, or in other words are on a semi-permanent diet.9 Manufacture of reduced-fat or low-calorie foods is booming. But dieting without exercise is a largely futile activity. Another report by Mintel found that people who thought of themselves as very overweight were more likely than average to be trying to keep their fat intake down and to eat five portions of fresh fruit and vegetables per day, and rarely ate sweets. While the link between weight and diet was weak, there was a much clearer link between weight and exercise habits. About 30 per cent of those who did little or no exercise said they thought of themselves as 'quite a bit overweight'. In contrast, only 10 per cent of regular exercisers said this.10 Why are we facing this crisis of obesity? It is clear that there is an imbalance between the calories we are consuming and the energy we are expending, but how much of the blame should be pinned on less active lifestyles? Perhaps, after all, growing waistlines might be the result of us eating more food, or more fatty food, than twenty years ago? Andrew Jebb and Susan Prentice considered this in a paper for the British Medical Journal titled 'Obesity in Britain: gluttony or sloth?'" They pointed out that while our waistlines have expanded, average calorie intake has actually gone down. Between 1970 and 1990, the incidence of obesity trebled, yet the calories consumed at home, in meals out, and in alcohol, soft drinks and confectionery fell by a fifth. As they say: "The paradox of increasing obesity in the face of decreasing food intake can only be explained if levels of energy expenditure have declined faster than energy intake, thus leading to an over-consumption of energy relative to a greatly reduced requirement." In other words, the cause of the nation's growing waistlines is societal sloth. Nick Cavill is an expert in physical activity and health. He pointed out to me the seriousness of the obesity epidemic. "There's a generation of children being born now who could be the first generation to have a lower life expectancy than their parents. Life expectancy has risen because we've eradicated many common diseases. Now what we are seeing is that people are dying of the non-communicable diseases, like coronary heart disease and diabetes, and these are linked to obesity." Our bodies were honed by millions of years of evolution to be physically active, and our genes cannot keep up with the radical change in lifestyle of the last fifty years. As Nick explained, "Our caveman ancestors chased bison—that's what their bodies were adapted to do. As a species, we were incredibly active thousands of years ago, quite active hundreds of years ago, and now, in the space of less than a generation, we have become almost completely inactive. Nature intended us to move around, and we're going against that." This is not to say that we all have to start chasing bison. Quite small amounts of physical activity can increase fitness, reduce the risk of chronic illness and reduce weight. The official international advice is that 30 minutes of moderate exercise five days a week is enough to deliver substantial health benefits, although more than that—about 45 minutes a day—may be needed to lose weight. The even better news is that the exercise does not all have to be taken at one go. As Nick Cavill told me, "You can do it in bite-sized chunks. The fitness benefit from three ten-minute walks, five days a week, is almost identical to that from walking continuously for thirty minutes on five days." There is even evidence to suggest that people who take their exercise in shorter chunks lose more weight than those who do it all at one go. The crucial thing, though, is that the exercise must be regular, almost every day. Since few people have the time or motivation to go to the gym or swimming pool five days a week, this in practice means putting physical activity back into our everyday lives. We need to get incidental exercise when doing something else, rather than find extra time which can be dedicated to purposeless exercise on a treadmill or exercise bike. And this is where the spotlight turns back to cars. Figures collected by the Government's national travel survey show that over the course of a year, the typical Briton does 370 short trips (that is, trips of between 0 and 5 miles) by car. That is equivalent to one short car trip per day. Walking the shortest trips and cycling the slightly longer ones would give almost exactly thirty minutes of moderate exercise per day. For many of these short trips, walking or cycling is as quick, or even quicker, than driving and finding a parking space, so no time penalty would be incurred. Purposeful 'active travel'—that is, walking or cycling on a short trip that had to be made anyway—could on its own be enough to save tens of thousands of premature deaths every year. Nick Cavill reviewed dozens of medical research studies confirming that cars have made us fat, and using them less could make us thin again. First, he pointed out that there is circumstantial evidence of the link between body weight and active travel. "If you look at the countries in Europe that have low levels of obesity, they tend to be the ones where more people cycle, and vice versa." The correlation is not clear-cut, but it seems to be there. Denmark and the Netherlands have the lowest levels of obesity in the European Union, and the highest levels of cycling. Britain, on the other had, has just about the highest level of obesity in Europe, and very low levels of cycling.

## Cars Bad – Oil – War

Cars neseccitate massive oil supplies – causing global war

Bohm 6

Bohm et al, Lecturer in Management at the University of Essex, 2006, Steffen, Campbell Jones, Chris Land, Matthew Ptefson, “Introduction: Impossibilities of automobility”, Against Automobility, p. 10

The dependency on oil, a natural resource which, when burnt, creates vast environmental problems ranging from air pollution to global warming, defines the third antagonism of automobility. The fact that oil is a scarce resource, which has only a finite lifetime (most suggesting a century at best), yet is the single most important fuel for the organization of mass transport, connects the regime of automobility to a host of global geopolitical problems. To satisfy the developed world's thirst for oil, access to cheap oil has to be maintained and enormous amounts of money have to be spent in order to explore, produce, transport, refine and store oil so that it can finally be consumed at a petrol station in Washington, London or Berlin. Automobility is not just a system of car transport; it is a defining geopolitical factor that may even influence governments' decisions to go to war (see Martin-Jones, this volume). In this sense automobility quite literally kills, even though the victims of these wars remain largely invisible to the driver gliding through post-industrial suburbia. But automobility is not only an invisible killing machine because Western governments go to war to secure access to oil. The car delivers death much more directly, much closer to 'home.' The fourth antagonism, then, is that the regime of automobility cannot be disconnected from the mass 'accident'. Once you have millions of cars, steered by individual drivers, failures of that system are predictable. Annually around 1.2 million deaths are produced directly by the global regime of automobility, that is, by traffic 'accidents', significantly outstripping warfare as the leading cause of violent death (WHO/World Bank, 2004; Dauvergne, 2005). In the OECD countries alone, 107,406 people were killed in car 'accidents' in 2001, approximately one every five minutes (IRTAD/OECD, 2003). Yet these failures of the system remain largely invisible in the sense that they are regarded as 'normality'. The US might go to war because three thousand people die in a horrific attack on two skyscrapers, and a plane crash might make the headline news for a few days; roughly the same number (around 3200) of people are killed in car crashes on a daily basis, but their deaths are not spectacular enough to make it into the news. What we have got here, then, is not a stable, well-working machinery but a regime that is characterized by fundamental antagonisms. The regime of automobility is impossible because it is inherently fragile. It depends on a range of contingencies for its continued success, including the ability of geopolitical intervention and dominance to secure access to oil, the ability of planners and traffic engineers continually to provide for the mitigation of chronic congestion, the ideological success in rendering thousands of human deaths annually as 'normal' and acceptable, the ability to overcome opposition to road building, the capacity to navigate the fiscal crisis of the state to generate sufficient funds.

## Cars Bad – Oil – War

Car culture necessitates constant warfare of the fossil fuel wealthy nations of the war

Roberts 3

Roberts, Professor of Public Health, London School of Hygiene and Tropical Medicine, 2003, Ian, “Car Wars,” The Guardian, <http://www.guardian.co.uk/world/2003/jan/18/iraq.usa>

War in Iraq is inevitable. That there would be war was decided by North American planners in the mid-1920s. That it would be in Iraq was decided much more recently. The architects of this war were not military planners but town planners. War is inevitable not because of weapons of mass destruction, as claimed by the political right, nor because of western imperialism, as claimed by the left. The cause of this war, and probably the one that will follow, is car dependence. The US has paved itself into a corner. Its physical and economic infrastructure is so highly car dependent that the US is pathologically addicted to oil. Without billions of barrels of precious black sludge being pumped into the veins of its economy every year, the nation would experience painful and damaging withdrawal. The first Model T Ford rolled off the assembly line in 1908 and was a miracle of mass production. In the first decade of that century, car registrations in the US increased from 8,000 to almost 500,000. Within the cities, buses replaced trams, and then cars replaced buses. In 1932, General Motors bought up America's tramways and then closed them down. But it was the urban planners who really got America hooked. Car ownership offered the possibility of escape from dirty, crowded cities to leafy garden suburbs and the urban planners provided the escape routes. Throughout the 1920s and 1930s, America "road built" itself into a nation of home-owning suburbanites. In the words of Joni Mitchell: "They paved paradise and put up a parking lot." Cities such as Los Angeles, Dallas and Phoenix were moulded by the private passenger car into vast urban sprawls which are so widely spread that it is now almost impossible to service them economically with public transport. As the cities sprawled, the motor manufacturing industry consolidated. Car-making is now the main industrial employer in the world, dominated by five major groups of which General Motors is the largest. The livelihood and landscape of North Americans were forged by car-makers. Motor vehicles are responsible for about one-third of global oil use, but for nearly two-thirds of US oil use. In the rest of the world, heating and power generation account for most oil use. The increase in oil prices during the 1973 Arab oil embargo encouraged the substitution of other fuels in heating and power generation, but in the transport sector there is little scope for oil substitution in the short term. Due to artificially low oil and gasoline prices that did not reflect the true social costs of production and use, there was little incentive to seek alternative energy sources. The Arab oil embargo temporarily stimulated greater fuel efficiency with the introduction of gasoline consumption standards, but the increasing popularity of gas-guzzling sports utility vehicles over the past decade has substantially reduced the average fuel efficiency of the US car fleet. The US transportation sector is almost totally dependent on oil, and supplies are running out. It is estimated that the total amount of oil that can be pumped out of the earth is about 2,000 billion barrels and that world oil production will peak in the next 10 to 15 years. Since even modest reductions in oil production can result in major hikes in the cost of gasoline, the US administration is well aware of the importance of ensuring oil supplies. Every major oil price shock of the past 30 years was followed by a US recession and every major recession was preceded by an oil price shock. In 1997, the Carnegie commission on preventing deadly conflict identified factors that put states at risk. They include rapid population changes that outstrip the capacity of the state to provide essential services, and the control of valuable natural resources by a single group. Both factors are key motivators in the war with Iraq. Sprawling suburban America needs oil and Saddam Hussein is sitting on it. The US economy needs oil like a junkie needs heroin and Iraq has 112 billion barrels, the largest supply in the world outside Saudi Arabia. Even before the first shot has been fired, there have been discussions about how Iraq's oil reserves will be carved up. All five permanent members of the UN security council have international oil companies that have an interest in "regime change" in Baghdad.

## Cars Bad – Oil – Warming

Fossil fuel drive urban infrastructure is responsible for 85% of greenhouse gases

Droege 6

Droege, Senior Advisor at Beijing Municipal Institute for City Planning and Design, 2006, Peter, Renewable City : a comprehensive guide to an urban revolution, Pg.17

The Fossil City has reached its apex. The simultaneous concentration and expansion of cities since the mid-20th century were realised through massive investment in centralised infrastructure, and especially in power systems, within a heavily subsidised and hence seemingly cheap fossil-fuel economy, now at its peak. As a result, the cities in the 30 members states of the elite Organ­isation for Economic Co-operation and Development (OECD) consume between 60 and 80 per cent of their respective national energy production, including transport within and among urban areas (OECD 1995). This highlights modern cities' powerful role in worldwide, manmade greenhouse gas emissions: in 1998 fossil fuels, the main source of anthropogenic CO2-equivalent emissions, made up a staggering 85.8 per cent of total global commercial energy consump­tion: 40 per cent from oil; 23.3 per cent from coal and 22.5 per cent from natural gas. Nuclear power plants supplied 6.5 per cent; and 7 per cent were derived from the renewable hydroelectric facilities. A mere 0.7 per cent was captured from biomass, geothermal, solar and wind sources combined (USGS 2005). And since the fossil peak has not quite been reached yet, the zombielike abuse of fossil fuels continues to mount at a rapid rate - along with that of nuclear power - their consumption presently still growing faster than that of all renewable energy systems combined. Between 1990 and 2002 global fossil energy use - of coal, gas and oil - expanded by 44 per cent, while the total renewable-energy share has increased by only 33 per cent (Scheer 2005).

## FF Bad – War

“Fossil” oriented energy policy has defined an ultimately destructive system of overconsumption, where wars are fought to insure a constant supply

Droege 6

Droege, Senior Advisor at Beijing Municipal Institute for City Planning and Design, 2006, Peter, Renewable City : a comprehensive guide to an urban revolution, Pg.46

It is wise to be cautious, and embrace change with a sense of realism. The sheer momentum of the old industrial regime poses a daunting challenge. Its end may be in sight, but the old energy systems have defined all aspects of modern society, from personal and family life and its transformed role in the new mass production and consumption cycles, to the structure of the global economy. And these energy systems have, too, revolutionised a central domain rarely addressed in studies on cities, yet of central significance to them, both in terms of competing funding priorities and in their economic and physical vulnerab­ility: the very waging of war, its tools, strategies and tactics in supply, battle and occupation - and the rapid evolution of new killing machines and officially sanctioned weapons of mass destruction. These range from coal and later oil-fired battle ships, petroleum and nuclear submarines, the long rise of the tank to the fossil-fuelled tools of air supremacy - featuring such industrial marvels of mayhem as fighter planes, long-range bombers, Cruise Missiles, and that apocalyptic Cold War innovation, the intercontinental ballistic missile (ICBM). Intuitively, the idea of a solar tank or biogas bomber seems less menacing, even absurd. The reason may in part lie in the tragic irony that the most advanced fossil-fuel weapons today are largely and increasingly deployed to safeguard the very oil resources that power them: they have become their own end. The 140,000 US troops stationed in Iraq during 2005 consumed a staggering 1.4 million barrels of oil a day, all imported. The United States has engaged in 150 oil-related armed interventions since the early 1990s and, as outcome of its national energy policy, begun to militarise and perman­ently occupy the major global oil flow chokepoints, moving from the Persian Gulf to West Africa and the Caspian Sea (WDR 2005). While these figures suggest that significant present causes for conflict are - needlessly - energy related, the reduction in national oil dependence does not in itself promise peace on earth. The history of human civilisation has been deeply steeped in conquest, conflict and warfare - and, indeed, there is nothing inherently peace-loving about renewable energy. As one example, the United States Army has long been interested in solar thin-film development, as tent cover material or uniform fabric, to enhance communications power (Gartner 2004). The current preoccupation with securing global petroleum supply lines militarily high­lights how national priorities have hitherto been defined and met, and how globalisation has been structured over the past 50 years. But new develop­ments such as the United States President's January 2006 call for a move away from fossil fuel serve as reminders of the greatest present promise of global peace and equitable development: the defusing and ultimate removal of perhaps the largest risk for triggering a Third World War - global and rising fossil and nuclear dependence. Unfortunately, the subtext of Mr Bush's call was enhanced support for atomic power, increasingly fashionable again around the world.

## CONSUMPTION MINDSET INTERNALS

#### THE STATUS QUO MODEL OF TRANPORTATION IS DRIVEN BY A MASS CONSUMPTION MINDSET. BUILDING MORE ROADS IS NOT THE ANSWER

Robert M. Searns, Chair of the Board of Directors of American Trails, founding owner of Urban Edges, Inc., a planning and development firm, Oct. 13, 2007

<http://www.americantrails.org/resources/opinion/InfraSearns.html>, “Trails, Bike Paths and Sidewalks are Infrastructure Too,” ACC. 6-30-12, JT//JEDI

How shortsighted to envision a transportation system epitomized by an SUV modeled after an assault vehicle that burns a gallon of gasoline to convey an overweight occupant eight miles down a crumbling road. Is this the pinnacle of American ingenuity and know-how? We can do better! The 2007 reality is that we need a diversity of solutions and each has its place.

While investment in alternative modes of transportation won't fully solve these daunting problems, simply building more roads and bridges won't either. More creative solutions are needed and bikes and walking shoes are part of this solution and they are a very apropos means of travel for these times. No one in the bicycle and trails community suggests that highways and bridges are not absolutely necessary infrastructure to be funded and maintained. We are saying, though, that bicycle and walking facilities are also part of the picture.

#### OUR NATIONAL TRANSPORTATION INFRASTRUCTURE IS BUILT AROUND A CAR-CENTERED CULTURE OF EXCESS AND WASTE

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

There could not be a more a critical time for such a shift in federal transportation funding. For the past half-century, America has spent the overwhelming majority of its transportation resources building an extensive road system to facilitate travel by automobile. The resulting transportation system is so one-dimensional that it fails to meet all our mobility needs and creates major inefficiencies, such as an over-reliance on the automobile for even the shortest trips. Just as an ecosystem thrives on the interactions of a diverse web of life and a financial manager seeks a balanced portfolio of investments, transportation systems work best when there are multiple ways—or modes of transportation—to reach our destinations.

The unintended consequences of an automotive ‘monoculture’— such as global climate change, oil dependence, and an unprecedented obesity epidemic—are now far too serious to ignore when developing national transportation policy.

## CONSUMPTION MINDSET INTERNALS

#### THE CAR-CENTRIC TRANSPORTATION MODEL WILL GROW STRONGER—ONLY THE PLAN BREAKS THIS MNIDSET

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

New transportation priorities are necessary to resolve the problems that past transportation policies helped create. Since 1970, miles driven have tripled to more than three trillion per year, while over the same time period population only grew by 50 percent. Over the past decade, miles driven still grew twice as fast as the population (see figure on page 21). As a result, fuel savings and CO2 reductions from increased fuel economy have been swamped by these dramatic increases in driving. This upward trend in driving is projected to continue in coming decades unless we chart a new direction in transportation policy focused on managing miles driven by providing a rich mix of bicycling, walking and public transportation options, coupled with smarter development patterns.(31)

## BIKE SAFETY

#### THE PLAN INCREASES BICYCLE SAFETY EVEN AS IT INCREASES RIDERS

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Designing communities to foster active transportation improves the safety of bicyclists and pedestrians. In 2006, more than 4,784 pedestrians and 771 bicyclists were killed on U.S. roads. Despite this disproportionate share of fatalities, federal funding to address bicycle and pedestrian safety has been sorely lacking.

In European countries that have invested considerably in bicycle and pedestrian infrastructure, such as Germany or the Netherlands, fatality rates for non-motorists are about 10 times lower than in the United States.(4, 25) Australian cities also report increased safety for bicyclists as a result of infrastructure investments and increased bicycling.(5)

Portland, Ore., is a prime example of how investment in bicycle infrastructure results in increased safety. Since 1991, Portland has steadily expanded its network of bicycle facilities, and observed a constant growth in bicycling, while crash and fatality rates among cyclists significantly decreased. Between 1991 and 2006, Portland was able to reduce the crash rate by more than 69 percent. In that time period, the number of bicyclists grew more than four fold, while the number of fatalities remained low, between zero and five per year.

#### ACTIVE TRANSPORTATION IMPROVES BYCYCLE SAFETY

Reynolds et al ‘9 (Conor “The impact of transportation infrastructure on bicycling injuries and crashes: a review of the literature” Environmental Health 2009, 8:47)

The built environment has been implicated as an important determinant of bicycling rate [20-23], but these relationships are complex and a positive correlation has not always been found [24]. It is equally important to understand how the built environment affects bicycling safety because there may be an opportunity to prevent injuries by modifying transportation infrastructure. Infrastructure improvement meets several important conditions for successful injury prevention measures: (a) it is population based, rather than requiring initiative on the part of the individual; (b) it is passive, rather than requiring active participation; and (c) it is accomplished with a single action, rather than requiring repeated reinforcement [18].

#### Active transportation infrastructure solves public participation and increases pedestrian safety

Cohen 12

Larry, Founder and Executive Director of Prevention Institute, a non-profit national center dedicated to improving community health and equity, Prevention Institute, “Creeps and Weirdos: the auto industry agenda for keeping you on four wheels,” 2 February 2012, <http://www.nationofchange.org/creeps-and-weirdos-auto-industry-agenda-keeping-you-four-wheels-1328193397>, accessed 7/8/12, CD

And more people are biking. Nearly half of 18 to 34-year-old drivers are driving less and owning fewer cars. Equally important, nearly two-thirds surveyed said they would drive less if alternative transportation, such as public transportation, was available. In urban centers across the country, biking has enjoyed a re-birth of hipster cool—from fixies to cyclovias to bike rack art installations to Oakland’s scraper bikes that ‘go hard, I don’t need no car.’ This is great news for bike enthusiasts, environmentalists and public health advocates, but we need our street infrastructure to support physical activity. Roads designed for cars—and only cars—have real impacts on our health and safety. A recent report found that the number of combined biking and pedestrian traffic deaths has increased in the last two years to 14%. This is an appalling but preventable outcome, likely stemming from more people walking and biking without changes to the built environment and structural support.

## A2: TRANSPORTATION TRADE-OFF

#### INVESTMENT IN ACTIVE TRANSPORTATION DOESN’T TRADE-OFF WITH QUALITY OF OTHER FORMS

Robert M. Searns, Chair of the Board of Directors of American Trails, founding owner of Urban Edges, Inc., a planning and development firm, Oct. 13, 2007

<http://www.americantrails.org/resources/opinion/InfraSearns.html>, “Trails, Bike Paths and Sidewalks are Infrastructure Too,” ACC. 6-30-12, JT//JEDI

Just how many automobile bridges can you build with the penny or so of each Federal Transportation dollar spent on bicycling and walking facilities? Is that really the deal breaker? Of late, some have suggested that there is a causal tie between federal investment in non-motorized facilities and the growing problem of deteriorating roads and bridge infrastructure. Worse still there have been comments and political advertisements trivializing bicycle and walking facilities as somehow obsolete, frivolous and less than worthy.

While these improvements might seem to be a good scapegoat for our highway ills, the facts say this is simply not true. The reality is that while nearly 10% of all trips to work, school and the store are by bike or foot, the amount of federal dollars invested nationwide for bike and pedestrian improvements has averaged around 1% over the past decade or so. It is also noteworthy that more than 40% of the trips made daily in our cities are two miles or less and 25% less than a mile. Many of these are by car but could be made by bike or on foot— with improved facilities.

## SPENDING / BUDGET ANS.

#### SHORT-TERM SAVINGS FROM A SMALL SHIFT FAR OFFSET SHORT-TERM COSTS—NO TRADE-OFFS

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Active transportation is unique in its promise to offer numerous benefits, without any of the trade-off’s that so often come with other transportation policies. This report has made the case that bicycling and walking could and should play a far more prominent role in America’s transportation system, and that federal investment in bicycling and walking infrastructure is a cost-effective means to help meet the mobility needs of more Americans. Offering a balanced set of ways to get around better fulfills our nation’s transportation mission.

The resulting fuel savings from shifting just some of the shortest car trips to bicycling and walking would result in cost savings far larger than the upfront costs of infrastructure investments.

#### A SUBSTANTIAL INVESTMENT IN ACTIVE TRANSPORTATION CAN SAVE UP TO $28 BILLION A YEAR

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Increasing the use of bicycling and walking for transportation provides tremendous potential to increase physical activity among Americans. Based on the health care costs alone, the benefits from increased bicycling and walking could add up to $400 million assuming modest cost benefits, and up to $28 billion annually assuming substantial cost benefits. These estimates do not include the benefits from increased productivity and other secondary benefits associated with physical activity.

#### INCREASING FEDERAL INVESTMENT IN ACTIVE TRANSPORTATION IMPROVES BUDGET EFFICIENCY AND SAFETY

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Relatively small investments in bicycling and walking help to address all these transportation related problems. By making bicycling and walking—or “active transportation”—viable options for everyday travel, we can cost-effectively improve our mobility, protect our climate, enhance energy security and improve public health. Active transportation requires no technological breakthroughs— just federal investment at levels befitting its potential contribution to America’s well-being.

That potential is surprisingly substantial. This report broadly quantifies, for the first time, the benefits America can expect if bicycling and walking play more significant roles in our transportation system. It concludes that increases in federal investments to improve the convenience and safety of active transportation represent a highly cost-efficient use of public funds, producing a wide variety of benefits for all Americans.

## SPENDING / BUDGET ANS.

#### THE CURRENT MODEL OF TRANSPORTATION IS A CAR-CENTRIC MONOPOLY OF INEFFICIENCIES THAT OVERBURDENS GOVERNMENTS

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Transportation has become a one-dimensional affair. Half of all trips we take are only three miles or less—yet we drive almost everywhere we need to go, even to the closest destinations.(7) Rates of car ownership in the United States are the highest in the world, and the number of cars per household now exceeds the number of drivers.(7) For most Americans, the predominance of the car and the lack of adequate infrastructure for bicycling and walking have basically eliminated all transportation options except for one—driving.

As with any monopolized market sector, our transportation system now offers a single brand of mobility developed without incentives to provide the best possible product, and without competition that would assure the best price. Compared to a truly multi-modal transportation system, our current system produces less mobility at an inflated price. The inefficiencies of this car-centered monopoly become more apparent every day: congested roads that cost us precious time, gasoline prices that shrink our disposable income, road infrastructure projects that place massive burdens on state and federal budgets, and an over-dependence on oil that leaves our economy at the mercy of the world oil market and its suppliers.

## ELECTIONS ANS. – PLAN POPULAR

#### THE PUBLIC CLEARLY SUPPORTS ACTIVE TRANSPORTATION INVESTMENTS

Federal Highway Administration, 05/07/2012

<http://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/design_guidance/design.cfm>, “Accommodating Bicycle and Pedestrian Travel: A Recommended Approach,” ACC. 7-6-12, JT

Bicycling and walking issues have grown in significance throughout the 1990s. As the new millennium dawns public agencies and public interest groups alike are striving to define the most appropriate way in which to accommodate the two modes within the overall transportation system so that those who walk or ride bicycles can safely, conveniently, and comfortably access every destination within a community.

Public support and advocacy for improved conditions for bicycling and walking has created a widespread acceptance that more should be done to enhance the safety, comfort, and convenience of the nonmotorized traveler. Public opinion surveys throughout the 1990s have demonstrated strong support for increased planning, funding and implementation of shared use paths, sidewalks and on-street facilities.

#### 83% of Americans support federal funding for active transportation

Spotts 6/28,(Ethan,2012) (Proposed Transportation Bill Substantially Cuts Dedicated Funding for Biking and Walking) (http://www.activetrans.org/media/pressrelease/proposed-transportation-bill-substantially-cuts-dedicated-funding-biking-and-walk)ZB

Even though [a recent survey](http://www.americabikes.org/2012survey) found that 83 percent of Americans support maintaining or increasing federal funding for walking and bicycling facilities, a congressional committee yesterday recommended a federal transportation bill that would cut dedicated federal funding for biking and walking between 40 and 100 percent. The actual amount will vary depending on how each state uses the money. The bill maintains funding for transit projects but fails to restore pre-tax transit benefits to levels that expired last year.

## ELECTIONS ANS. – PLAN POPULAR

#### THE PUBLIC SUPPORTS THE PLAN BECAUSE IT SPURS URBAN REVITALIZATION

Robert M. Searns, Chair of the Board of Directors of American Trails, founding owner of Urban Edges, Inc., a planning and development firm, Oct. 13, 2007

<http://www.americantrails.org/resources/opinion/InfraSearns.html>, “Trails, Bike Paths and Sidewalks are Infrastructure Too,” ACC. 6-30-12, JT//JEDI

More importantly these improvements are something that the public— the taxpayers who ultimately fund all of the programs— have said they desire and demand. Survey after survey shows that trails, walking and bicycle facilities rank in first priority for recreational activity, in deciding where to buy a home and where public funds should be spent. In Kansas City for example citizens ranked investing in trails over building a new football stadium! Indeed one of the engines transforming our inner cities and sustaining our economy is the rise of a class of creative workers and entrepreneurs who demand trails, greenways, bicycle and pedestrian amenities— an essential ingredient revitalizing urban areas from Denver to Detroit.

#### **Biking infrastructure investment is overwhelmingly popular**

Sierra Club 12

(America's largest and most influential grassroots environmental organization, <http://www.sierraclub.org/pressroom/downloads/BikeMonth_Factsheet_0512.pdf>, Pedaling to Prosperity, 7/2/12, CD)

More Americans are choosing to bicycle for transportation, but government funding of safe bicycling projects is not keeping up. Though biking and walking account for 12 percent of all trips in the U.S., these transportation modes receive only 1.6 percent of federal transportation spending—far less than their fair share. Federal transportation policy should support the development of biking, transit, and pedestrian infrastructure to ensure our roads are safe, convenient, and accessible for all. Cost savings Bicycling keeps money in the pockets of American families. The average annual operating cost of a bicycle is $308 — versus $8,220 for the average car. New analysis by the League of American Bicyclists shows that bicyclists in the United States save at least $4.6 billion each year by not driving. Forty percent of all trips are made within two miles of home. Analysis by the Sierra Club shows that if American drivers were to make just one four-mile round trip each week with a bicycle instead of a car, they would save nearly 2 billion gallons of gas. At $4 per gallon, total savings would be $7.3 billion a year. Investing in bicycle infrastructure is cost-effective. For $60 million — the cost of a single mile of urban highway — the new city-wide bicycle network earned Portland, OR, the highest possible platinum rating as a Bicycle Friendly Community. Transportation choices All Americans deserve access to safe and convenient transportation choices like biking, walking, and transit. More Americans are choosing to bicycle for everyday transportation. Between 2000 and 2010, the number of bicycle commuters grew 40 percent nationwide. That growth was even greater — 77 percent — in the largest Bicycle Friendly Communities, as identified by the League of American Bicyclists More than 80 percent of Americans support maintaining or increasing federal funding for biking and walking, including 85 percent of Hispanics. bicyclists in THE U.S. save $4.6 billion a year by not driving household cost savings from annual bicycle Travel Annual bike trips 4,082,000,000 Average bike trip distance (miles) 2.26 Annual miles bicycled 8,956,000,000 Estimated annual cost savings from bicycling travel $4,661,598,000 Cost of fuel saved by bicycle travel $1,610,574,790 PEDALING TO PROSPERITY bicycling Will save Americans $4.6 billion in 2012 Transportation equity Not everyone drives a car: 33 percent of Americans do not drive at all —they should not be marginalized as we build transportation infrastructure and plan communities. The average American household spends more— 16 percent of their budget—on transportation than on food or healthcare. Low-income families spend as much as 55 percent of their household budgets on transportation. Transportation options such as bicycling reduce those costs. For Latinos, walking and biking are essential for getting to work and other destinations, such as grocery stores. Minority and low-income children are more likely than their affluent or white peers to walk or bike to school. From 2001 to 2009, Hispanics, African Americans, and Asian Americans took up bicycling at a faster rate than other Americans, representing 21 percent of all bike trips in the U.S. in 2009.

## ELECTIONS ANS. – PLAN POPULAR

#### THE PLAN IS POPULAR

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Americans want and need these choices. When asked how they would allocate transportation spending, Americans indicated that they would spend 22 percent of transportation funding on biking and walking infrastructure—about 15 times what is currently spent (see page 18). The time for reevaluating our nation’s transportation system to support people’s needs and desires is now.

#### Homebuyers are favoring houses in a walkable communities

Leinberger 12

(Christopher B. Leinberger, Non-Resident Senior Fellow Metropolitan Policy Program at Brookings, “Walk this Way: The Economic Promise of Walkable Places in Metropolitan Washington, D.C.” Brookings Institute. May 2012. Accessed 7/7/12) WK <http://www.brookings.edu/research/papers/2012/05/~/media/Research/Files/Papers/2012/5/25%20walkable%20places%20leinberger/25%20walkable%20places%20leinberger.pdf>

However, a closer look at the post-recession housing numbers paints a more nuanced picture. While U.S. home values dropped steadily between 2008 and 2011, distant suburbs experienced the starkest price decreases while more close-in neighborhoods either held steady or in some cases saw price increases. 2 This distinction in housing proximity is particularly important since it appears that the United States may be at the beginning of a structural real estate market shift. Emerging evidence points to a preference for mixed-use, compact, amenity-rich, transit-accessible neighborhoods or walkable places. According to the National Association of Realtors, 58 percent of homebuyers surveyed prefer mixed-use neighborhoods where one can easily walk to stores and other businesses. Further, 56 percent expressed a preference for communities with amenities such as a mix of housing types, various destinations within walking distance, public transportation options, and less parking. The trend is swinging away from neighborhoods that contain primarily large-lot single-family housing, few sidewalks, ample parking, and where driving is the primary means of transportation. Sixty percent of those swinging toward newer amenities do so for the convenience of being within walking distance to shops and restaurants and two-thirds of buyers factor walkability into their home purchase decision. 3 Changing demographic trends— retiring baby boomers, first-time buyers preferring walkable places, and a rising number of households without children—are one reason for the increased housing market segment driven by walkability. 4

## A2: CITIES CP

#### THEIR CP PROMOTES A PRIVILEGED VIEW OF THE PROBLEM, WHERE BANKRUPT CITIES ARE MANDATED TO JUST BUILD WITH FUNDS THEY DON’T HAVE. ONLY A SUBSTANTIAL FEDERAL INVESTMENT IN ACTIVE TRANSPORTATION CREATES A GREAT QUALITY OF LIFE THROUGHOUT AMERICA

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

An increasing number of Americans have been voting with their feet to increase the use of active transportation. A quiet trend of increased bicycling and walking has been building for years among those seeking an affordable, healthy, clean and enjoyable way to get around. This trend has rapidly accelerated in the past year in response to the high costs of driving. The trend has been most pronounced in communities that have already invested in systems to facilitate safe and convenient bicycling and walking.(1, 2) Because few communities have had sufficient resources to build truly functional active transportation systems, most Americans have been left standing on the sidelines looking for safer and more convenient ways to join this movement. The pent-up demand for safe and convenient places to bicycle and walk will only be satisfied by concentrated federal investments in coherent networks of bicycle paths, trails, sidewalks and other facilities. Just as our nation invested in the interstate system and extensive road networks during the past half century, our current era of concern over oil dependence, traffic congestion, climate change, and rising obesity rates calls for creating a new balance in which mobility for every American is convenient, safe, affordable, and last but not least, enjoyable. Those Americans privileged to live in communities that accommodate bicyclists and pedestrians appreciate their built environment. Health is improved; stress levels are reduced. Streets have become places where people meet on a human scale. Commutes create a relaxing end to workdays, and active transportation can save people the challenge of making time to stay fit. While this report quantifies many of the benefits of active transportation, it is impossible to put a price tag on the increases in quality of life generated from the opportunity to ride a bicycle or walk. The only way to value this aspect of active transportation sufficiently is to provide all Americans with the opportunity to find out for themselves.

## A2: STATES CP – perm solves

#### PERM SOLVES BEST

Batterbury ‘3 (Simon, assistant professor in the Department of Geography and Regional Development at the University of Arizona “Environmental Activism and Social Networks: Campaigning for Bicycles and Alternative Transport in West London” The ANNALS of the American Academy of Political and Social Science 2003 590: 150)

A key element of sustainable development in cities is the implementation of more effective, less polluting, and equitable transportation policy. This article examines the role of activist organizations promoting transport alternatives in London, Britain’s capital city and its largest metropolitan area. Major national, citywide, and local policy changes have permitted citizens’ groups to work more actively with progressive elements in government planning, breaking down citizen-expert divides. In West London, the most congested sector of the metropolis, an environmentally based social network, the Ealing Cycling Campaign, promotes cycling as a sustainable transport alternative. Its strategies require active cooperation with the local state rather than radical opposition to it, raising questions about the oppositional stance more commonly found among urban social movements. Environmental citizenship needs to be founded on social realities and conduced in mainstream political systems if it is to be effective in complex urban environments.

## A2: STATES CP – FISM LINK TURNS

#### Aff solves the NB - normal means increases federalism

Cradock et al 9

(Angie L. Sc.D., is a research scientist in the Department of Society, Human Development, and Health at the Harvard School of Public Health, Boston, MA, USA, Philip J. Troped, Ph.D., M.S., is an assistant professor in the Department of Health and Kinesiology at Purdue University, West Lafayette, IN, USA, Billy Fields, Ph.D., is Director of the Center for Urban and Public Affairs at the University of New Orleans, New Orleans, LA ,USA. Steven J. Melly, M.A., M.S., is a GIS specialist in the Department of Environmental Health at the Harvard School of Public Health, Boston, MA, USA. Shannon V. Simms, B.A., is a field representative at the Rails-toTrails Conservancy, Washington, DC, USA Franz Gimmler, B.E., is Senior Director for advocacy and outreach at the Rails-to-Trails Conservancy, Washington, DC, USA. Marianne Fowler is Senior Vice President of Policy at the Rails-toTrails Conservancy, Washington, DC, USA. Journal of Public Health Policy, 2009, <http://www.palgravejournals.com/jphp/journal/v30/nS1/full/jphp200860a.html>, “Factors Associated with Federal Transportation Funding for Local Pedestrian and Bicycle Programming and Facilities” Accessed 7/2/12, CD)
After Congress appropriates money for each transportation program, various program-specific formulas are used to apportion the program monies among the states. Within the yearly congressionally determined limit on each state’s apportionment, states have considerable authority and flexibility to determine how to distribute funding among these programs (30). State transportation departments conduct short- and long-term planning activities and work together with regional planning agencies and other stakeholders to determine the state spending on specific transportation projects. To be responsive to distinct regional transportation needs, the Intermodal Surface Transportation Efficiency Act and its successors both permitted and required metropolitan areas to establish their own transportation goals and objectives through a series of transportation plans developed by Metropolitan Planning Organizations (31). In metropolitan areas, the Metropolitan Planning Organizations must work in partnership with state Departments of Transportation to implement selected projects. Although the majority of federal transportation funding (and state-derived funding) is received and managed by state departments of transportation, states use different strategies in apportioning funds to sub-state regions, with some states distributing funding evenly among counties and other states using various transportation need-based formulas (32).

STATE & CITY OFFICIALS WANT FEDERAL LEADERSHIP, WHICH IS LACKING NOW

Flusche 10

Darren, policy analyst, League of American Bicyclists, September 2010, Climate Change and Bicycling: How bicycling advocates can help craft comprehensive Climate Action Plans,<http://www.bikeleague.org/resources/reports/pdfs/climate_change_bicycling.pdf>, TL

Nonetheless, most of the action occurs at the local level, where cities and universities are providing the leadership. Professor Stephen Wheeler, an expert in state and local Climate Action Plans at the University of California, Davis writes, “In interviews, officials repeatedly lamented the lack of federal action on this topic, but expressed the belief that in lieu of federal leadership it was imperative for states and cities to take action.” As Michael Boswell explains, “The story of CAPs is that it’s been a bottom up process.” Because much of the serious climate planning is happening at the local level, and bicycle‐planning is often viewed as the domain of localities, there are good opportunities for bicycling advocates to get involved.

## A2: STATES CP – FISM LINK TURNS

Federalism tanks Bikes projects – lack of federal oversight means funds won’t get allocated

Bike League 11

(“Why “Eligibility” Isn’t Enough: The case for dedicated bicycle and pedestrian funding in the federal transportation bill” 7/26/11. Accessed 7/2/12. <http://www.bikeleague.org/resources/reports/pdfs/eligibility_isnot_enough.pdf>) WK

The more discretion states have, the less they spend on bike/ped projects. The largest source of funds for non‐motorized transportation projects has been the TE program – a program that is limited to 12 specific activities, including three bike/pedestrian categories and several others that State DOTs appear to like even less than trails, bike lanes and sidewalks. More than half of TE funds have been allocated to bicycling and walking. All the Safe Routes to Schools funds and one‐third of the RTP funds have to go towards non‐motorized projects. The CMAQ program, which can be used for wide variety of activities including signal timing, the addition of turn lanes, car‐pool and ride‐share programs, transit, etc. has seen only 5 percent of funds go towards bicycling and walking – even though these are clearly eligible and effective activities. An even smaller percentage of very flexible Surface Transportation Program funds have gone to bike/ped, and virtually no Highway Safety, National Highway System, Bridge and other “highway” program funds have been spent on bicycling and walking…in twenty years. 8 . States readily admit they don’t want to spend on bicycling and walking. In recent testimony to House and Senate committees considering reauthorization, state DOTs such as Florida, Oklahoma, Utah and Nevada have all specifically said they don’t support these programs and don’t want to be required to spend any funds at all on bicycling and walking. Their association, the American Association of State Highway and Transportation Officials recently withdrew under pressure a request to significantly weaken current Federal policy on routinely accommodating bicyclists and pedestrians in transportation projects, programs and plans.

## A2: STATES CP – FED KEY

#### Federal intervention is essential-only the DOT can authorize funds

Cradock et al 9

(Angie L. Sc.D., is a research scientist in the Department of Society, Human Development, and Health at the Harvard School of Public Health, Boston, MA, USA, Philip J. Troped, Ph.D., M.S., is an assistant professor in the Department of Health and Kinesiology at Purdue University, West Lafayette, IN, USA, Billy Fields, Ph.D., is Director of the Center for Urban and Public Affairs at the University of New Orleans, New Orleans, LA ,USA. Steven J. Melly, M.A., M.S., is a GIS specialist in the Department of Environmental Health at the Harvard School of Public Health, Boston, MA, USA. Shannon V. Simms, B.A., is a field representative at the Rails-toTrails Conservancy, Washington, DC, USA Franz Gimmler, B.E., is Senior Director for advocacy and outreach at the Rails-to-Trails Conservancy, Washington, DC, USA. Marianne Fowler is Senior Vice President of Policy at the Rails-toTrails Conservancy, Washington, DC, USA. Journal of Public Health Policy, 2009, <http://www.palgravejournals.com/jphp/journal/v30/nS1/full/jphp200860a.html>, “Factors Associated with Federal Transportation Funding for Local Pedestrian and Bicycle Programming and Facilities” Accessed 7/2/12, CD)

Although local and state funding sources are important, federal transportation funding is an essential source of financial support for creating, improving, and maintaining bicycle and pedestrian infrastructure and facilities. In the United States, the federal Department of Transportation provides substantial funding for all transportation related projects. The Federal Highway Administration is the lead agency within the US Department of Transportation, overseeing program administration and providing financial and technical support to state and tribal governments that administer the programs locally. The Federal Highway Administration budget for transportation comes primarily from fuel and motor vehicle excise taxes. Approximately every 7 years, transportation bills are passed by the US Congress to authorize the use of these funds for various Federal Highway Administration programs. Although the Federal Highway Administration was originally created to focus on roads and highways, the passage of the Intermodal Surface Transportation Efficiency Act (20) in 1991 marked a shift towards a multi-modal approach to surface transportation by creating new objectives, programs, and planning requirements for bicycle and pedestrian activities. Following the Intermodal Surface Transportation Efficiency Act, the Transportation Equity Act for the 21st Century (21), enacted in 1998, authorized program funding for another 6 years. In 2005, the latest in the new generation of transportation bills, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (22) was passed, authorizing transportation funding through 2009 (23).

## COERCION ANS.

#### THE PEOPLE WILL VOLUNTARILY CHOOSE ACTIVE TRANSPORTATION—PLAN GIVES THEM A CHOICE

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

A more diverse transportation system that provides viable choices to walk, bike and use public transportation, in addition to driving, will lead to a far more efficient use of transportation resources. By providing people with safe, convenient and affordable options, we enable all Americans to choose the means of transportation that best meets their needs and abilities for any given trip. As a result, more people will choose biking or walking for short trips, and in combination with public transportation for longer trips.

#### THE PLAN GIVES THE PUBLIC A CHOICE

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

Only a multi-modal transportation system allows an optimal use of limited resources, such as fuel, land, time, and money in the first place; and public health and the environment more broadly. Providing Americans with transportation choices will allow us to select the transportation mode best suited for our needs: whether it is the fastest, the easiest, the cleanest, or the one that satisfies multiple needs at the lowest overall cost.

#### Taxes don't violate rights

John Christman, Professor of Philosophy at Virginia Polytechnic Institute, 1986, PHILOSOPHY AND PUBLIC AFFAIRS, Spring p.165.

Also, as Kearl has pointed out, persons who gain entitlements through embedded labor may enter into a market, the function of which serves to reduce inefficiencies, reduce externalities, and lower negotiation costs which all increase the net social product produced from those entitlements without demanding extra labor from individual traders Thus, taxation which redistributes that extra product would amount to a limitation of the ownership rights of the traders over the commodities in question but not constitute an encroachment on the rights anyone has to her or his labor (since the product redistributed is from the increased efficiencies of the market mechanism, not increased labor.

## K ANSWERS / V2L

#### ONLY A MULTI-MODAL TRANSPORTATION POLICY AFFIRMS A QUALITY OF LIFE PERSPECTIVE THAT ADDRESSES THE SUBJECTIVITY OF PEOPLE, NOT MOVING OBJECTS

Thomas Gotschi, Ph.D. and Kevin Mills, J.D., ‘8

“Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking,” <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>, ACC. 7-5-12, JT

This report is a call to action. The choice is clear. The time has come for a truly multi-modal transportation policy; a policy that recognizes that driving is not always the quickest, cheapest, cleanest, healthiest—or only—way to get from Point A to Point B. By investing in transportation systems that also offer the options of bicycling, walking and public transportation, we can meet our mobility needs while also reducing our oil dependence, greenhouse gas emissions and obesity rates.

But just as importantly, transportation systems should enhance our quality of life. There is great joy in a child learning to ride a bicycle or the independence of senior citizens taking a walk to run errands and see friends. We cannot lose sight of the fact that transportation should be about people and the places they live, not just the movement of vehicles.

#### Small investments on bicycling can have large returns and increase the quality of life for Americans

Flusche 9

(Darren, policy analyst, League of American Bicyclists, June 2009 <http://www.bikeleague.org/resources/reports/pdfs/economic_benefits_bicycle_infrastructure_report.pdf>, The Economic Benefits of Bicycle Infrastructure Investments, TL)

**S**ome locations focus more on quality of life for their residents than on tourism. Portland, Oregon, which has been designated a Platinum-level Bicycle Friendly Community by the League of American Bicyclists, in part for its investments in infrastructure, saw $90 million in bicycle-related activity in 2008. Nearly 60 percent of that activity came from retail, rental, and repair, with manufacturing and distribution, bicycle events, and professional services, such as bike messengers and coaching and legal expertise, also contributing. Recognizing the importance of bicycling to Portland, Mayor Sam Adams has proposed setting aside $500,000 specifically for bicycle programs and projects to “provide more Portlanders an affordable option for getting around the city.” As a result of policies to encourage bicycling and maintain urban density, which reduce auto-dependency, Portland residents save on transportation costs and have more money to spend on things they value. Compared to the distance and time spent commuting to work in the median American city, Portlanders travel 2.9 billion fewer miles and spend 100 million fewer hours, saving $2.6 billion a year. These communities show the impact that relatively modest investments in paths, expanded shoulders, and trails can have on the local economies by attracting visitors, residents, and businesses.

## A2: CAPITALISM

#### CARS KEY TO CAPITALIST EXPANSION

HOPWOOD ’99 [BILL HOPWOOD, **Can Socialism Save the Planet?,** <http://www.socialistparty.org.uk/Environment.htm>**, Accessed 2-17-05, JT]**

Cleaner engines fail to solve many problems caused by cars. Cars cause congestion, dominate cities' public spaces, break up communities and encourage urban sprawl. Car-based transport consumes large areas of land and huge amounts of resources.

Of course technical improvements are welcome. Already it's possible to produce the same number of goods with a quarter of present levels of energy and materials.

The barrier is not technology; but capitalism, which depends for its survival on an ever-increasing volume of production, using more and more resources and producing more and more waste. To boost its markets, capitalism spends $1,000 billion a year on marketing.

#### The Auto industry endorses capitalism

Andersen 12,April 6th , ,2012(<http://www.international.ucla.edu/china/article.asp?parentid=125624>) (Designated Drivers: State Capitalism in China’s Auto Industry)( G.E. Anderson (Ph.D., UCLA, 2011) has been either living in or frequently traveling to China for nearly two decades. Through his consulting practice, Pacific Rim Advisors, he provides advice in political risk mitigation, business-government relations and business strategy. In his earlier career he held various positions in finance from commercial lending analyst to CFO, more recently serving as Finance Director for Charles Schwab's Tokyo-based joint venture. He also taught at university in Chengdu, Sichuan.) ZB

China's unprecedented level of growth over the past three decades, combined with a financial crisis in the West, have led many to question whether free-market capitalism is the better system for generating sustainable economic growth.  Not only have some of China's political leaders already declared victory, but many Western observers have begun to question whether the Chinese may not have discovered a magic formula for combining free markets with state control.Are the Chinese breaking the rules of capitalism, or are they re-writing them?G.E. Anderson’s in-depth look at industrial development in China’s auto industry reveals not only how China surpassed the U.S. to become the world’s largest market for autos, but also political principles that have shaped China’s approach to industrial planning in general.The picture that emerges is of a central government certain of what it wants, but willing to break its own rules to achieve higher level goals.  It also reveals the inherent weaknesses in China’s state-centric system that may prevent it from becoming the innovator and industrial power it aspires to become.

## A2: CAPITALISM

#### The Auto industry is a classic example of capitalism

Bond 3(Patrick, October 21)( What is a crisis of overproduction?)( http://www.marxmail.org/faq/overproduction.htm)(PhD (Johns Hopkins University)(political economist) ZB

In addition, overproduction is the result of capitalist competition.  To expand market share, capitalists must invest in expansion of their productive capacity.  The world auto industry is a classic example.  The biggest automakers have built plants in all the large world markets--in North America, Europe, Asia, etc.  They're sharply competing for market share.  They've built the capacity to turn out about 80 million vehicles a year, but they can only sell about 60 million, so they are using about 75% of their productive capacity, which drastically cuts into the rate of return on the capital intensive assembly lines.  Each capitalist has a simple solution to excess capacity.  If their rivals would just disappear, the problem would cease to exist.  Thus, there is the potential for competition to become ugly and, at the extreme, to lead to "trade wars" and eventually to "shooting wars."

## T-active transportation

Rails to Trails, 08

Rails to Trails Conservatory: Active Transportation for America. <http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf>. 2008. DA- 07/03/2012.

In this era of traffic congestion, high gas prices, climate change, an obesity epidemic, and fiscal constraints, federal transportation funding has reached a critical crossroads. Decades of car-centered transportation policies have dead-ended in chronic congestion, crippling gas bills, and a highly inefficient transportation system that offers only one answer to most of our mobility needs—the car. Investment now in a more diverse transportation system—one that provides viable choices to walk and bike, and use public transportation in addition to driving—will lead to a far more efficient use of transportation resources. Active transportation is the missing piece in our transportation system.

## \*\*\*K AFF.\*\*\*

## K 1AC

# Bicycles Affirmative

## 1AC

**Despite a growing culture that supports cycling transportation, there’s still a massive stigma that’s attached to pedaling – cycling culture has been pushed underground – this is a form social death constituted by invisibility that erases difference**

**Herr 12**

(Samantha Z., University of Kentucky, “Biopolitics of Bike Commuting: Bike Lanes, Safety, and Social Justice”, Theses and Dissertations, <http://uknowledge.uky.edu/geography_etds/2>, [CL])

The plague for bicycle transportation integration in the U.S. has not only been the perceived physical risk, but also the stigmatization that cycling transportation has accrued over the years. Bicycles have been perceived as recreational at best, childish, a rebellious act, or a utilitarian option for the poor, at worst (Aldred 2010; Blickstein and Hanson 2001; Carlsson 2010; Furness 2005a; Furness 2005b; Horton 2006; Horton 2007; Horton, Rosen and Cox 2007; Skinner and Rosen 2007**)**.22 Furthermore, the bicycle commuting lifestyle puts demands on the body and its appearance that make it harder to achieve standing expectations of professional or appropriate appearance and demeanor that are also inherently classed, raced, gendered, aged, etc. (fieldnotes 6-25-10; interview transcript 7-7-10; Cupples and Ridley 2008; Horton 2007; Horton et. al. 2007). As one research participant eloquently put it: I think that everyone is capable of becoming a cyclist and not necessarily everyone is motivated to become a cyclist. I think there's a lot of fear that prevents people from becoming a cyclist. There's a certain element of stigma to the idea of being a cyclist as well. I mean, like 'ah, I'm gonna get to work and I'm gonna be all sweaty', or 'that's something that hippies do, and I'm dignified. I deserve a car'. There's a lot of class dynamics I think with owning and operating an automobile. It gives you a certain amount of dignity and also power that people seek. That everyone seeks to some extent (interview transcript 6-30-10). It can thus be understood how the act of bicycle commuting extends beyond the marginalization of a transport mode and reaches into other realms of daily life in the city. The project of mainstreaming bicycle transportation integration has had to battle these everyday concerns and logistics, as well as ingrained assumptions and habits of living-automobile dependence and infrastructural hegemony, perceived social dissidence, assumptions about class markers, feelings about the sweaty, working body, and ideas of what is desirable and possible for life in the city. Bike lanes are an attempt to legitimize bicycling in the city by sectioning off space and making cycling more visible, but in doing so, they are an attempt to legitimize more than that. As bicycling transportation is situated within a web of lifestyle factors related to gender, race, class, age, etc., bike lanes become not only statements for modal method inclusivity, but inclusivity writ large. Bike lanes are spaces for the accommodation of difference. Bicycle transportation research shows that women feel less safe riding next to cars than men, and are less likely to bike if there are not specified lanes because of this perception of risk (Emond 2009; Krizek 2004). Children and the variedly able do not always have the capability to ride at high speeds to keep up with traffic. Researchers and bike lane advocates have also acknowledged economic barriers to accessing bicycles that could cruise at car speeds due to maintenance issues or quality of the machine (Horton et. al. 2007). Bike lanes are a response to these situations with the intent to expand the population of people for which cycling is a viable option (Pucher and Buehler 2009, my research). In this way, advocating for bike lanes is advocating for a broader urban milieu of acceptance and inclusion. Bike lanes, from this perspective, become mechanisms designed to accommodate for differences of ability, preferences, and lifestyle demands, and thus mitigate the tension between hegemony and diversity in the city. Cycling integration becomes a project toward social equity.

**This structural invisibility is directly the result of a lack of infrastructure to support the legitimacy of cyclers not just as commuters but as subjects. In order to create true contestation against the hegemonic dominance of transit spaces, we must render cycling subjects intelligible – the impact is exclusion.**

**Herr 12**

(Samantha Z., University of Kentucky, “Biopolitics of Bike Commuting: Bike Lanes, Safety, and Social Justice”, Theses and Dissertations, <http://uknowledge.uky.edu/geography_etds/2>, [CL])

Efforts toward social equity can take many forms. Bikeways logic implicitly understands bike lanes as a discursive intervention that responds to our constructions of legitimacy—legitimate behavior, legitimate bodies, legitimate identities—in the city. *In other words, bike lanes generate and contribute to a rights-based discourse of social justice and safety in the city*. A rights-based framework of social justice is the common one we are familiar with here in the United States and many other places. It is a *representative* notion of social justice, where rights are designated, protected, and mitigated based on a person or group’s ability to become recognized by the whole (or the authoritative body empowered with the role of distributing justice). Judith Butler calls this intelligibility. One must be intelligible to have rights, to be considered legitimate, or conversely to have rights or legitimacy taken away, and this is ultimately important for Butler because our access to the human—to a livable life—hangs in the balance of our intelligibility. In her book, *Undoing Gender*, she says: To find that one is fundamentally unintelligible (indeed, that they laws of culture and of language find one to be an impossibility) is to find that one has not yet achieved access to the human. It is to find oneself speaking only and always as if one were human, but with the sense that one is not. It is to find that one’s language is hollow, and that no recognition is forthcoming because the norms by which recognition takes place are not in one’s favor” (2004a:30, 218). The import of this idea for bicycle transportation integration is that bicycles need to be rendered intelligible as transportation in order that cyclists become legitimized on the street, providing them access to road rights and safety. In other words, cyclists need to become *cycling subjects*, set apart from an identity and subjectivity as motor vehicle drivers, to have access to their own rights *as cyclists,* and obtain accommodations for this type of transport mode and lifestyle. This is to say, cyclists must be rendered visible; they must *be seen*. One research participant put it this way: …I think that visibility is hugely important. Visibility and legitimacy. Visibility has made those of us who are not the crazy eighteen-to-twenty-four-year-old-boy on their fixed bike darting in and out of traffic being stupid, more comfortable and therefore more visible. And that's important because… they're not the kind [of cyclists] who are going to make drivers think cyclists should be here and that's important to me... (interview transcript 7-2-10). In this quote, this bike commuter expresses how the visibility of bicycling is intricately connected to its legitimacy as a transport mode. For her, making space for the potential inclusion of different kinds of transport cyclists is tied to making cycling visible, which works to establish legitimacy for cyclists. This, as she states, is important to her; it is important to her that drivers recognize that cyclists ‘*should* be here,’ on the street and in the city. According to bike commuters who participated in this research, bike lanes make cycling more visible. They “remind drivers that [bicyclists] are supposed to be there” (interview transcript 7-2-10), and they “…let[] the car know that when they open their door, they’re opening their door into someone else’s space” (interview transcript 6-3010). Expressions like “supposed to be there,” “should be there,” and “someone else’s space,” strongly display cyclists’ concerns with legitimacy. Bike lanes are seen to contribute to creating legitimacy for cyclists both through being visible markers, and as claims to the use of space. In a word, they provide cyclists with *representation*, an avenue by which to be known, an avenue by which to become a *cycling subject*. Thus, bike lanes are essentially understood by cyclists and advocates through a rights-based, or representative, discourse of social justice. Prominent geographer and theorist of urban social justice, Don Mitchell, conceives of social justice in the same way, and expounds on what he views to be the inherent interplay between social justice and the city. In his seminal work, *The Right to the City: Social Justice and the Fight for Public Space* (2003), Mitchell outlines his conception of social justice that follows a dialectical “logic of representation” that “centers on the right of groups and individuals to… represent themselves to others and to the state—even if through struggle—as legitimate claimants to public considerations” (2003:33). In this way, “a *space for representation*—a place in which groups and individuals can make themselves visible, is crucial” (2003:33). “Representation, whether of oneself or a group, demands space” (2003:33). It is precisely in the “public” spaces of the city that representations and negotiations of legitimacy are hashed out. For transportation cyclists and advocates, the street is such a space. To follow Mitchell’s theorizing further, the street is such a space, not because it is inherently so, but because a group has made it so. In Mitchell’s terms, he would call this a ‘public’ space. “[W]hat makes a space public,” says Mitchell, “…a space in which the cry and demand for the right to the city can be seen and heard--is often not preordained ‘publicness.’ Rather, it is when, to fulfill a pressing need, some group or another takes space and through its actions makes it public” (2003:35). Thus, from Mitchell’s perspective, in order to obtain and exercise rights to the city—to lead a *legitimate* existence and way of life in the space of the city—a group must claim their right. This “claim” is understood for Mitchell as a spatial gesture; **it is the taking of space**. To use Mitchell’s terms, bikeways logic understands bike lanes as a “cry and demand for the right to the city;” bike lanes are the taking of space and making it public, and they are acts of representation that claim a ‘right to the city’—legitimacy—for cyclists. Bike lanes make transport cyclists intelligible as cyclists. But what is this legitimacy qua visibility doing for cycling safety in Boston?

Additionally, car culture has insulated the white middle class in their flee from the city into suburban neighborhoods – the culture of the freeway has created a destructive logic of white flight that casts the city as a zone of disposability for minorities and the poor

Kuswa 2

(Kuswa, Director of Debate @ U. of Richmond, Winter 2002, Kevin, “Suburbification, Segregation, and the Consolidation of the Highway Machine,” The Journal of Law in Society, 31.3, lexis)

How did the Census explain the increase in population that was taking place? Mainly, it augmented the old definition of urban with the notion of the urban fringe. The emergence of an urban fringe marked an [\*42] explicit separation between two types of urbanization: primarily urban and peripherally urban. Primarily urban regions-once utopian places of commerce and leisure free from the hardships of rural existence-took on new characteristics of social malaise, such that the urban fringe became a flight away from the poverty, crime, and inadequate social services of the city. These judgments were not explicit in the Census definition and neither was the source of the momentum propelling the changes. In a way, the addition of an urban fringe that might or might not be considered urban was a reflection of two competing views of the city. n32 Shifts in the classification of urban were not expected to convey preferences for one form of settlement over another. Other historical factors indicate that highways and automobiles were serving as (and creating the need for) escape hatches for wealthy citizens to live outside of the city. It is more than coincidence that the [\*43] urban fringe took on a life of its own at the very same time that highway construction into urban areas was fully funded by federal revenues. n33 The two inclusions of urban fringe-one being the densely settled regions outside the city and the other being the very densely settled regions on the city's edge-took different angles, setting up the transition from fringe to suburbia. The first inclusion required places to be unincorporated, implying that eventual incorporation would open the possibility of suburban autonomy. The second inclusion, bypassing concerns of incorporation, referred to a type of fringe that was densely settled. A dense fringe allowed the Census to distinguish between differing forms of suburban growth. In both instances, the fringe was poised to take on life of its own, weaning itself away from the city as a maturing juvenile leaves an aging parent. The fringe worked to segregate itself, with an emphasis on gate, from fears of the city. The trope of segregation must travel with the suburb, because the fear of segregation "was not spoken by government officials responsible for administering the nation's social programs." n34 National trends and sweeping generalizations of the suburb are difficult to defend. No matter how many theoretical frameworks are applied, "suburbs differ much in the circumstances of their creation, in price, size, durability, institutional complexity, and in the income, [\*44] educational level, and life style of their residents." n35 Despite all these variables, formations crop up that transcend the particulars of a given suburb. A few such formations begin to work through segregation and geographic racism (apartheid) by uniting urban highways with the suburb as a place of white privilege. The suburb was not a consequence of white people feeling as though they needed to leave the city (although that could be a factor); rather, institutional forces supported land and transportation policies that benefited certain groups at the expense of others. B. Highway and Housing Displacements: How Suburbia Contributed To Racial and Economic Inequality An auto journal in the 1920s noted: "illiterate, immigrant, Negro and other families" remained predominantly outside the market for motorcars. n36 The fact that automobiles were available to some American families and not others had severe ramifications on class and race politics. Configurations of automobile ownership and automobile use joined with the newly entrenched terrain of the suburb to legitimize and perpetuate the marginalization of certain groups. It is important that we expand our focus to include the areas affected by the suburb and not just the suburb itself. Many minority and lower income neighborhoods were excluded from the suburbification of America; instead occupying limited land replete with collapsing infrastructure and urban pollution. These conditions, especially the segregation and differentiation of social status based on borders within the city, are not new phenomena. When horses performed many of the transportation roles in the city, pollution was just as extreme in the form of excrement and disease. Usually the large stables were located away from the privileged or well-to-do neighborhoods. On the other hand, it is important to note that the suburb continued these practices and may have intensified them. [\*45] Detailing the suburb as a primary mechanism for the segregation of people, Lewis Mumford targets the metropolis and its co-option by the military and the state. Citing overvalued land, increasing congestion, a lack of space for recreation, a perpetual cycle of growth and decay, and an elitist distribution of social services, Mumford contends: "The metropolitan regime opposes these domestic and civic functions: it subordinates life to organized destruction, and it must therefore regiment, limit, and constrict every exhibition of real life and culture." n37 Mumford's articulation of a regimented urban reality was compounded by the massive expansion of road building following World War II and the 1956 solidification of the highway machine. The rise of the suburb-a place partially produced by (and fueling) the highway's ability to connect the pristine periphery to the central business district-temporarily resolved Mumford's concerns of density and congestion, only to displace those problems with more severe environmental and human costs. Regardless of the organization of the suburb, the construction of highways in urban areas was a traumatic and oppressive event for the people uprooted by the highway's swath. The suburb also exacerbated the human displacement wrought by the highway because the resources necessary to soften the blow of urban construction were being consumed by suburban areas. The suburbs were typically beyond the reach of the poorest residents of the city, a barrier to entry that widened the gap between the rich and the poor, particularly when the poor neighborhoods were often the same neighborhoods torn up by the highway. The paradox was that the highways and the vehicles that traversed them were being promoted under the banners of maximum choice, individual access, and personal mobility. n38 These ideals were used to build more highways, increasing the demand for automobiles, and removing choice from the inhabitants of the city. Personal and individual choice could not exist on a large scale

when part of the process necessitated a destructive dissection of urban areas. [\*46] The connections between highways and suburbia are only less plentiful than the connections between suburbia and segregation. This can be diagramed through the highway machine as a mechanism of containment, population accumulation, sprawl, and what Ronald Greene calls "the racing and placing of populations." n39 According to Greene, a population control apparatus began articulating modes of government to the problems of large American cities. Certain governing logics began to contain these social crises by enforcing the segregation of people based on class and race. While enforcing this stratification, these governing logics were simultaneously lodging blame for the inequality firmly on the shoulders of those communities who had been stripped of access and relegated to the decaying inner city. These moves gestured to a different sense of power than traditionally deployed. Greene sets up this new intersection of bio-power in two places: the emergence of the inner city as a threat to the health of the social body, and the ways a governing apparatus acts to race and place populations. The rise of urban pathologies and the segregation of "unhealthy" groups of people were made easier by the automobile's facilitation of suburban communities commuting to predominantly white- collar jobs. Greene borrows from Mitchell Gordon, a long-time journalist with the Wall Street Journal, to map the emergence of the diseased city. n40 Gordon's work constructs the city as a withering and doomed sign of human destruction, a perspective advocated in the title, Sick Cities. Gordon's immediate concern involves transformations in transportation and automobile expansion, as he explains in his conclusion: "More people in more automobiles, with more time and money to spend keeping them in motion, will speed up the conquest of urban space on earth and, notwithstanding the huge sums that will be poured into new concrete carpeting, compound congestion at critical places." n41 [\*47] A critique of the city helps to draw attention to the terrible living conditions in urban areas, but it also contributes to the very sprawl it abhors by painting a dismal picture of city life. Gordon's alternative to urban blight lacks muster-he simply encourages state and local governments to take more steps to assist metropolitan areas in combating major problems-but his critique of urban life during the 1960s adds a great deal to the residue of suburban flight. For every idyllic suburban community, countless blocks of city residents were losing access to clean air and water, quality public education, and affordable land or transportation. Gordon does not use the terminology of race very frequently, but he often engages in containing discourse, positioning the city as the focal point of racing and placing populations. An indispensable and primary link between Mitchell Gordon's dystopia and the notion of containment has to be the full-scale construction of urban highways. Urban highways must be mapped as physical and discursive arteries of containment, especially as they helped to construct suburbs that compounded and fostered other signs of sick and diseased cities in the 1960s. Highways made suburban housing available on one end while destroying urban housing on the other. Housing policy and transportation policy represent some of the ways institutions have perfected practices that discriminate against groups based on race. The racist effects of the highway, the city, and the suburb cannot be overlooked because of a fear of ideological criticism or identity politics. Intersectional and interlocking arrangements of oppression warrant criticism from as many directions as possible, including both depth and breadth. By firming up the genealogy of the racist manifestations of the highway machine in conjunction with the place of the suburb and the practices of state-regulated housing, it becomes clear that critical whiteness is one crucial way to map the highway machine in this country. One place of racism generated by suburbs and urban highways is the "black ghetto." Often cited as a reason for fleeing the city by industries and white middle- class suburbanites, the black ghetto is about more than stereotypes and discrimination. The black ghetto became the territory that was contained by articulations between suburban growth, highway construction, and new housing opportunities for many white [\*48] families. According to Massey and Denton: "The black ghetto was constructed through a series of well-defined institutional practices, private behaviors, and public policies by which whites sought to contain growing urban black populations." n42 Instead of describing the extensive examples of racism within American society in a bipolar way, a map of a particular arrangement of domination makes criticism possible and more pertinent. Showing how the highway machine and housing policy contributed to the oppression of non-whites demonstrates how institutions can further racist goals with tacit consent by the white majority. In Paul Fotsch's writing on urban transportation forms, he argues the link between freeways and housing segregation. n43 According to Fotsch, race infuses these issues. And the details of how institutional racism governs many of the effects of highways and suburbia is the key. This memory needs resurrecting. n44 Connecting the alignment between the highway machine and housing segregation to the alignment between land development and modes of transportation generates a line between institutional advancement and segregation. Combined with the flow of resources being used to construct highways, changes in demography and housing patterns manifested themselves in the oppressive deployment of white privilege. Urban and suburban landscapes were polarizing, particularly on race and class lines. Through the 1960s and early 1970s in America, the map of spatial segregation continued to overwhelm many urban and suburban regions. Deploying the Gramscian tropes of maneuverability and consolidation, Fotsch speaks of a "hegemonic bloc" that works to align "large capital interests" with the "white working and middle class" to create a topdown coalition. n45 The components of this bloc include road- user coalitions, truckers, steel workers, oil and gas industries, rubber [\*49] manufacturers, hotel and restaurant chains. Fotsch's standpoint provides a valuable back-drop to the exploitation left in the wake of the highway's purposeful organization of spaces and places. Notice how the trope of security takes on racial dimensions as the city is conflated with "poor people of colour:"

Significant to enabling this coalition was the postwar subsidization of the suburban white life-style, including the construction of interstate freeways. The other side of white suburban security was the entrenchment of poor people of colour in central cities, and....the role freeway construction played in this entrenchment. Freeway and suburban segregation also creates the distancing which allows the distorted narrative of the inner city described in the first section to become widely accepted. n46

Fotsch initially contends "the freeway is part of dominant narratives which view African-American and Latino residents of the central city as largely responsible for the conditions of poverty and violence amidst which they live." n47 The pincer movement occurs when the urban highway materializes the stratification of groups based on race and class. The rhetoric of blame-creating a status of victim by arguing that certain people deserve

their immobility-is complemented by a highway machine that allows an extreme differentiation between living conditions within a limited region. It becomes natural to blame people for inadequate living conditions in order to justify inaction. Fotsch concentrates on Los Angeles and urban California, but the same process marks the history of Houston, Chicago, St. Louis, Detroit and many other east coast cities. Charting the way interstate throughways divided Boston, New York, Philadelphia, Baltimore, Washington, D.C., Richmond, and Atlanta is but one string of examples. During the 1950s the "auto freeway transportation system...helped to create the ghettos," n48 [\*50] and now those same highways have joined a technological narrative that helps to legitimate the ghettos. The state continues to invade the formation of the suburb and the urban fringe by allocating resources in selective ways. State policies attempt to capture transportation and residential planning, simultaneously entrenching certain racist practices. Urban highways after 1956, in particular, were constructed according to fairly uniform standards set up by the Bureau of Public Roads in the Yellow Book. The urban highway is, simply, a wide path of limited access roadway, usually raised with at least two lanes available in each direction. The effects of these highways are severe and physical, especially their "connection to the suburban goal of escaping urban populations." n49 More pernicious than the urge to escape, the connection to suburbia made it easy to label urban populations as "poor" and "radical" and constitutive of a culture of new immigrants. n50 The logic of the suburbs implied that the run-down areas of a city were regions occupied by minorities. In instances where the actual suburb was not predominantly inhabited by whites, those places still tended to be racially homogenous and the suburb was always a means of separating economic classes. The city polarized into a few high rent districts and a number of highly populated low rent districts. The highway generated an explicitly racist boundary by isolating large numbers of people from one another. Certainly buses and consumer spots at highway exits offered locations for human contact, but not the same type of human interchange that previously occurred on trains. The place of the highway displaced residents through isolation, while simultaneously displacing urban communities by racing and subordinating certain populations. All this was done in addition to the highway's absorption of a vast amount of already limited land. Thus, the suburb carries along with it a distancing of its occupants-a distancing generated by the individualized nature of urban freeways. The distance between people justified itself by demonizing the congestion of the city, associating that congestion with poverty and [\*51] violence and essentializing minority populations as dangerous. The suburbs constructed the city as inherently violent, an unpredictable instability that could not "be contained on public transit." n51 The urban freeway permitted selective access to city resources for suburbanites, but also put up an arbitrary shield between the productive output of the highway and the violent residents of surrounding neighborhoods. Compared to subways, trains, buses, and other mass transit, the freeway shaped "a particular distracted experience of everyday life" and became "a symbol of isolation and isolatability." n52 Car-jackings, drive-by shootings, and high-speed chases all add risks to the highway cocoon, but urban freeways still stretch endlessly into the suburbs, promising the security and luxury of home (for some) at a comfortable distance from the city. Demonizing minority communities as poor and violent simultaneously charts the suburb as white and wealthy. The highway machine has directly assisted in, and perhaps even been constitutive of, a segregated metropolis. Fotsch argues that from the beginning of the 1900s, the suburb has drained the city of its life and marginalized the city's radiant diversity. Suburban residents continued to enter the central city even though they no longer paid taxes to urban governments, draining it of its resources and contributing less and less to its maintenance. The highway facilitated this siphoning, placing a suction cup over the vitality of the city's core. Fotsch also points out that these effects of the suburb were based on race as well as income: "As southern blacks began to migrate to northern and western cities during and after the First World War," isolationist whites diverted their capital to nearby suburbs. n53 Race intensified as a factor when the economy expanded after World War II and large numbers of white Americans were able to take advantage of a conjunction between suburban highways and the Federal Housing Administration (FHA). Catapulted by two decades of restrictive [\*52] covenants that prohibited renting or selling property to blacks in certain neighborhoods, the FHA was able to continue practices of overt discrimination. A disciplinary array of containment mechanisms collected themselves within housing, transportation, and public expenditures. Less than equal provisions were allocated to low-income and minority zones, districts, quadrants, or any other complex descriptor for the various "wrong" sides of the track. The racial grids for dwelling acted to capture human territories and integrate multiple forms of exclusion into an apparatus of geographic privilege. Since its inception in 1934, the Federal Housing Administration began granting long-term amortized mortgages for the purchasing of homes. These loans were federally insured and were generally granted "for home purchases in the suburbs" which were already being subsidized by federal spending on urban highways. n54 The FHA also rejected loans in minority areas even though the Supreme Court struck down racial covenants in 1948. n55 Well into the 60s, "FHA policy and overt discrimination on the part of banks and real estate agents helped keep suburbs exclusively white." n56 Citing a comprehensive study of the making of the underclass in the United States, Fotsch reports that the Fair Housing Act of 1968 n57 prohibited housing discrimination. Massey and Denton are quick to note that the de jure prohibition of discrimination did not translate into de facto equality. Making discrimination illegal, as in the Civil Rights Act of 1964, n58 did not reverse institutional and structural racism. If anything, the Department of Housing and Urban Development was simply a mask on top of pernicious racism. n59 Indeed, the FHA was never given the [\*53] legal authority to prosecute (or even investigate) discrimination. Massey and Denton assert that because of the weak detection powers of the Department of Housing and Urban Development, realtors and banks continued to block attempts by minorities to buy property in white suburbs. n60 It is here where Fotsch's historical narrative of housing discrimination crosses paths with the highway machine and the Interstate Highway Act of 1956. This juxtaposition marks a racist consolidation of interests and arrangements. If nothing else, the energy and social mobilization of the 1960s was a cumulative reaction to forms of segregation approaching pre-Civil War extremes. Geographic constrictions on property ownership and residency, not to mention the limited access of highways, played (and play) immense roles in physical banishment and racial oppression in America. Most discussions of the Federal-Aid Highway Act omit a direct consideration of racism and possible racist deployments of highways and suburbs. Gleaning perspective from these varied histories, it is important to add considerations of race to any map of the suburbs. The middle-class whites of the suburbs were able to increase their living standards by enjoying consumer spending fueled by equity in their homes and the deduction of property taxes from their income taxes. Housing and highways intertwined to perpetuate white privilege. When urban renewal projects did take place, they encouraged gentrification and high-rent commercial development. In some instances, the city was re-colonized when the highway tore apart minority communities and city planners re-built infrastructure that did not benefit the shattered neighborhoods. Fotsch claims "'urban renewal' came to be understood as a euphemism for 'negro removal.'" n61 In sum, a governing apparatus operating through housing and the highway machine implemented policies to segregate and maintain the isolation of poor, minority, and otherwise outcast populations. The accounts of segregation and isolation continue to this day. Some suburbs have diversified from some angles (multi-cultural [\*54] communities), but maintained their stratifying function from other angles (gated fortresses protecting pockets of elitist wealth). Working through discourses of containment and the perspectives of critical whiteness can offer a challenge to such arrangements, however, if only by adding to our understandings of the highway machine, suburbia, and the urban environment.

**This is part of a politics of disposability that renders the bodies of cycling subjects, minorities, and the poor – this is a form of silent, ongoing structural war against the poor that functions through stigmatization and invisibility. It must be an ethical priority to make the violence of biopolitics visible.**

**Giroux 6**

(Henry A. Giroux, *Global Television Network Chair in Communication Studies*, Katrina and the Politics of Disposability, September 14th 2006, Accessed online at <http://www.henryagiroux.com/online_articles/Katrina_Pol_Disposibility.htm> Accessed online on June 28, 2012)

A year later, and the victims of Katrina are not only deemed unworthy of state protections, but dangerous and disposable. What does it mean, for example, when CNN’s Anderson Cooper returns to the scene of the crime named Katrina and, rather than connecting the Bush’s administration contempt for social programs to the subsequent catastrophe, focuses instead on the rumors of crime and lawlessness that allegedly spread over New Orleans after the hurricane hit? What are we to think when Juan Williams, a senior correspondent for NPR, writes in a *New York Times* op-ed that the real lesson of Katrina is that the poor “cause problems for themselves,” and that they should be condemned for not “confronting the poverty of spirit?” Williams invokes the ghost of self-reliance and self-responsibility to demonize those populations for whom the very economic, educational, political and social conditions that make agency possible barely exist.

Only a few dominant media journalists such as Bob Herbert of the *New York Times* attempted to articulate a politics of government abuse that unites both Baghdad and New Orleans. Of course, this last issue is difficult, for here we must connect the painful dots between the crisis on the Gulf Coast and that “other” gulf crisis in the Middle East—between the images of U.S. soldiers standing next to tortured Iraqis forced to assume the indignity of a dog leash and the images of bloated bodies of a redundant populace floating in toxic waters after five long days of government indifference. How else can we explain the Bush administration’s refusal to allocate adequate funds for hurricane and flood control in New Orleans while spending billions on the war on Iraq? What does it mean when a government prioritizes tax relief for the ultra-rich and ignores the most basic needs of minorities of class and color?A new politics now governs American policy, one that I call the politics of disposability. It is a politics in which the unproductive (the poor, weak and racially marginalized) are considered useless and therefore expendable; a politics in which entire populations are considered disposable, unnecessary burdens on state coffers, and consigned to fend for themselves. Katrina laid bare what many people in the United States do not want to see: Large numbers of poor black and brown people struggling to make ends meet within a social system that makes it difficult to obtain health insurance, child care, social assistance, savings, and even minimum-wage jobs.In their place, the youth are offered bad schools, poor public services and no future, except a possible stint in the penitentiary. As Janet Pelz in the Sept. 19, 2005 *Seattle Post-Intelligencer*rightly insisted, “These are the people the Republicans have been teaching us to disdain, if not hate, since President Reagan decried the moral laxness of the Welfare mom.”As the social state is hollowed out, the category “waste” no longer simply includes material goods but also human beings. This is a result of a revised set of political commitments that have given up on the sanctity of human life for the populations rendered “at risk” by global neoliberal economies. Instead, the right has embraced an emergent security state founded on cultural homogeneity. This is a state that no longer provides Americans with dreams; rather, it protects Americans from a range of possible nightmares.Defined primarily through a discourse of “lack” in the face of the social imperatives of good character, personal responsibility, and hyper-individualism, entire populations are expelled from the index of moral concerns. Defined neither as producers or consumers, they are reified as products without value and then disposed of.Zygmunt Bauman writes in his brilliant book, *Wasted Lives*, these groups are “leftovers in the most radical and effective way: we make them invisible by not looking and unthinkable by not thinking.” When young black and brown youth try to escape the politics of disposability by joining the military, the seduction of economic security is negated by the violence that is compounded daily in the streets, roads, and battlefields in Iraq and Afghanistan. Their symbolic fate is made concrete in the form of body bags, mangled bodies and amputated limbs — sights rarely seen in the narrow vision of the dominant media.The public and private policies of investing in the public good are dismissed as bad business, just as the notion of protecting people from the dire misfortunes of poverty, sickness or random blows of fate is viewed as an act of bad faith. Weakness is now a sin, punishable by social exclusion. The state’s message to unwanted populations: Society neither wants nor cares about nor needs you. Bauman observes that dominant “power is measured by the speed with which responsibilities can be escaped.” To confront the biopolitics of disposability, we need to recognize these dark times in which we live and offer up a vision of hope. We need to work to create the conditions for collective and global struggles that refuse to use war as an act of politics and markets as the measure of democracy. Making human beings superfluous is the essence of totalitarianism. Democracy is the antidote in urgent need of being reclaimed.The tragedy of both gulf crises must do more than provoke despair or cynicism, it must spark a politics in which the images of those floating bodies in New Orleans and the endless parade of death in Iraq serve as a reminder of what it means when justice, as the lifeblood of democracy, becomes cold and indifferent in the face of death.

**And, the stigma surrounding cycling transport is more than just a norm – bike lanes, and their absence, are an important part of the social imaginary of transit. The discourses surrounding bike lanes and transportation planning is one that securitizes social space through a biopolitical technology of power and fear**

**Herr 12**

(Samantha Z., University of Kentucky, “Biopolitics of Bike Commuting: Bike Lanes, Safety, and Social Justice”, Theses and Dissertations, <http://uknowledge.uky.edu/geography_etds/2>, [CL])

Since the car boom of the 1950s, transport cycling in the US has been particularly stigmatized as childish and negatively associated with poverty and/or deviancy (Aldred 2010; Blickstein and Hanson 2001; Carlsson 2010; Furness 2005a; Furness 2005b; Horton 2006; Horton 2007; Horton, Rosen and Cox 2007; Skinner and Rosen 2007). As a response to dominant car-culture, environmental activists in the 1970s deployed bikecommuting advocacy, but this was largely seen as a counterculture threat to the status quo (Furness 2005b; Horton 2006). Thus, bike-commuting has generally disappeared as a potential means of transport for all but those who are too young or cannot afford a car (exemplified in such statistics as less than 1% of Americans commute by bike (McCarthy 2011; Pucher and Buehler 2009) … that is, until now. In cities across the U.S., biking is being touted as an energy-efficient, low carbon footprint, healthy, community-building form of transport, a sustainable solution to perceived urban ills. As city governments have become increasingly motivated to make their cities more sustainable, transport cycling has become integral in these plans. Boston is one such city enthusiastic about bicycle transportation. After appearing three times on Bicycling Magazine’s ‘The Worst’ list, the last of which was in 2006, the City of Boston changed its tune. In 2007, Boston Mayor, Tom Menino, launched a multipronged strategy to encourage bicycle transportation and make it a more viable option in the city. Since then, bike lanes and racks have been installed, a bike map project has been completed, and various city-wide bike-commuting events have taken place (City of Boston 2011). In 2011, Boston launched one of the first bike sharing programs in the U.S. (City of Boston 2011). Recent enthusiasm and efforts for cycling transport integration by Boston residents and the City made Boston an interesting case for my research. For this geographical investigation, the departure point has become the bike lane, an emerging feature in U.S. urban landscapes. **Bike lanes are key infrastructure** and symbols of the present ‘bikeways’ and ‘complete streets’ strategies for transport cycling integration. Since the mid-2000s, cities around the U.S. have been restructuring their streets to include bike lanes in unprecedented proportions. While increasingly a feature of the U.S. urban landscape, bike lanes are vehemently contested and ambiguous spaces. For example, Ben Adler, writer for The Nation, reports that in 2010, ‘Colorado’s Republican gubernatorial nominee attacked his Democratic opponent for building bike lanes, warning that they “could threaten our personal freedoms” and “convert Denver into a United Nations community"’ (2011:22). Adler also cites cases in New York City, one in which the city was sued for painting a bike lane that removed street parking in a wealthy area, and another in which a Hasidic Jewish community contested a lane in their neighborhood, believing that women on bicycles were dressed immodestly (2011:23-24). How did bike lanes come to be on the street in the first place, and what does it mean for them to be there? These are the questions of my first chapter. Because bike lanes are such ambiguous and contested spaces, it is interesting to ask, “what is at stake?” What is the thrust of bike lane enthusiasm? Through my second chapter, I come to understand that bike lanes are embedded in a process of re-imagining urban life toward more inclusivity and humanistic ideals of public space.1 I investigate the complex discourse of safety that works through discussions about bike lanes in transport literature, **planning paradigms**, bike advocacy, and for everyday bike commuters. What begins as a concern of the physical body leads to ideals of legitimacy and inclusivity, of which the bike lane has become a key symbol and act of these imaginings. The logic of bike lane safety becomes one that employs a right-based notion of social justice in which legitimacy, and ultimately safety, is garnered through becoming intelligible, or visible, as cycling subjects. I find this rights-based logic of social justice problematic in the context of bicycling integration and the issue of safety. My fieldwork research indicates that increasing visibility and legitimacy of cyclists doesn’t lead to felt experiences of increased safety for cycling bodies. This leads me to question the usefulness of a rights-based strategy of social justice to affect everyday embodied experiences. In the third chapter, I use the case of transport cycling to explore another option for conceptualizing, understanding, and strategizing for social justice in the city. In the third chapter, I depart from a liberal democratic notion of social justice and make a case for understanding how bike lanes work through the lens of what Foucault terms “security.” Security is an affective technology of power that aims to preemptively intervene through the milieu to effect the population so as to maximize benefit for the greatest number. There is, of course, always a margin of failure, those who will encounter harm. I connect fear, and more specifically cyclists’ fear, to the dimension of social in/equality. I explore the connection between difference, fear, and risk in the context of transport cycling, showing how the bikeways discourse of inclusivity works through bike lanes as mechanisms of security. This understanding is at odds with the understanding of bike lanes as territorial rights-claims, a common understanding demonstrated by bikeways proponents (from scholars to cyclists themselves). To be at odds, however, is not to be a critique. The Foucauldian perspective that I suggest is an additional perspective that highlights less seen aspects of the transport cycling experience, project towards integration, issues of social justice, and elements of power relations more broadly. I do not disagree with a rights-based interpretation of bike lanes and social justice; rather, I intend to bring to the fore an alternative dimension that simultaneously exists alongside it. While in actuality I believe that representational and affective dimensions are inextricable from each other, in this thesis I will express these dimensions dichotomously. This dichotomy is solely used heuristically in an effort to highlight and explain the nature of difference between these two dimensions. I engage in this project to hopefully flesh out what I believe has been a monochromatic painting of bike lanes, transport cycling integration, cycling safety, and social justice in the city. From the perspective of security that I adopt, bike lanes are not understood as features of a rights struggle that claim space in the city for an under-represented population of cyclists, or that simply wave the banner for an ideology of a more humanistic way of life, but rather are mechanisms working within the bikeways discourse of inclusivity that physically shift the urban milieu, affecting spaces and bodies in important ways. Inclusivity discourse, which advocates for the inclusion of cycling as an option for travel on city streets and for the inclusion of many different kinds of cyclists, intervenes at the conjunction of subject positionality, perception, probability, potentiality, and embodied reality. It renders cycling safety into a problem of fear and risk, and responds by negotiating difference and normalcy within the milieu. I then apply this Foucauldian-influenced understanding of the bikeways approach to cycling safety to the problem of reaching real bodies in our efforts towards social justice and safety in the city. Cycling safety within the bikeways context provides a productive opportunity to explore this new way of thinking and acting because **the problem of cycling safety is directly situated within our bodies, in encounters** with one another, as we each traverse the city. There is a timeliness, and maybe even urgency, for this exploration as transport cycling becomes increasingly promoted and popularized as a mode of transport in cities across the U.S. How can we capitalize on the mechanisms at work in our changing streets and cities for a more equitable and fearless future?

**The ability of the State to structurally deny access to intelligibility is part of the spreading of social death by the Sovereign to the body of the cycling subject – this is an aspect of a logic that wages wars in the name of populations, and that manages life and the body – with the power to give life comes the power to take it away**

Foucault 84

(Michel Foucault, Chair of the History of Systems of Thought at the College of France, The Foucault Reader, Ed. Rabinow, 1984, pg. 259-260, Originally 1978 in the History of Sexuality Vol. I)

Since the classical age, the West has undergone a very profound transformation of these mechanisms of power. "Deduction"has tended to be no longer the major form of power but merely one element among others**,** working to incite, reinforce, monitor, optimize, and organize the forces under it: a power bent on generating forces, making them grow, and ordering them to submit or destroying them. There has been a parallel shift in the right of death, or at least a tendency to align itself accordingly. This death that was based on the right of the sovereign is now manifested as simply the reverse of the right of the social body to ensure, maintain, or develop its life. Yet wars were never as bloody as they have been since the nineteenth century, and all things being equal, never before did regimes visit such holocausts on their own populations. But this formidable power of death**-**and this is perhaps what accounts for part of its force and the cynicism with which it has so greatly expanded its limits-now presents itself as the counterpart of a power that exerts a positive influence on life, that endeavors to administer, optimize and multiply it, subjecting it to precise controls and comprehensive regulations. Wars are no longer waged in the name of a sovereign who must be defended; they are waged on behalf of the existence of everyone, entire populations are mobilized for the purpose of wholesale slaughter in the name of life necessity: massacres have become vital**.** It is as managers of life and survival, of bodies and the race, that so many regimes have been able to wage so many wars**,** causing so many people to be killed. And through a turn that closes the circle, as the technology of wars has caused them to tend increasingly toward all-out destruction, the decision that initiates them and the one that termites them are in fact increasingly informed by the naked question of survival**.** The atomic situation is now at the end point of this process: the power to expose a whole population to death is the underside of the power to guarantee and individual's continued existence.The principle underlying the tactics of battle-that one has to be capable of killing in order to go on living-has become the principle that defines the strategy of states. But the existence in question is no longer the juridical existence of sovereignty; at stake is the biological existence of a population. If genocideis indeed the dream of modem powers this is not because of a recent return of the ancient right to kill; it is because power is situated and exercised at the level of life, the species, the race, and the large-scale phenomena of population.

**And so my partner and I demand that the United States federal government should substantially increase active transportation investment in the United States.**

**The question of social justice, inclusion, and transportation citizenship is one that’s bound up in the problem of legitimacy – the politics of bodies and the materialization of fear and security in the everyday experience of cycling is contingent on access to visibility on and off the street – bike lanes solve.**

**Herr 12**

(Samantha Z., University of Kentucky, “Biopolitics of Bike Commuting: Bike Lanes, Safety, and Social Justice”, Theses and Dissertations, <http://uknowledge.uky.edu/geography_etds/2>, [CL])

The street is a space that is understood (and can be understood) in a variety of ways, and these ways often carry with them differing and/or competing worldviews and ideals. In his more recent work, Blomley deciphers how different ‘street logics’ operate. For example, he explores how “traffic logic” renders streets into transport corridors, rather than spaces of citizenship (2007a, 2007b), and how “pedestrianism,”—the sidewalk logic currently dominating Canadian planning and engineering views—takes the sidewalk as a space for circulation and unimpeded flow, rather than a space for the exercise rights (2011).7 The sidewalk, Blomley argues, is a highly politicized space, made even more so by its rendering through the logic of pedestrianism as a-political. Blomley’s attention to street logics encouraged my own attention to the logics of transportation cycling integration—namely the ‘vehicular cycling’ and ‘bikeways’ perspectives—in my analysis presented in this thesis. Literature on social justice in the city, and in particular work that considers mobility and movement, does a great job conceptualizing the role of the body in rights and representation (e.g. Blomley 2011:88-93), but rarely considers embodiment (for an exception see Kawash 1998). Conversely, I find geographic literature on fear/safety particularly compelling because it takes the body and its movements through the city seriously. It illuminates how personal, embodied experiences of fear/safety in the city are expressions of power dynamics in the city, yet it does not explore how bodies are wrapped up in movements towards social justice. In other words, fear scholarship ties the affective dimension to social justice concerns, but does not go all the way to exploring the connection to social justice movements. This thesis is an attempt to tie affective, experiential dimensions to conversations about social transformation, bridging the gap between the kinds of scholarship in the fear/safety literature and academic work on urban social justice. What does consideration of the affective dimension, or embodied experience, do for geographic thought on social justice in the city? In this way, this thesis is a study of the biopolitics8 of cycling that (hopefully) **foregrounds real bodies**. Judith Butler writes in reflection of herself, “I am not a very good materialist. Every time I try to write about the body, the writing ends up being about language” (2004a:198). I am attempting not to fall into this same trap. On a theoretical level, this thesis is an exploration of the following questions: how can we understand and work toward social justice experientially, in everyday embodied moments and acts, rather than deferring to structures of representation, intelligibility and law (Butler’s ‘language’) in the hopes that this works back on our everyday experiences? Is there such a mode of social justice, and if so, what does this look like? The reason I ask these questions is because it seems to me that rights-based notions of social justice fall into the very trap that Butler reflects upon. Rights-based notions of social justice render bodies into significations and language rather than dealing with actual bodies. Within this framework, which inherently rests on the ability to define and signify, we are left with a situation in which more justice can only be gained through an injustice. Butler concisely states the problem this way: “I may feel that without some recognizability I cannot live. But I may also feel that the terms by which I am recognized make my life unlivable” (2004a:4). Is there a way to, at least, imagine a path toward justice that escapes this problematic? It is not the case that I think we should do away with rights-based ways of thinking about and working towards social justice—quite the opposite—rather, I think that there is, simply, more to social justice than that. These additional methods and possibilities remain under-theorized and under-explored. I understand myself to be participating in transformational theory, not critical theory. My project is not about replacing ways of thinking and seeing, but about creating multiple ways of thinking and seeing. Different ways of seeing are needed to expand the toolbox in order that we may broaden our appreciation of the variety of possibilities and paths that exist in which to work towards the common goal of social change and transformation in our everyday lives. With an eye toward this project, transport cycling integration becomes exemplary as a way of looking at how social change is envisioned and embodied currently in the U.S. First, transport cycling integration and, more specifically, bike-laning, is a movement for mobility rights, access, and safety. As such, it is a movement for social justice in the city that also foregrounds everyday embodied practices. Second, it’s happening now. Particularly Boston, as a space and a group of people, is in a unique moment of transition. Unlike a city like Portland or Seattle in which bike-laning and cycling integration has, in a sense, already happened, Boston is in the throws of this at an accelerated pace due to high levels of enthusiasm from multiple kinds of actors (government, residents, businesses, advocacy groups, etc.). This shift has material, conceptual, social, cultural, and economic dimensions. This thesis contributes to theoretical conversations about social change in that I use the case of transport cycling integration in Boston to examine our current paradigm of social justice in the city, and to explore new ways of understanding. Following the lead of scholars who call for the need to flesh out the social aspect of the sustainability agenda, this thesis contributes to sustainability conversations by exploring the social justice dimension of transport cycling integration. Largely taken as an environmental, health, and economically beneficial option by transport and planning scholars, this thesis encourages sustainability and transport scholars to hold the inherent, but often overlooked, dimensions of power relations in view. Further, by foregrounding bike commuters’ experiential accounts of cycling the city of Boston, I push social justice conversations out of the realm of language and law to consider embodied dimensions of marginalization, exclusion, and inclusion.

**Obviously access to mobility is never a certainty – only bike lanes infrastructure can remedy the inequality in relationships to mobility in the city that directly effect how mobility is constituted discursively. Cycling and infrastructural support of cycling is part of a movement toward the reclaiming of public spaces away from fear and marginalization.**

**Herr 12**

(Samantha Z., University of Kentucky, “Biopolitics of Bike Commuting: Bike Lanes, Safety, and Social Justice”, Theses and Dissertations, <http://uknowledge.uky.edu/geography_etds/2>, [CL])

Recent transport cycling enthusiasm is a divergence from dominant car-centric ways of urban living in the U.S. As such, it inherently and inevitably invokes contestation, struggle, and marginalization. Through my research and analysis, I show how current transportation cycling integration is a movement toward creating a more inclusive urban milieu. Inclusivity is a point of convergence between the physical and ideological dimensions of cycling safety. Creating an environment that invites transport cycling to the street (i.e. implementing bike lanes) encourages more people to cycle, and is seen to increase overall embodied safety for cyclists. This inclusivity is also seen to establish the legitimacy of cycling for transportation. Transport cycling is embedded in ongoing social relations in the city established beyond the immediate purview of the bike. As mobilities and geography scholars suggest, the everyday ways in which we travel the city are intricately woven into the fabric of historically constituted and re-constituted power dynamics in the city (Blomley 1994; Blomley 2007a: Blomley 2007b; Cresswell 2010; Henderson 2009; Jenson 2009; Mitchell 2005; Shaw and Hesse 2010). On a meta-mobilities level, “**Mobility is a resource to which not everyone has an equal relationship**” (Hannam et al. 2006:3). More circumstantially, for example, Henderson (2009) looks at how parking debates in San Fransisco are “not just about parking, [but]…about how the city should be configured and organized, and for whom” (2009:71).“Different forms of mobility, such as movement by car or movement by foot [or bike], need different built environments to be functional, and are only privileged when political power promotes one over the other” (Henderson 2009:71). In other words, “[m]obility…contains social relations” (Henderson 2009:74). Thus, it is important to ask: Who moves furthest? Who moves fastest? Who moves most often?... **How is mobility discursively constituted**? What narratives have been constructed about mobility? How are mobilities represented?...Finally, and perhaps most importantly of all, there is a politics of mobile practice. How is mobility embodied? How comfortable is it? Is it forced or free (Cressell 2010:21)? This thesis responds to some of these questions in the context of bicycle commuting, most particularly looking at how it is embodied. As with every other facet of our lives, how we journey is implicated in our positions of privilege and experienced subjectivities, such as race, class, age, gender, and sexuality. Bicycle transportation is no exception. Hanson (2010) appropriately opens her article on mobility and gender with Frances Willard’s (the famous suffragette) account of how riding the bicycle, which was largely prohibited for women at that period of time, established her independence and freedom from the restrictions of middle-class womanhood, allowed her to explore the outdoors and her inner-self, and was a vehicle used to advance ‘the woman question’ (Hanson 2010:5-7). Fast forward a few hundred years, and the bicycle is still being used, at least in theory, to advance social equity. Only now, it is within the context of sustainability objectives (e.g. Batterbury 2003; Hanson 2010; Monheim 1996; Pucher and Buehler 2007; Shay and Khattak 2010; Wilkinson 1997).2 This concept of sustainability is understood to have three dimensions— environment, economy, and social equity (Hanson 2010; Jones 2005; Shay and Khattack 2010). These sentiments are mimicked by recent sustainable transport objectives (Shay and Khattak 2010:15).3 Bicycle transportation integration is part of this larger move toward sustainable transport. Transport cycling, or bike-commuting, is seen as a holistic solution to environmental problems of air pollution and energy-consumption, traffic congestion and high transportation costs, and as a way to promote more equitable, community aspects of urban living (Batterbury 2003; Furness 2010; Hanson 2010; Monheim 1996; Pucher and Buehler 2007; Rastogi 2011: Shay and Khattak 2010; Wilkinson 1997). Some bicycle scholars turn a critical eye to this green-scripting of bicycling, where scholars unveil the bicycles’ recent environmental endorsement to reveal how this can be at the expense of social equity, community, and/or inclusion (Aldred 2010; Cupples and Ridley 2008; Jones 2005). In this thesis, I emphasize the dimension of social equity as it pertains to cycling integration. From this perspective, where accommodating diversity is a driving theme in sustainability discourse, current cycling integration contributes, not only to a more inclusive streetscape, but to the creation of a more inclusive urban milieu at large. While my research takes place in this overarching context of sustainability, this context largely falls away in my analysis. Instead of a systemic or structural approach, I focus this thesis on the embodied, or affective, experience of movement (like Jones 2005, Middleton 2010, Sheller 2004, or Spinney 2007, 2009). From this perspective, the issue of safety becomes my primary theme, the body my primary site. Cyclists experience marginalization and exclusion through embodied threat and perceived bodily risk in undertaking bicycling behavior on car-laden city streets (McCarthy 2011). Thus, advocates and cyclists struggle for the ability and legitimacy to cycle, not simply for the sake of ideology, but because bicycling can be life threatening.4 The level of danger that cycling presents is highly contested among scholars and advocates. No matter how you calculate risk, however, the fact is that cycling can result in serious life-changing injury and even death. In 2008, for example, there were 716 reported cases of bike traffic fatalities and 52,000 reported injuries, and in 2009 there were 630 fatalities and 51,000 injuries (NHTSA National Center for Statistics and Analysis 2008, 2009). This means that while bicycle trips make up less than one percent of the modal split, bicycle fatalities make up two percent of all traffic fatalities per year (ibid.). Bicycle scholars Pucher and Dijkstra find that cycling versus riding in a car in the U.S. is three times more likely to result in a fatality on a per trip basis, and eleven times more likely to result in a fatality per kilometer traveled (2000:28). Life and death dimensions beyond vehicle collision exist as well. For example, a cyclist in Charleston described an experience in which a driver threatened him at gunpoint over a minor dispute about sharing the road (McCarthy 2011:1447). Another transport cyclist discussed feeling “hunted” after seeing a ‘Share the Road’ symbol tagged over with a circle and slash (McCarthy 2011:1447). Safety, or **its other face, fear**, is an issue of social justice. Feelings of threat are conditioned by marginalization. Critical geographic literature on fear in the city argues that perceptions and experiences of fear and safety in the city are socially constructed. Scholars document differing experiences across gender, class, sexuality, age, race, and ability (Brownlow 2005; Day 2006; Doan 2007; Englandand Simon 2010; Kern 2005; Loukaitou-Sideris 2006; Munt 2002; Pain 1991, 2000, 2001; Pain and Townshend 2002; Starkweather 2007;Valentine 1989). Pain states: Research has consistently produced evidence that social traits such as age, gender, race, ethnicity and class affect fear levels. It has been hypothesized that this is due to structural inequalities in society which affect the relation of such groups to power. Those who feel a lack of integration into their neighbourhoods, isolation, or a lack of social acceptance; those who have little control over resources; and those who are marginalized and have a sense of powerlessness within society are most likely to fear crime (1991:424). While Pain’s research, and the majority of geographic scholarship on fear in the city for that matter, has to do with fear related to crime violence, the same can be said for fear related to daily travel. Loukaitou-Sideris (2006), for example, finds that ethnic minorities, and in particular the elderly, experience more fear of walking related to threats of traffic collisions. She also finds that ethnic minorities disproportionately walk as a mode of transport, and are disproportionately represented in pedestrian injury and fatalities statistics. Likewise, Horton (2007) finds that cyclists’ fear of accidents is embedded within subjective experiences of gender, race, class, etc. (134). Fear/safety is conditioned by subjectivities, but it is also conditioned by material realities (not disconnected from subjectivity, of course), such as the locations where low income populations or racial minorities live in relation to infrastructurally impoverished streets, or access to types of modal methods. It is also mitigated by bodily capability. For example, British bicycle scholar, Phil Jones (2005), reflects on his ability to physically and emotionally handle his bicycle journey to work. If this activity posed more of an unwelcomed, or drastic, challenge to his capabilities, this activity would generate considerably more fear. Furthermore, feelings of fear and safety don’t stop at the individual. Again, Jones discusses how if he had a family to take care of, he would see the risks he takes on his bike as “unacceptable” (2005:827; also see Sheller 2004:229230). 5 In fact, Cupples reflects, after acknowledging her own productive and reproductive responsibilities and fear of death by cycling, that “It is no sheer coincidence that commuter cyclists are much more likely to be male, and are often people who don’t have immediate responsibility for the social reproduction of the household” (2011:228).6 Similarly, Horton (2007) discuses how men who do not have fear for themselves in bike commuting, express fear for wives or daughters if they were to do the same thing. Thus, it can be understood how fear is tied to subjectivity—in this case gender—and how these subjectivities play out in material realities—like being a primary care-taker, or having the opportunity to develop cycling skills. Transport cycling, Horton points out, ‘puts the person back into the fearscape in a much less mediated way’ than one would be in a car (2007:134). Unlike the car, cycling places the body in a public sphere. Engaging in the act of cycling isn’t merely taking a calculated risk of accident with one’s body, but is taking that risk under certain variable conditions, and allowing one’s body to be open to all kinds of contact and assault that might occur while traversing public space. Thus public space is a key theme for scholarship on fear/safety in the city.

**Our demand is not just an imagined policy that gets passed by faceless politicians and resolves decades of structural discrimination – instead, we think you should imagine the 1AC as a form of biketivism that politicizes the bicycle as a vehicle for social movements that challenges assumptions about broader power structures and forms of cultural hegemony**

Furness 5

Furness, Ph.D. in Communication at the University of Pittsburgh, 2005, Zachary Mooradian, Put the Fun Between Your Legs: The Politics and Counterculture of the Bicycle, Doctoral Thesis. pp. 48-52

Through a dialectical process of action (protest and everyday practice) and communication (media), the cycling counterculture calls the technological decision making process into question and it simultaneously creates new narratives about technology that emphasize both individual empowerment and collective struggle. Collectively, these processes are intended to “transform the cognitive structures that help people to interpret ideas/issues/arguments”112 about bicycling and car culture. To put it another way, one goal of biketivism is to make the bicycle stand for something, to communicate messages through the technology. This is not to ascribe an independent agency to the technology, rather, it is a way of looking at how activists can attach specific meanings to particular technologies that communicate messages to the public—even in the absence of an accompanying discourse. This is essentially the inversion of the branding method of advertising that is well-documented by Naomi Klein, in which corporations ‘breathe life’ into commodities in order to make them communicate specific messages long after our televisions have been turned off and the magazine covers have been closed. Take for example the Hummer SUV, a technology that is tied to a narrative of adventure and excitement through selective media representation and advertisements that feature images of Hummers climbing up steep hills, tearing through forests, and ultimately resting atop the summits of mountains. Because of the association that people have between the automobile and this particular narrative, the Hummer continues to communicate a message without the presence of an accompanying advertisement, sales pitch, or stunt driver: A Hummer SUV no longer exists as a product of engineers’ planning and workers’ labor at General Motors, a complex machine made of metal, glass, and rubber, or even a vehicle to get the kids to soccer practice. Instead (coached a bit by Madison Avenue) the H2 takes on a personality of rugged individualism, a bit of military imperial invincibility, and a ready-made landscape of untrammeled, open, and distinctly non-suburban terrain.113 Over the last two decades, a practice of branding inversion known as *culture jamming* has emerged within various facets of the anti-corporate, anti-capitalist, and anti-globalization movements.114 As a series of tactics that attempt to invert and politicize both the products and function of mass culture, culture jamming can be seen as one way in which individuals have individually and collectively transcended Horkheimer and Adorno’s ominous assertion that “anyone who resists can only survive by fitting in.”115 Culture jammers critique capitalist and corporate institutions through direct action tactics such as billboard modification116 and street theatre,117 and also through the manipulation and re-circulation of advertisements,118 music,119 technologies,**120** and other mass produced commodities.121 Culture jammers are extremely diverse because there are a number of different intellectual influences that have shaped both the theoretical dispositions and practices of specific groups. Some of the predominant influence include, but are not limited to, the Frankfurt School, William Burroughs, the Yippies, Guy Debord and the Situationist International (SI), second wave feminism, activist guru Saul Alinsky, and punk rock. Mark Dery is correct in referring to culture jamming as an “elastic category, accomodating a multitude of subcultural practices”122 because different groups have wide ranging interpretations of who, or what, should be targeted (for disruption, satire, or critique), what media or objects should be utilized, which audiences should be targeted, and what criteria is used in order to evaluate success or failure. However, despite the variety of theories and tactics used by culture jammers there are common objectives that are collectively shared by the majority of culture jammers, including some the following: 1) to demystify corporate power, undermine consumer culture, and critique capitalism through “semiological guerrilla warfare”123 and technological manipulation, 2) to politicize and publicize a host of issues that have been effectively masked by corporate dominance of the media environment such as public vs. private use of space, rampant advertising, citizens rights, sweatshop labor, intellectual property laws, and institutionalized discrimination, 3) to ultimately change people’s communication habits, i.e. to teach them oppositional strategies for decoding messages in both the public and private spheres124 and **4)** to encourage, motivate, and educate other people on how to utilize ‘Do It Yourself’ (DIY) tactics in order to create their own cultural practices and products—as opposed to merely consuming those sold by corporations. Culture jammers have shown how one can manipulatesuch images and narratives in order to tell an entirely different story about a particular commodity, whether it is a Hummer or a McDonald’s cheeseburger.125 Through techniques such as direct action, billboard modification, satire, and the subversive use of images/text, culture jammers demonstrate the idea that branding can be used in an entirely different manner than was intended. By changing the images and texts associated with a particular commodity, one can possibly change the way in which people learn to evaluate images/texts, and ultimately, change the way in which they perceive that commodity. Along the same lines, biketivists attempt to change public perceptions about the bicycle through creative forms of direct action, inventive use of cycling technologies, subversive images/texts, and the production of positive images/texts that are intended to teach people how to ‘read’ bicycles in a different way. Ultimately, the goal is to not only have people ‘read’ bicycle/cycling in a different way, bike activists also work towards cultural changes that result from changes in both consciousness and discourse: “groups, as well as individuals or institutions, through their rhetorical tactics and strategies create social movements, changes in public consciousness with regards to a key issue or issues, measurable through changes in the meanings of a cultures keyterms in public discourse.”126 This focus on transformation and long-term social change is one of the important differences that separates politicized cyclists from most—but not all—culture jammers who are more focused on aesthetic rebellion and pranks than sustained political initiatives.

### Solvency – Bike Lanes

**Herr 12**

(Samantha Z., University of Kentucky, “Biopolitics of Bike Commuting: Bike Lanes, Safety, and Social Justice”, Theses and Dissertations, <http://uknowledge.uky.edu/geography_etds/2>, [CL])

For all the bike literature on safety (such as Chich-Wei 2011: Emond 2009: Forester 1971; Haake 2009; Heesch 2011; Horton 2007; Krizek et. al. 2004; Krizek and Roland 2005; McCarthy 2011; Parkin et. al. 2007; Pucher 2001; Pucher and Buehler 2007; Pucher et. al. 2010; Reynolds et. al. 2009; Sandar et. al. 2011; Schepers et. al. 2011; Sharpe et. al. 2011; Skinner and Rosen 2007), there is not an analysis of safety discourse. “Safety” today doesn’t entail what it used to thirty years ago, or what it will thirty years from now. What do we mean by “safety” and what circumstances produce this result? Or more specifically, what do people mean when they talk about safety for cyclists and what assumptions undergird these conversations and approaches? What expectations do we have or experiences do we envision for a ‘safe street’? And what does this discourse produce? While sustainable cycling logics may erase the heterogeneous aspects of cycling by assuming that everyone can and should participate in cycle commuting (Cupples and Ridely 2008), cycling safety discourse does not. In fact, current cycling safety discourse begins with an acknowledgement of difference in its stated desire to provide more inclusivity. This strategy of inclusivity is about increasing the population of cyclists on the road. To produce a greater population of cyclists on the road, cycling needs to become a viable option for a wider diversity of people in the city. This is where bike lanes come in. Bike lanes are used to produce a more inviting and accessible atmosphere for a wider diversity of cyclists with varying skills, abilities, lifestyles, and purposes. But the parameters of this kind of inclusionary thinking doesn’t stop there. In fact, some proponents of this kind of cycling integration methodology assert that, “The few cities that do provide good infrastructure for cyclists are the safest for cyclists, pedestrians and cars” (Koglin 2011: 225). Planning for cyclists’ means creating more equal urban spaces where all road users can use the space…[It] will create a more attractive city for all” (Koglin 2011:226, my emphasis). While intentions may be in the right place on this one, so to speak, the reality may not necessarily be this idyllic. Cupples points out that “A consideration of the gender imbalance [in commuter cyclist populations] seriously complicates the assertion that planning for cycling = planning for equity” (2011:228). Here, the discourse of safety qua inclusivity begins to unravel. Furthermore, while employing a strategy of inclusivity is seen as a common sense method to increase safety for cyclists, it is less obvious how this strategy actually works. McCarthy (2011) argues that this strategy is ultimately about identity and social exclusion. For her research participants, she concludes, more cyclists on the road would work to normalize the cyclist identity, overturning driver notions about cyclists as outsiders. **I take my interpretation more in the direction of looking at inclusivity as a safety logic in itself**. Inclusivity, as it is presented through a bikeways logic, is understood as a representational strategy for safety. In this way, inclusivity is a discursive response to a pre-discursive threat (i.e. the embodied risks of transport cycling). This challenges us to think more broadly about the assumptions we make in our experiences of safety and fear as we move through the city. What ensures our safety? Who is responsible? What is the connection between our environment, our subjectivities, and (the safety/protection of) our bodies?

### Solvency - Safety

**Herr 12**

(Samantha Z., University of Kentucky, “Biopolitics of Bike Commuting: Bike Lanes, Safety, and Social Justice”, Theses and Dissertations, <http://uknowledge.uky.edu/geography_etds/2>, [CL])

The last chapter outlined the historical conditions from which the inclusion of bike lanes on U.S. city streets emerged. In essence, the existence of bike lanes are material manifestations of the bikeways imaginary of bicycle transportation integration, which is intricately woven within a fabric of a ‘complete streets’ mindset popular today. This chapter will delve more specifically into the bikeways imaginary that undergirds the advocacy, creation, and use of bike lanes specifically. In this chapter, bike lanes are interpreted as mechanisms that participate in a tripartite discourse about safety, inclusivity, and legitimacy. I explore how bike lanes are employed in urban design and imagination toward a certain vision of a *safe street* and city that is *linked to an ideal of social inclusivity. This ideal is built on preconceptions about the establishment of social equity and justice through the rendering of cyclists as (legitimate) subjects.* I then look at how this understanding of transport cycling integration compares with the everyday lived experiences of cyclists in Boston. While cyclists seem to be gaining more visibility, they do not seem to be experiencing less fear. In consideration of this disjuncture, I am led to ask fundamental questions about the connection between bike lanes and social equity, and about the rights-based logic of social justice that the bikeways imaginary assumes and deploys. In the summer of 2010, 1.65 percent of total trips in Boston were made by bike,19 yet the City of Boston would like to reach at least 30 percent (Freedman interview Transcript 6-23-10). This would require a cultural shift within Boston’s urban milieu, where bicycling would become integrated into the mainstream.20 To support claims for the possibility of realizing such an ideal, bike lane advocates often point to places in Europe, such as the Netherlands, Denmark, Germany, Sweden, and Switzerland, that are seen to have actualized this way of life. This is seen in both transportation literature that advocates for bikeways (e.g. Pucher 2001; Pucher and Buehler 2007; Pucher et. al. 2010; Tolley 1997), as well as through my fieldwork**.**

As one participant said during our interview, “… I was in Europe last year...and [my friend and I] went to the grocery store…The store had practically no [bike] parking [left], and all of these elderly ladies arrived on their bicycles.... You still don't see anything like that” (interview transcript 77-10). Another participant said: I was in Sweden for a summer, and they have cycle tracks on all the roads, and that is amazing. They also have… these air pumps along the way. Just public ones. It's pretty cool. And then... within the heart of the city where the streets are really narrow, they just close it off to cars, so in the morning time you just would see this rush hour of bikes, and people biking. So that is really, really cool (interview transcript 7-30-10). The inclusivity and bike-friendliness of the European urban environments that these quotes portray— by the image of elderly women cyclists in the first, and extra care and attention toward cycling needs through the public availability of air pumps, cycle tracks, and bike-only streets in the second— are visions for what U.S. streetways *could be*; they are potentialities. Even with bike lane construction and a marginal increase in cyclist population thus far, the safer, more inclusive streetscape modeled by bike-friendly European cities that have flourishing cycling transport rates and bike boulevards has yet to manifest in Boston (and in the greater U.S.).

For many cycling transportation scholars, advocates, and bike commuters, what lies between the current state of urban bicycle transportation and what could be (i.e. European “realities”) is the issue of safety for cyclists (Horton et. al. 2007; Skinner and Rosen 2007; e.g. the preoccupation with this topic in the transport literature). Bike lanes are mechanisms employed to this end, but to understand how they work in this way is more complex than one might at first think. Cycling safety is multi-dimensional. Livable Streets blogger, Steve Miller (blogpost 1-25-11), usefully provides a framework for understanding safety (which he gets from none other than a Dutch cycle blogger). He articulates three kinds of safety: actual safety, subjective safety, and social safety. Actual safety has to do with the actual likelihood that a cyclist’s body will be involved in an accident, and is the notion of safety central to the vehicular cycling perspective. In actuality, bike lanes, as strips of paint on the ground, do not protect cyclists’ bodies from the physical threats of the road. In this way, the vehicular cycling perspective makes some good points. What seems to be the greatest physical danger for cyclists on the road is precisely what bike lanes do not protect against. Tables show (Forester 2001) that falling is the highest physical danger to cyclists, followed by car-bike collisions that occur during turning and crossing points (such as intersection scenarios), which are areas that bike lanes generally do not cover (2001:8-9). Further, bike lanes can complicate cyclists’ physical safety by guiding cyclists to ride in certain areas of the street. It is a hot debate, however, whether this ultimately results in more or less safety for cyclists. For example, one research participant felt that bike lanes were “sort of an oxymoron…because really you have to be on the outer edge of a bike lane to be safe, so what would make ‘em safer is… if they would get rid of all the cars parking on the streets, but I know that would be really hard to do” (interview transcript 7-30-10). On the other hand, another participant felt that overall safety was increased by bike lane presence. He said: Are they [bike lanes] safe? Yes, I think they are. Really the main argument against bike lane safety is the dooring situation, of course. And I think this is a highly contested subject, especially in this city, but given the choice between a bike lane and no bike lane, a bike lane is going to be a safer environment for a cyclist, even though it encourages them to ride in the door zone. Because I think that most cyclists will not ride in the door zone and most cyclists will actually ride further away from cars with a bike lane than they would without one…(interview transcript 6-30-10). These responses demonstrate that bike lanes are perceived to have an effect on cyclists’ physical safety, but whether it is for better or worse is hard to say. Either way, this supposes that Boston cyclists use bike lanes. Do they? Comparisons between the Boston Bikes map, a 2010 bike lane map obtained from the City of Boston showing existing and proposed bike lanes, and ten participant journey maps (see Appendix for a reproduction) conducted along with interviews and participant observation suggest that the overall sentiment among cyclists in Boston is that they may use a bike lane if it is there, but they don’t go out of their way to use them.21 However, variance in how riders negotiate streets and journey pathways complicate this assumption. A breakfast conversation I had with a group of transportation cyclists illuminates differences in preference and comfort. The conversation went like this: P1: I like to be in the road, more away from car doors and sometimes I just ride in the middle of the road. P2: Yea, I noticed that when we road to Trader Joe’s the other day. I like to ride more in the middle of the [car] lane, but I feel awkward about it. I thought I was the only one that did that. P3: I like to hug the side, but I check to see if there is a person in every vehicle. If there is, then I go around them. Me: I have no problems taking the [car] lane and I will often move over to claim space if I see a car double-parked up ahead. P2: I do that too. Sometimes people get mad at me, but what am I supposed to do, get run over (fieldnotes 7-16-10)? This conversation, as well as data collected through journey accompaniments and video recording cycling journeys, indicate that, due to obstructions in the bike lane, other road conditions, and rider preferences, actual bike lane use in Boston may very well be sporadic at best. As bike lanes do not provide a physical barrier to road obstacles, it is hard to say whether they are helping or hindering the physical safety of cyclists; however, there is more to bicycling safety than a moment of collision. **Bike lane advocates know this—and this is their main point**. From the bikeways perspective, bike lanes are not so much mechanisms to protect the physical safety of riders as much as they are there to effect perceptions of safety. In other words, bike lanes are foremost an attempt to intervene at the level of subjective safety. Subjective safety, according to Miller, is how safe one feels on the road in terms of proximity to vehicles, bodily fitness, familiarity with cycling, etc. (blogpost 1-25-11). Bike lanes work to make people *feel* more comfortable, something that advocates are aware of. From this point of view, it is the perception of safety that drives the potential ‘reality’ of safety that is sought after. A professional cycling advocate stated it this way: You hear over and over again, 'Man, I'd really like to bike if there were bike lanes. I'd feel way better if there were bike lanes.' And it’s not like a strip of paint on the ground makes people safer, it's just that they FEEL safer so then they go riding, and then there DOES seem to be some indication that more people riding DOES make them safer, so it’s like, you trick 'em into thinking that they’re safer, and then they become safer. So I don't know what the ethics of that is [chuckle] but um, it's not like a trick, it’s more like you put them at ease and then more people do it, and then they *want* to do it (interview transcript 6-16-10). In other words, bike lanes provoke feelings of safety that then encourage more people to cycle, which generates more overall cycling and safety. The nub of this logic, as demonstrated in the above quote, is inclusivity. Safety becomes a matter, not primarily of individual bodies, but of collective inclusivity.

### Stigma

**Herr 12**

(Samantha Z., University of Kentucky, “Biopolitics of Bike Commuting: Bike Lanes, Safety, and Social Justice”, Theses and Dissertations, <http://uknowledge.uky.edu/geography_etds/2>, [CL])

Here, again, it is useful to think about the multi-dimensionality of what it means to be ‘safe’ and ‘at risk’ in our everyday lives. On the one hand, cyclists are gaining more visibility and representative legitimacy as bike lanes increasingly appear on the landscape and potentially increase ridership. This could contribute to feelings of increased safety while using a bike lane, such as the example given by the first respondent, where she felt more safe crossing the notoriously dangerous Comm. Ave. intersection in a bike lane. On the other hand, what is ultimately at stake for cyclists is the safety of their bodies, including the risk this poses to the social relations in which their bodies participate. Bike lanes aren’t doing much to increase these levels of embodied safety. Despite an increase in the visibility of cycling transportation on the urban landscape, transport cycling ridership is still very low, and cyclists experience threats of invisibility or over-display, driver rage, crowding, environmental obstacles, oblivious cell-phone-sucked pedestrians, and even flying objects hurled their way, in sporadic and unpredictable ways on a daily basis (interview notes 6-30-10, 6-30-10, 7-2-10, 7-7-10; fieldnotes 6-26-10). One transport cyclist that has been cycling since the 1970s recounts some of her recent interactions on the street like this:

**The cars all hate me**. The pedestrians are completely oblivious…It's still very dangerous. I wouldn’t say that anything has improved in terms of courtesy...It's not like one hundred percent of them are horrible. But I think its preponderance. Just don't care. Or, its simply like when you're coming on a bike, and the driver wants to turn into traffic and they're only looking left and…they only turn their head when they accelerate to turn, and you can maybe get their attention, but mostly you have to stop, you know, wait for them, because they just don't think of it (interview transcript 7-7-10).

This bike commuter feels hated, not cared for, and invisible. A response from another transport cyclist describes being literally squeezed between careless drivers and large potholes. She says, “Road surface is a huge problem in this town. ... and it's hard here because it freezes and thaws and freezes and thaws. I totally get that, but it's an issue for cyclists because there will be huge ruts and a car next to you and you'll be like, 'AHHH!' (interview transcript 7-2-10). Understandably, this is a very scary and dangerous situation. I too experienced a dose of exclusion when riding in Boston during my summer fieldwork. One night I was pelted in the face by a plastic soda bottle by someone in a passing vehicle. It hit me right smack on my left cheek bone and left a considerable bruise. 23 Furthermore, some cyclists feel that there has been an increase in intentional harassment by drivers who run cyclists off the road, or pretend that they are going to, since the implementation of bike lanes and more cyclist visibility (post-fieldnotes 9-2711).24 These accounts indicate that, despite increased visibility and legitimacy (in a rights-based context), for all intents and purposes, it doesn’t really matter. These examples demonstrate the embodied risks, both physical and emotional, involved in cycling the city. Innumerable elements of automobile hegemony, bicycle stigma, and social conditioning play a role in the unfolding of these daily experiences. While transportation cycling is supposedly gaining more ground, when it comes to immediate embodied experience on the road, the streets of Boston can still feel like quite an exclusive and risky place for cyclists.

### S - Harmony

Bike lanes equalize boddies – creates harmony

Herr 12

(Samantha Z. Herr, Audio-Video technology manager, Geography Graduate Student, Union, Department of Geography, University of Kentucky, 2010-2011 DisClosure: A Journal of Social Theory editorial collective, 2009-2011 Treasurer , Geography Graduate Student Union, Department of Geography, University of Kentucky, 2009- 2010 Professional Development Committee Graduate Student Seat, Department of Geography, University of Kentucky.University of Kentuck, BIOPOLITICS OF BIKE-COMMUTING: BIKE LANES, SAFETY, AND SOCIAL JUSTICE, 2012, pg 85-87, accessed 6/8/12, PE)

We move through the city, not as one body trying to go to one place, but as a multiplicity of bodies striving for harmony. I’ll illustrate with a simple example. Not too long ago, I was walking down Centre St. and came upon a situation in which a public 28 By ‘collective,’ I mean a whole that is unified, and at the same time preserves the difference and multiplicity of its parts. 86 works vehicle had pulled over into a bike lane outside of a liquor store. A cyclist standing outside the liquor store with her bike started taking pictures of the vehicle, which instigated a conflict between the driver of the vehicle and the cyclist. The cyclist kept arguing for the driver to find a spot for his vehicle that did not block the bike lane, while the driver tried to explain how there wasn’t another spot for him to move his vehicle that would be close to where he needed to work (post fieldnotes 3-27-12). The cyclist felt her claim to space was being violated, while the public worker felt his civic duty trumped that claim. Both were dealing with each other in a categorical and territorial way that resulted in a bind, rather than a flow. Street space is a limited resource that has to accommodate a plethora of activities and needs. What if we engage one another, not as categories, groups, names, or legal bodies, but through affect? Judith Butler suggests: [P]erhaps we make a mistake if we take the definitions of who we are, legally, to be adequate descriptions of what we are about. Although this language may well establish our legitimacy within a legal framework ensconced in liberal versions of human ontology, it does not do justice to passion and grief and rage, all of which tear us from ourselves, bind us to others, transport us, undo us, implicate us in lives that are not our own, irreversibly, if not fatally (2004b:25). What I am proposing is exactly to do justice to passion, grief, and rage. We can engage each other through our affects—through our feelings, desires, embodied experiences—as diverse, yet converging bodies. In this light, the problem over space between cyclist and public worker would be solved, not by winning a categorical rights claim, but by an ability to attend to the other’s need as it arose in the moment. Cycling safety within the bikeways context provides a productive opportunity to explore this new way of thinking and acting because the problem of cycling safety is directly situated within our bodies, in encounters with one another, as we each traverse 87 the city. The questions for cycling safety become questions about how we regard one another, perceive one another, engage one another. Our and others’ movements become the responsibility, not of a law, right, or regulation, but of what we create in the moment, with ourselves and with others, preemptive of any categorical standing. Bike lanes have no necessary part in this, but they can be instrumentalized as an impetus and a beginning on a path towards actualizing a different kind of street, city, and way of conducting urban life.

### S – Freedom

Bike lane are mechanisms of choice and freedom

Herr 12

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Bike lanes as mechanisms of this technique of power, help build ‘the public’ (Foucault 2007:75), notions of freedom and livability, and ideals of inclusion and social justice. They do this, not through claiming spaces of representation like Mitchell (2002) would assert—claims which capture and create artificial stasis—but through managing circulation, managing a “multiplicity in movement” (Foucault 2007:125), managing “freedom” (2007:48-49, my emphasis). Within this framework of security, this freedom is not restricted by law and gained through rights claims, but is rather facilitated and produced through the management of freely moving bodies. Bike lanes attempt to be positively productive. They work to facilitate what people want to do and what they will want to do in the future. In this way, bike lanes participate in an apparatus that “think[s] before all else of men’s freedom, of what they want to do, of what they have an interest in doing, and of what they think about doing” (Foucault 2007:49). It is an apparatus that simultaneously creates and responds to ‘the wills of people’ and a notion of ‘public good.’ It is in this way that bike lanes work towards ‘street for all.’

### S – Patri

Fear of cycling disproportionately harms women

Herr 12

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While Pain’s research has to do with fear related to crime violence, the same can be said for fear related to daily travel. Loukaitou-Sideris (2006), for example, finds that ethnic minorities, and in particular the elderly of this group, experience more fear of walking related to threats of traffic collisions. Similarly, bicycle transportation research shows that women cycle less than men, feel less safe riding next to cars than men, and are less likely to bike if there are not specified lanes because of perceptions of risk (Emond 2009; Krizek 2004). Cupples reflects, “It is no sheer coincidence that commuter cyclists are much more likely to be male, and are often people who don’t have immediate responsibility for the social reproduction of the household” after acknowledging her own productive and reproductive responsibilities, and fear of death by cycling (2011:228). Additionally, Horton (2007) discuses how men who do not have fear for themselves about bike commuting, express fear for wives or daughters if they were to do the same thing. While there are, no doubt, many reasons for the differing perceptions of risk, sentiments of fear, and rates of cycling for men and women, the examples here illustrate how notions about female bodies impact fear of particular kinds of movement in the city. It also shows how fear and transport choices can be intertwined with seemingly unrelated material realities, such as care-giving, that are also intertwines with subjectivity. Power relations that play into fear play out in material realities, such as the locations of where income or racial minorities live in relation to infrastructurally impoverished streets, access to types of modal methods stratified by gender, class, and other axis of difference, and whose bodies are more likely to suffer injury or death. Along with her findings on fear, for example, Loukaitou-Sideris (2006) also finds that ethnic minorities disproportionately walk as a mode of transport, and are disproportionately represented in pedestrian injury and fatalities statistics. “[R]isks are not the same for all individuals, all ages, or in every condition, place or milieu. There are therefore differential risks that reveal, as it were, zones of higher risk and, on the other hand, zones of lower risk. This means that one can thus identify what is dangerous” (Foucault 2007:63). Fear is conditioned by subjectivity, but so too is risk. Cycling safety is a mashup of subject positionality, perception, probability, potentiality, and embodied reality.

### S Mech – Inclusivity

The Aff is key to solve – bike lanes create a discourse of inclusivity that makes cities bicycle-friendly

Herr 12

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Bicycle scholars Cupples and Ridley state, “Cycling strategies and the improvement of infrastructure might not…be wholly ineffective, but we should recognize that the effectiveness of such an approach is likely to be ‘limited as a consequence of its concentration on the representational’” (Cupples an Ridely 2008:263). However, infrastructural improvements, such as bike lanes, do not inherently imply a “concentration on the representational.” Whatever representational work infrastructure does is a result of the associations, purposes, and meanings that we imbue it with. What if we interpret the work of bike lanes in a different light? What if we understand bike lanes as contributing to, not so much the intelligibility of cycling, but more to the affective register of the urban milieu? What pathways toward equity and social justice come to the fore when we understand bike lanes not as territorial rights-claims, but as an affective means to motivate new ways of urban living? I propose in this chapter to understand bike lanes in the Foucauldian framework of what he terms “security.” Security is a particular type of technique of power that works on the population remotely through the event-space of the milieu. In the case of transport cycling, the city—with all its natural and constructed elements, including people—creates the milieu. The population is the people in Boston. Security aims to preemptively intervene through the milieu to affect the population so as to maximize benefit for the greatest number. There is, of course, always a margin of failure, those who will encounter harm. From this angle, the issue of safety begins with fear. 70 I connect fear, and more specifically cyclists’ fear, to the dimension of social in/equality. I explore how the experience of fear, which I understand to be an affective experience of a perceived threat, and risk are impacted by subject positionality in relation in relation to the norm of the population. I explore this theoretical connection between difference, risk, and fear in the context of transport cycling. This analysis shows the discourse of inclusivity, a key discourse of the bikeways strategy for transport cycling integration, to be an important ideological mechanism for the construction of a certain feeling of a ‘safe city.’ Inclusivity discourse, which advocates for the inclusion of cycling as an option for travel on city streets and for the inclusion of many different kinds of cyclists, intervenes at the conjunction of subject positionality, perception, probability, potentiality, and embodied reality. It renders cycling safety into a problem of fear and risk, and responds by negotiating difference and normalcy within the milieu. Inclusivity discourse is a project of creating a new norm that, at the same time, maintains multiplicity. It is not about trying to get everyone to move the same way, but about providing a space in which different people can move differently throughout the city within a normal range. It is about what kinds of experiences and environments can be expected or predicted in the city. In this way, the discourse of inclusivity that was described in the last chapter is understood as an operative in the macro-technology of security in this one. Bike lanes are physical mechanisms of inclusivity discourse; they carry out security. This understanding is at odds with the understanding of bike lanes as territorial rights-claims. From this perspective, bike lanes are not understood as features of a rights struggle that 71 claim space in the city for an under-represented population of cyclists, or that simply wave the banner for an ideology of a more humanistic way of life, but rather are mechanisms that physically shift the urban milieu, affecting space and bodies.

### S Mech – Perception – Safety

Bike lane create perceptions of safety, attracting riders

Herr 12

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As explored in the last chapter, what seems to be the greatest physical danger for cyclists on the road is precisely what bike lanes do not protect against. Categorically, bike lanes don’t provide a physical barrier against motor vehicles, unexpected confrontations with pot-holes and other street obstacles, flying objects or derogatory words, or the subjective dimensions that correspond to the likelihood of these events occurring to some bodies more than others. Instead, bike lanes are employed to affect people’s perceptions. Bike lanes are employed to affect people’s perceptions of how safe it is to cycle on city streets. Consider again this quote from a professional Boston bicycle advocate: You here over and over again, 'Man, I'd really like to bike if there were bike lanes. I'd feel way better if there were bike lanes.' And its not like a strip of paint on the ground makes people safer, it's just that they FEEL safer so then they go riding…(interview transcript 6-16-10). The point of intervention for cycling safety is not the actual safety of bodies, but on increasing people’s perceptions of safety in the hopes that this will work back on the actual safety of bodies. In this way, the bikeways strategy for cycling safety concentrates not on what is, but on what could be—the ‘could be’ of bodily harm, and the ‘could be’ of a safer street and city. In other words, the bikeways strategy for cycling safety is not located in the realm of the here and now, but in the realm of potentiality. Here, “potentiality” is a technical term. Brian Massumi understands potentiality as “the tension between materially superposed possibilities and the advent of the new” (2002:134);25 it is the tension that exists between our materialities and our imaginaries, our reality and our ideals, what is and what could be. For example, in the summer of 2010, 1.65 percent of total trips in Boston were made by bike,26 yet The City of Boston would like to reach at least 30 percent (Freedman interview Transcript 6-23-10). The tension between 1.65 and 30 percent can be understood as potential. Thirty percent of total trips in Boston being made by bicycle is a potential reality that is neither predictable nor necessarily probable—as that level of bicycle commuting in the U.S. is virtually unprecedented—but it is hoped for and possible.

## Automobility Bad – Awesome Domination

#### The hegemony of cars to the exclusion of bikes is a form of awesome domination, not just a set of policies but a form of dwelling which excludes all other forms of being

Sheller and Urry 2k

Sheller and Urry, Professors of Sociology, 2000, Mimi and John, International Journal of Urban and Regional Research, 24.4, <http://ideas.repec.org/a/bla/ijurrs/v24y2000i4p737-757.html>

Conclusion We have shown how automobility, as currently constituted, fosters a civil society of hybridized car-drivers', accelerates a collapse of movement between the public and the private, generates a new theme and style of political contestation, and points toward a complex interweaving of mobility and communication within the urban infrastructure. Car-drivers dwelling within their cars, and excluding those without cars or without the license' to drive such cars, produce the temporal and spatial geographies of cities as a function of motorized mobility. Pedestrians and cyclists, to a significant extent, are confined to small slivers of the urban public, while many public-transport users are relatively disenfranchised and excluded from full citizenship. Only those moving (however slowly) in cars, taxis and trucks are public within a system where public spaces have been democratically seized, through notions of individual choice and personal flexibility, and then turned into the iron-cages' that deform public roads and the people disciplined within them. The civil society of automobility that arises within contemporary cities involves the transformation of public space into flows of traffic, coercing, constraining and unfolding an awesome domination which analysts of the urban have barely begun to see even as they sit staring through their own car windscreens. Smith writes of the analogy with modern scientific thought: 'We get into this mode very much as the driver of a car gets into the driving seat. It is true that we do the driving and can choose the direction and destination, but the way in which the car is put together, how it works, and how and where it will travel structure our relation to the world we travel in (1987: 73). We have suggested some brief ideas at the end of this article that might just save towns and cities from this awesome Frankenstein-created monster of 'auto' mobility.

## Automobility Bad – Discipline

#### Automobility effects both pedestrians and drivers by creating a tight set of rules in which pedestrians and seen as an obstacle and rural areas are divided

Sheller and Urry 2k

Sheller and Urry, Professors of Sociology, 2000, Mimi and John, International Journal of Urban and Regional Research, 24.4, <http://ideas.repec.org/a/bla/ijurrs/v24y2000i4p737-757.html>

As personal times are desynchronized, spatial movements are synchronized to the rhythm of the road. The loose interactions and mobilities of pedestrians are forced to give way to the tightly controlled mobility of machines, especially in the human and machinic density of urban areas. Automobility dominates how both car-users and non-car-users organize their lives through time-space. Driving requires 'publics' based on trust, in which mutual strangers are able to follow shared rules, communicate through common sets of visual and aural signals, and interact in a kind of default space or non-place available to all 'citizens of the road' (see Lynch, 1993). Yet car-drivers are excused from the normal etiquette and social coordination of face-to-face interactions. Car travel rudely interrupts the taskscapes of others (pedestrians, children going to school, postmen, garbage collectors, farmers, animals and so on), whose daily routines are merely obstacles to the high-speed traffic that cuts mercilessly through slower-moving pathways and dwellings. Junctions, roundabouts and ramps present moments of carefully scripted intercar action during which non-car users of the road present hazards or obstacles to the drivers intent on returning to their normal cruising speed. Automobility also generates new scapes that structure the flows of people and goods along particular routes, especially motorways or interstate highways (see Urry, 2000, on scapes and flows). There is a rewarping of time and space by advanced transportation structures, as scapes pass by some towns and cities while connecting other areas along transport-rich 'tunnels'. Such tunnels also shape urban geographies of social exclusion and ghettoization (see Urban Taskforce, 1999). Public housing estates in the UK or so-called 'projects' in US cities are often cut off from bus, rail or subway links to employment-rich business districts within the city and from automobile roadways linked to more desirable (middle-class) residential and leisure areas outside the city. At the same time, tolls and parking fees can deter rural and suburban dwellers from entering the city too easily. Thus, the inequalities among multiple publics are entrenched in urban spaces of unevenly distributed access and exclusion.

## Cars Bad – Autonomy

#### Car-centric society governs social space, governing bodies and mobility in the service of power and capital. This reduces individuals to habitual travelers, obliterating human agency and destroying community

Illich 78

Ivan Illich, philosopher, priest, activist, professor @ Penn St. and Univ. of Bremen, 1978, “Energy and Equity” in Toward a History of Needs, <http://www.cogsci.ed.ac.uk/~ira/illich/texts/energy_and_equity/energy_and_equity.html>. Edited for sexist language

Past a certain threshold of energy consumption, the transportation industry dictates the configuration of social space. Motorways expand, driving wedges between neighbors and removing fields beyond the distance a farmer can walk. Ambulances take clinics beyond the few miles a sick child can be carried. The doctor will no longer come to the house, because vehicles have made the hospital into the right place to be sick. Once heavy trucks reach a village high in the Andes, part of the local market disappears. Later, when the high school arrives at the plaza along with the paved highway, more and more of the young people move to the city, until not one family is left which does not long for a reunion with someone hundreds of miles away, down on the coast. Equal speeds have equally distorting effects on the perception of space, time, and personal potency in rich and in poor countries, however different the surface appearances might be. Everywhere, the transportation industry shapes a new kind of [hu]man to fit the new geography and the new schedules of its making. The major difference between Guatemala and Kansas is that in Central America some provinces are still exempt from all contact with vehicles and are, therefore, still not degraded by their dependence on them. The product of the transportation industry is the habitual passenger. [s/]He has been boosted out of the world in which people still move on their own, and [s/]he has lost the sense that [s/]he stands at the center of his[/her] world. The habitual passenger is conscious of the exasperating time scarcity that results from daily recourse to the cars, trains, buses, subways,and elevators that force him to cover an average of twenty miles each day, frequently criss-crossing his path within a radius of less than five miles. He has been lifted off his feet. No matter if he goes by subway or jet plane, [s/]he feels slower and poorer than someone else and resents the shortcuts taken by the privileged few who can escape the frustrations of traffic. If he is cramped by the timetable of his commuter train, he dreams of a car. If he drives, exhausted by the rush hour, he envies the speed capitalist who drives against the traffic. If he must pay for his car out of his own pocket, he knows full well that the commanders of corporate fleets send the fuel bill to the company and write off the rented car as a business expense. The habitual passenger is caught at the wrong end of growing inequality, time scarcity, and personal impotence, but [s/]he can see no way out of this bind except to demand more of the same: more traffic by transport. [s/]He stands in wait for technical changes in the design of vehicles, roads, and schedules; or else [s/]he expects a revolution to produce mass rapid transport under public control. In neither case does [s/]he calculate the price of being hauled into a better future. He forgets that he is the one who will pay the bill, either in fares or in taxes. He overlooks the hidden costs of replacing private cars with equally rapid public transport. The habitual passenger cannot grasp the folly of traffic based overwhelmingly on transport. His inherited perceptions of space and time and of personal pace have been industrially deformed. [s/]He has lost the power to conceive of himself outside the passenger role. Addicted to being carried along, [s/]he has lost control over the physical, social, and psychic powers that reside in [hu]man's feet. The passenger has come to identify territory with the untouchable landscape through which [s/]he is rushed. [s/]He has become impotent to establish his[/her] domain, mark it with his[/her] imprint, and assert his[/her] sovereignty over it. [s/]He has lost confidence in his power to admit others into his[/her] presence and to share space consciously with them. He can no longer face the remote by him[/her]self. Left on his[/her] own, [s/]he feels immobile. The habitual passenger must adopt a new set of beliefs and expectations if he is to feel secure in the strange world where both liaisons and loneliness are products of conveyance. To ``gather'' for him means to be brought together by vehicles. [s/]He comes to believe that political power grows out of the capacity of a transportation system, and in its absence is the result of access to the television screen. [s/]He takes freedom of movement to be the same as one's claim on propulsion. [s/]He believes that the level of democratic process correlates to the power of transportation and communications systems. [s/]He has lost faith in the political power of the feet and of the tongue. As a result, what [s/]he wants is not more liberty as a citizen but better service as a client. [s/]He does not insist on his[/her] freedom to move and to speak to people but on his[/her] claim to be shipped and to be informed by media. [s/]He wants a better product rather than freedom from servitude to it. It is vital that [s/]he come to see that the acceleration [s/]he demands is self-defeating, and that it must result in a further decline of equity, leisure, and autonomy.

## Cars Bad – Crowd Out Bikes

#### Fast cars hog the best routes and deter bikers and walkers by intimidation

Sloman 6

Sloman, Special Advisor to the Board of Transport for London, 2006, Lynn, Car Sick: Solutions for our Car-addicted Culture, p.

At speeds above about 30 miles an hour, cars are intimidating. They hog the best routes from place to place. If you walk or cycle along a country lane, you must always be looking over your shoulder for a car bearing down on you at 60 miles an hour. On main roads in rural areas, where there is often no pavement, you end up walking through the long wet grass and mud on the verge. Some cyclists say they do not mind cycling on highspeed rural main roads, but, like many others, I always have to steel myself to cycle the 6 miles from my village into the local market town, and I know many people who say they would like to cycle but do not do so because it is too scary. In the area where I live, the Dyfi Valley, the council and local community groups got together to ask residents what they thought needed to be done about traffic and transport in the area. More than a thousand people from nearly 500 households responded. The single issue that was mentioned more than any other was that people wanted to be able to walk or cycle along the main roads. People said things like: At the moment we are afraid to walk to town because of speeding traffic. Since I have lived in Penegoes, in the summer months you are housebound because you are afraid to walk along the road (so come on let's get a footpath)!!! I would cycle, but I'm frightened off the main road, especially where there's a bend. It's not safe to walk on the main road—so you sit in the car. Walking you can be squashed in the hedge. I've observed speeds of 50 + [miles an hour] and I've had to dive into the hedge myself. I walk with my daughter down to school [along the main road] and the drivers don't slow down at all. The speed limit of 40 miles an hour—it's taken twenty years to get that. But then it's the enforcement of it. You can come along this road [past the school]—it has a 30 mile an hour limit, but people drive at 50 miles an hour. One thing leads to another. As one of the residents commented, because it is not safe to walk, people end up driving, themselves adding to the number of cars on the main road, and in turn deterring another person from walking or cycling. This sort of self-reinforcing positive feedback crops up time and again, as we shall see.

## Cars Bad – Disabilities

#### Cars create disabled bodies

Whitelegg 97

Whitelegg, Professor of Sustainable Transport and Sustainable Development, 1997, John, Critical Mass. Pg. 25

Paradoxically the solution to China's growth imperative is the same as that required in Europe and the rest of the world. This is to redefine the current concept of growth and economic progress so that human expectations can be fulfilled at much lower levels of materials intensity, land take, energy consumption and pollution see 50 million killed and 1.1 billion injured. Currently about 800,000 people injured in road traffic accidents each year are permanently disabled. This total is expected to rise to 5.7 million per annum by 2030. Cumulatively, we can expect 100 million disabled people by 2030 as a result of road traffic accidents worldwide.

## Cars Bad – Environ

#### Car culture destroys our relationships with nature, creating social structures that produce massive environmental destruction

Whitelegg 97

Whitelegg, Professor of Sustainable Transport and Sustainable Development, 1997, John, Critical Mass. Pg. 61

On a more practical level, time (or a radical distortion of time) is implicated in environmental destruction. Destructive projects, such as the M3 motorway near Winchester (Twyford Down), have been constructed to save a few minutes on the journey from London to Southampton. Similar projects are in the pipeline for the A34 (Bristol to Southampton) and for a south coast motorway to link Brighton with Portsmouth. Time savings are formally incorporated into the cost-benefit analysis which is used to justify roads and these time savings are likely to be higher if the existing road system is congested. This is the case around Birmingham where a Birmingham northern relief road is proposed for the eastern side of the conurbation and a western orbital road is proposed for the west. The arguments for both roads are couched in terms of time savings on the existing crowded motorway system. The time savings themselves are individually too small to amount to much in the way of usefully reallocated time. Road construction in the UK is justified on grounds of saving time. The additional road space which is being continually added to an overcrowded system will ensue that more car trips and lorry trips are added which will eliminate time savings by perpetuating congestion. More importantly, the land use system is pushed further in the direction of dispersal, loss of local facilities, development of edge-of-town and out-of-town shopping facilities and business parks, and hence higher still levels of car use. The non-sustainable trajectory is given a strong boost by the urge to save time, while all the time we spend more time reaching those destinations that were once nearer. If changes in transport over time are explored it becomes apparent that the advantages of faster and more frequent travel have not been equitable. There are key areas in which transport has affected the way we perceive - and use - our global environment. Temporal changes in transportation technology at the local scale show, with intra-urban journeys as an example, how the nature and size of urban areas have changed as a direct result of the friction of distance being reduced. This has led to progressively longer journeys being undertaken on a daily basis. Transportation between cities has also changed dramatically at both the national and international level. In both cases the concept of time-space convergence (a shrinking world) and cumulative linkage advantage (better accessibility) have been introduced to illustrate how greater demand for interaction between places leads to the development of high priority transport corridors that can exclude other places along a route. A direct result of this is that these excluded places may be more disadvantaged than places connected by the high priority corridor.

## Cars Bad – Individual

#### Cars Overdetermine Individual Choices to Predetermined Options

Whitelegg 97

Whitelegg, Professor of Sustainable Transport and Sustainable Development, 1997, John, Critical Mass. Pg. 59

The experience of travel and transport has shifted over the last 100 years from one involving large expenditures of time for relatively short distances, to the reverse relationship. The friction of distance, much loved by geographers and spatial modellers, has been lubricated to such a degree that long-distance travel to exotic destinations for holiday purposes is the norm and most goods and services consumed by households are sourced at some distance from the local region. In Europe Marks and Spencer, in their heavily packaged offerings of fresh vegetables, proudly declare that runner beans and mange tout have been specially flown in from Kenya or Nicaragua. In the US 99 per cent of all shopping trips are made by car. This chapter will explore the way that time savings have come to dominate thinking in transport and how transport systems are shaped by this single objective. The shift to faster and faster methods of transport to save time has the effect of increasing environmental pollution whilst spreading the range of activities and demands on goods and services so that they are global - even for the most mundane and widely available products. Increasing dependence on transport, year on year, increases miles travelled for all journey purposes. The erosion of the friction of distance is expensive and it changes perceptions and psychology; it fundamentally alters lifestyles and expectations and creates land use patterns and spatial structures that require even greater inputs of distance and energy to sustain them. We are effectively consumers of distance, and distance has become a commodity. Unlike some other commodities, distance establishes its own logic on spatial structures and behaviour so that it becomes impossible or very difficult for individual consumers to exercise choice and reduce their level of consumption. In a subtle and pervasive way higher levels of consumption negate the concept of free choice and we are imprisoned in a distance-intensive world.

## Cars Bad – Inequality

#### **Cars produce social inequality**

Whitelegg 97

Whitelegg, Professor of Sustainable Transport and Sustainable Development, 1997, John, Critical Mass. Pg. 70

The development of electric trams changed dramatically the urban form of many cities. For example, much of the early housing developments took the form of discontinuous ribbons along major routes. As commuter distance increased, these ribbon developments were also extended (in some cases speculative developers working in conjunction with tram companies) to promote suburban developments. Transport has had a well-documented effect on the social geography of cities in the developed world. The ability to purchase distance, like the ability to purchase space, (both internal and external to the dwelling) has made a distinctive contribution to urban and social segregation in terms of income, class and ethnicity. In practice, reality is more complex than can be encompassed in explanations based on land values, transport costs or transport technology. Many European cities have wealthy individuals living in high density city centre areas not far from ethnic enclaves (for example, Wedding and Kreuzberg in Berlin and the New Town in Edinburgh). British cities are frequently characterised by concentrations of poor quality housing in peripheral greenfield sites developed by public bodies without adequate attention to social infrastructure and basic facilities. In many cases the affluent live in rural areas many miles from the city.> The explanation for the complexities (and failures) of both market forces and the planning system goes much deeper than a mechanistic model of transport choice and housing price or supply. The built environment in all its space-time complexity can only reflect the inequalities and structural imbalances in the distribution of wealth and income. Transport policies cannot resolve fundamental inequalities in society and cannot eradicate poverty. Transport policies can provide high quality access at low cost to basic goods and services, and by improving access can stimulate the development of denser patterns of local facilities (for example, shops, schools and healthcare facilities). They can also improve air quality and health (see Chapter 10). In this sense, transport policies have the potential to deliver significant improvements in quality of life to low income and no income groups. In the main, these opportunities are not exploited and the reverse situation is more common. Low income or no income groups living in degraded inner city environments often have to endure the noise, traffic danger and pollution from the vehicles of the relatively wealthy as they journey to work, the shops or to pursue leisure. The increase in the use of cars cannot be accounted for by the decline in the amount of bus use, cycling and walking. There has not been a transfer of travel activity from these latter three modes to the car, rather there has been a dramatic increase in the amount of travelling we do to a larger number of destinations over a much wider geographical area. Whilst this gives the illusion that we are in some way better off (through more choice) it also means that a great deal of money is spent to maintain this level of mobility as well as more time travelling on our own behalf and ferrying children around. It also means that a new class of 'access poor' has been created. As local facilities decline in number so accessibility for those without cars deteriorates. There is no mechanism in existence to compensate for the loss of local grocery shops, local schools and local leisure facilities.

## Cars Bad – Oil – Mil, Violence

#### The culture of the car necessitates a militarization of our everyday lives, promoting a violent bunker mentality

Graham 4

Graham, Professor of Human Geography, University of Durham, 2004, Stephen, “Postmortem City: Towards and Urban Geopolitics,” http://www.marxsite.com/ Postmortem%20City. pdf, p. 189-191

Which brings us neatly to our penultimate example of the inseparability of contemporary war and urbanism. This centres on the ways in which the reconstruction of landscapes and consumption habits in the wealthy cities of the advanced industrial world, with their profound implications for geopolitical competition, impact on security, terror and urbanising war elsewhere (Le Billon, 2001). A powerful case of these important but poorly researched connections comes with the growing fashion for large, 4-wheel drive «Sports Utility Vehicles» in Western, and particularly, US cities. Given the very high degree of influence of major US oil companies on the Bush regime, there is growing evidence of direct connections between the fashion for more and more profligate use of oil in sprawling US cityscapes; the geopolitical remodelling of US defence forces; and the so-called «War on terror» through which the US government is achieving a high level of geopolitical control of the world’s largest untapped oil reserves, in and around the Caspian Basin (Kleveman, 2003). 9/11 has thus been ruthlessly exploited. In particular the 9/11 attacks provided the «catastrophic and catalysing event» that was identified by the influential 1997 report Project for a New American Century – including Donald Rumsfeld and Paul Wolfowitz – as necessary to allow the U.S. to justify the invasion of Iraq with any hope of legitimacy (Harvey, 2003b, p. 15). Whilst the US strategy is not necessarily about directly controlling oil resources per se, there is little doubt that «it is about ensuring that whoever controls it buys and sells it in U.S. dollars through the New York commodities market» that lies a few hundred meters from «ground zero» (Halevi and Varoufakis, 2003, p. 66). There is little doubt that a key objective of the US attack on Iraq was to install a US-friendly oil producing regime there that would eventually displace the Saudis as the main «swing producer», allowing the United States (and not OPEC) to regulate the international price of oil (Gregory, 2004a; Harvey, 2003). Three key points are crucial here. First, SUVs were fashioned and marketed after the first Gulf War as quasi-militarised «urban assault luxury vehicles» (Rampton and Stauber, 2003). Clotaire Rapaille, a psychological consultant to major U.S. SUV manufacturers, reveals that his research suggests that Americans want «aggressive cars» that can be thought of as «weapons» or «armored cars for the urban battlefield». The design and marketing of such vehicles, he argues – with their names like «Stealth» and «Warrior» – needs to tap into, and address, their consumers’ fears about contemporary urban life (cited in Rampton and Stauber, 2003, p. 138). Post 9/11, it is now clear that advertisers have been deliberately exploiting widespread fears of catastrophic terrorism to further increase sales of highly-profitable SUVs. Rapaille has recently been urging the main auto manufacturers to address the fact that «the Homeland is at war» by appealing to buyers’ most primitive emotions (ibid., p. 139). Second, the SUV is being enrolled into urban everyday life as a defensive capsule or «portable civilization» – a signifier of safety that, like the gated communities into which they so often drive, is portrayed in advertisements as being immune to the risky and unpredictable urban life outside (Garner, 2000). Such vehicles seem to assuage the fear that the urban middle classes feel when moving – or queuing in traffic – in their «homeland» city. Subliminal processes of urban and cultural militarisation are going on here. This was most powerfully illustrated by the transformation of the US army’s «Humvee» assault vehicle into the civilian «Hummer» just after the first Iraq war – an idea that came from the Terminator film star (and now California Governor) Arnold Schwarzenegger (who promptly received the first one off the production line). Andrew Garner writes that: «For the middle classes, the SUV is interpreted culturally as strong and invincible, yet civilised. In the case of the middle class alienation from the inner city, the SUV is an urban assault vehicle. The driver is transformed into a trooper, combating an increasingly dangerous world. This sense of security felt when driving the SUV continues when it is not being driven. The SUV’s symbols of strength, power, command and security becomes an important part of the self-sign […]. With the identification of enemies within our borders, this vehicle has become a way of protecting members of the middle class from any threat to their lifestyle» (2000, p. 6). Finally, the fact that SUVs account for over 25% of US car sales has very real impacts on the global geopolitics of oil. With their consumption rates of double or triple normal cars, this highly lucrative sector clearly adds directly to the power of the neoconservative and ex-oil executive «hawks» in the Bush regime to drive forward the above-mentioned strategy of colonisation by dispossession. This is especially so as they have operationalised their perpetual «war on Terror» in ways that are helping the USA to secure access to the huge, low-priced, oil reserves that the United States argues it needs to fuel its ever-growing level of consumption. (Currently these stand at 25.5% of global consumption to sustain a country with less than 5% of the world’s population). Clearly, then, the profligate oil consumption and militarised design of SUVs «takes on additional significance in the light of the role that dependency on foreign oil has played in shaping U.S. relations with countries in the Middle East» (Rampton and Stauber, 2003, p. 139). «The economic, cultural and military infrastructure that undergrids US Middle East policy will not be so easily undone», writes Tim Watson, «and without its wholesale reform or dismantling, Islamic terrorists will not so easily disappear» (2003, p. 110). As with the cosmopolitan nationalities of the dead, then, so the events of 9/11, in their own way, reflect and symbolise the deep connections between urban everyday life and city form and the violence spawned by geopolitical conflict and imperialist aggression. Watson writes that he has been haunted since 9/11 by images of the hundreds of vehicles abandoned, never to be recovered, at rail stations by commuters to the twin towers in the states of New York, Connecticut and New Jersey. «These symbols of mobility» became, instead: «images of immobility and death. But these forlorn, expensive cars and SUVs also represent a nodal point between the US-domestic economy and a global oil market in which Saudi, Kuwaiti, and Iraqi production is still so important» (Watson, 2003, pp. 110-111).

## Cars Bad – Patri

#### The automobile is another place in which women are oppressed in society, women have been relegated to “family” cars and decreased mobility, and women without means for cars are put at an even greater disadvantage

Sheller and Urry 2k

Sheller and Urry, Professors of Sociology, 2000, Mimi and John, International Journal of Urban and Regional Research, 24.4, <http://ideas.repec.org/a/bla/ijurrs/v24y2000i4p737-757.html>

Women have a very different relation to cars than do men as a group. In the interwar period automobility was generally organized around a cosiness of family life, both in Europe and the US (Taylor, 1994: Chapter 4). In the latter, this was the period of massive suburbanization that was predicated upon low-density family housing with a sizeable garden, many domestic production goods for the 'wife' to use, and a car to enable the 'husband' to travel quite long distances to get to work. The automobilization of family life not only brought the newest and most expensive car models first to male 'heads of families', while women had to settle for second-hand models or smaller cars, but also led to the uneven gendering of time-space. While working men became enmeshed in the stresses of daily commuter traffic into and out of urban centres, suburban 'housewives' had the greater burden of juggling family time around multiple, often conflicting schedules of mobility epitomized by 'the school run' and mom-as-chauffeur. Once family life is centred within the moving car, social responsibilities tend to push women towards 'safer' cars and 'family' models, while men have greater luxury to indulge in individualistic fantasies of the 'Top Gear' fast sports car or the impractical 'classic car'. Cars were originally designed to suit the average male size and have only recently been designed to be adjustable to drivers of various heights and reaches. The distribution of company cars has also benefited men more than women, due to continuing horizontal and vertical segregation in the job market, which keeps most women out of positions with access to such 'perks'. Actuarial statistics also show that male drivers are more likely to externalize risks onto others through dangerous driving practices (see Meadows and Stradling, 2000). Given these inequalities, for many women exclusion from automobility has become a crucial political issue, both because it limits their capability to work outside the home and because it makes movement through public spaces difficult. In most countries women became eligible to be licensed drivers later than did men, and in some countries they still face severe restrictions on their ability to drive. Women working in domestic service jobs (often from racialized minority groups or recent immigrants) faced (and still face) a gruelling journey on unreliable public transport between the city and the suburbs. Single mothers without cars are among the groups most dependent on public transport and most likely to find their particular 'taskscapes' fraught with gaps and inconveniences. The male drivers' domination of public space appears in the practice of 'kerb crawling' in the city, one of the most tolerated forms of prostitution, which compounds the difficulties of the female 'street walker' as 'flaneuse' (Wilson, 1995).

## Cars Bad – Poverty

#### The primacy of the automobile is the root cause of massive poverty – the poor cannot access jobs, creating a vicious cycle

Kay 97

Kay, Architìture and planning critic for The Nation, 1997, Jane, “Asphalt Nation”, p. 38-41

Red Hook's isolation has given it a perverse "end-of-Western-civilization" chic to the artists and activists attracted to its warehouses. Nonetheless, working life for the old residents is an oppressive circle. The highways that destroyed the neighborhood caused its emptying. The emptying produced low density, which undercut public transportation and kept income down. The low-income inhabitants lack money to buy a car and hence find work, and, thus, the neighborhood deteriorates further. It is a cycle. A few years ago, Kasinitz conducted a survey at the South Brooklyn Local Development Corporation, an employment agency interviewing out-of-work community members applying for jobs. Three hundred people came looking for work, but only 9 percent of the adults had driver's licenses. "Here's a place that hires a lot of truck drivers and this agency couldn't place them." Most urban areas don't have that hiring capacity. For forty years two out of every three new jobs have been exported to the suburbs. Funds have gone to roads, not bus or rail; to private homes, not walkable city apartments; to corporations in the distant suburbs, not inner-city industry. Carless city dwellers get handcuffed to home and hence cut out of the workforce. While the world perceives poverty as a result of carlessness, it is dependency on the car that is the culprit. With suburban jobs now outweighing urban ones by large multiples, the center city poor lack, as the Ford Foundation summed it up, "Access to Opportunity." The inequity begins in the very first search for a job and extends to daily life. "You speak of job opportunity, [but] they don't have a clean shirt, much less physical transportation or literacy skills," observes Michael T. Savage, deputy director of HUD's Economic Development. "You have jobs over here. You have the community over there. Transportation is one of the overlooked arts in economic development." "I was standing on a rail platform," Ricardo Byrd went on describing his experience on another day. A man offered a job tip to a woman friend as they stood waiting. The job seeker responded with just one question: "How close is it to the bus?" "That was her first 41 The Geography of Inequity question," said Byrd. "Her second question was 'How much do they pay?' " Even Byrd was surprised at transportation's place at the top of the woman's list. Byrd also recalled the case of a factory looking to relocate near the U.S.-Mexican border to take advantage of the North American Free Trade Agreement (NAFTA). When the would-be builder looked at a site in a Latino community, he saw a highway. A wonderful highway it was, he told Byrd, the ultimate in accessibility. But he shook his head. "These are minimum wage jobs," said the employer. "How can my riders get to work?" For another Southern plant—a spanking new factory not one-quarter mile from low-income housing—it was still no-go. "It's one of the high crime areas," he said. No one would stand at the bus stop on the street outside the project. No one would provide a transportation feeder to circle into its threatening maze. Fear of the streets, bad weather, distance, and sporadic service made the bus a bad trip. Organizers of the model recruitment program of the Church Community Jobs Commission have also explored the problem. Seeking to link their African-American church in Oakland with AT&T job hunters, they watched the applicants dwindle when would-be employees learned that they would need a car to get to work twenty miles away. The most burdened bear the double burden of inaccessibility. In the end, poor transport does not issue from poverty, but lies at its very roots and sustains and perpetuates it. "The transportation costs associated with all this mobility are regressive" in the view of Alan Hughes, author of "The New Metropolitan Reality." In the modern city work, shopping, schooling demand travel. "And what for most people is a low-density lifestyle becomes for the poor and low income a set of costly barriers." Everyone suffers from the automotive sources of pollution, congestion, and other such exactions, of course. The less fortunate can neither flee nor adjust to them with flexible work hours, telecommuting jobs, or the extended arm of the cellular phone. A "concentration of poverty and de-concentration of opportunity," as Hughes phrases it. Lately, advocates have sued to right inequities in the mass transportation system itself. They claim that while the well-to-do have secured more commuter rail service, the impoverished have faced cutbacks. In 1994, a twenty-five-cent fare raise and the end to a bus pass in poorer neighborhoods, coupled with the allocation of a few hundred million dollars to a suburban rail project, roused the Los Angeles Labor/Community Strategy Center to secure the services of the NAACP Legal Defense and Education Fund. Together, they sued the transit authority for class bias, discrimination against people of color, and malfeasance. They argued that, since the bus riders made less than $15,000, had no car, and were nonwhite, the malapportion-ment of funds reflected bias. A year later New Yorkers addressed the transportation equity issue by protesting steeper bus and subway fare hikes for urban versus suburban commuter rides. The Urban League and Straphangers' Campaign filed an antidiscrimination suit charging "class warfare." They based their argument on the same principles of bias, that the price increase violated the 1964 Civil Rights Act by misserving African-Americans, Hispanics, and Asian-Americans—the majority of city transit riders. Sometimes subtle, sometimes blatantly biased location policies pit budgets for sleek transit lines like Metro in Washington, D.C., or the Green Line in Los Angeles against buses. For years racist policies have compounded the issue of poor public transportation; from the Red Line in Boston to the MTA Central Light Rail Line in Baltimore to L.A.'s new subway, officials have shifted transit lines to separate the impoverished minorities from the wealthy. Advocates from other cities have rallied to correct the problem of the racial injustice involved. Yet for all the validity of their search for equity, pitting the affluent commuter against the inner city bus rider ignores the fact that each is subject to the inequities of the automobile age. In a world bereft of decent public transportation, the rich and poor grapple for fragments when they should be allies against automobile dominance.>

## Cars Bad – Poverty

#### Wealthy cars produce global poverty – generates a higher business elite

Whitelegg 97

Whitelegg, Professor of Sustainable Transport and Sustainable Development, 1997, John, Critical Mass. Pg. 130-131

The consumption levels of the wealthy drive a global economic system that ensures that lifestyle requirements in New York or London have an impact on the environment in Bangkok and Goa, on the upper atmosphere, and on what is grown in Kenya or Chad. The maintenance of the lifestyles of the opulent is accompanied by the destruction of remote environments and intervening spaces. This has a close parallel in the impact of the affluent closer to their home communities. Most cities in Britain experience large daily tidal flows of traffic, part of which consist of affluent commuters who live in rural idylls and drive to work or their park and ride destination. Their journey into Manchester, Birmingham or Liverpool, for example, takes them past residential areas where poorer people live, and they impose noise, air pollution and traffic danger on those poorer groups. The poorer groups have to pay the price for the convenience, lifestyle and consumption patterns of the richer groups. If the premise that sustainability must be concerned with a more equitable distribution of resources is accepted, then concern with achieving merely global reductions of energy use or CO2 emissions does not provide an adequate solution. Instead it should be asked: how equitable is the current distribution of resources used by global transport systems? And how can these be redistributed in such a way that combines environmental objectives with the need to maintain human well-being? When searching for appropriate solutions, it is important to remember that the inequitable distribution of resources not only occurs between countries of the North and South, but within them. Thus, for example, new highway infrastructure in a developing country may in fact benefit economically only a small, already wealthy, business elite. A more sustainable and equitable use of economic resources may instead have resulted in investment in better public transport or in improving accessibility to essential services such as schools or health centres.

## Cars Bad – Poverty B – SS

#### Cars have led to the loss of local services – Inevitably disadvantaging the sick, unemployed, and poor

Sloman 6

Sloman, Special Advisor to the Board of Transport for London, 2006, Lynn, Car Sick: Solutions for our Car-addicted Culture, p.

Small shops are not the only local services that have been closing. The transformation of the retail industry has been mirrored by steady closure of local post offices, banks, small hospitals, job centres and magistrates' courts. The planners think that they will be able to reduce costs by having fewer buildings to run. The people who pay the price are the most vulnerable in society—the sick, the unemployed, the poor and those seeking access to justice. Among the poorest households (those whose income is in the lowest 20 per cent), less than half own a car. Most pensioner households (69 per cent) do not own a car. Most single-parent families (56 per cent) are also without a car. For these people, bank, post office, magistrates' court and job centre closures, or the move of a town-centre hospital to an out-of-town site, cause great inconvenience and in some cases hardship. The records kept by Citizens Advice Bureau provide a litany of tales of the problems people suffer because services are being centralised and local offices closed. I met Sue Edwards, a social policy officer for Citizens Advice, when we worked together on a project looking at transport in the countryside. As part of the project, she asked local CABs to tell her about the transport difficulties their clients faced. We received many pages of case-note summaries. "Our bureaux deal with transport problems on a daily basis," Sue told me. She showed me a few examples. A single mother on income support had been in touch with a CAB in Shropshire to ask for help when she was summoned to attend court for a review of her financial circumstances. The court was over 40 miles away, and she simply did not know how she would be able to get there. The trip would have involved two buses, or a taxi which would have cost £44, a third of her weekly income. In Derbyshire, a CAB was contacted by a man who lived in a remote rural area and had just lost his job. The closure of the local job centre meant he had to make a 36-mile round trip by infrequent public transport to another town, to sign on and look for vacancies. Sue told me that in some rural areas, people get into debt because they cannot afford a car, but cannot manage without one. A 62-year-old man in Lincolnshire got in touch with his local CAB because he lived in a village which had very few amenities and poor public transport, and he felt he had to run a car. He had run up an overdraft and had to take out loans to cover bills for the car.4 In the village of Liss, Hampshire, all three bank branches—Lloyds, Barclays and NatWest—closed in quick succession in the mid-1990s. Writing in the summer of 2000, local resident Margaret Effenberg described the problem: "We are now forced to travel to Petersfield or Liphook to visit the bank or withdraw money—a round journey of 10 miles each visit."5 Liss is a sizeable village, with a population of 6,500. Margaret calculated that overall, Liss villagers had to travel a staggering 1 million extra miles a year to use their bank. Most of the villagers made the new trip by car, which was inconvenient and added to traffic but did not entail real difficulty. But for some the round trip was a problem. "The extra travel is particularly affecting older and disabled people," Margaret explained. "37 per cent of the villagers are aged over 60 and 20 per cent have a disability that limits mobility." Local people were also concerned about the knock-on effects of the bank closures on local shops. The local retailers were faced with making a round trip to Petersfield each day to bank the day's takings, and the loss of the banks affected residents' shopping habits. As Margaret commented, "If you go to the bank in Peters-field, you're not going to come back to shop in Liss, are you?" Margaret and others campaigned hard against the bank closures; as a result of their work there are now several cash machines in Liss, and the post office offers some limited banking facilities. But the banks have not reopened, and damage has been done. "It's now very difficult for small businesses in Liss," Margaret explained. "Some businesses have closed and several premises are now vacant. Six months ago an organic vegetable shop opened, but they are now closing. People are shopping out of the area." High car ownership led to closure of the banks, and now those two factors working together are undermining a once-thriving local economy. In Norwich, the city hospital moved out of the town centre to a site just off the city's southern bypass. The move was resisted by local people, who argued that it would be more difficult for out-patients and visitors to reach the new hospital, and it would cause an increase in traffic, which in turn would mean more dangerous roads, worse air pollution and fewer people able to get healthy exercise by walking or cycling. In other words, more ill people—hardly what the NHS wants. Denise Carlo was involved in a campaign to try to stop the hospital move. After the new hospital opened, all her fears about access difficulties came true. She told me: "Since the hospital opened, the transport situation has worsened. Even more car parking has been provided and the bus services have been dreadful." Out-patients and visitors now have little choice but to drive. When fewer people had a car, services like health care, banks, courts and unemployment offices were provided in places that people could reach by bicycle or bus. Today, the Government and private companies get away with closing down these local, easily accessed services, because most people can reach the more distant locations by car. If you own a car, it is a minor inconvenience when the local post office closes, or the old city hospital moves. But for the old, the poor and the sick it is now more difficult. These closures are only explicable if you assume that everyone has access to a car, or that everyone who matters has access to a car. The planners can get away with it because we are such a heavily motorised society.

## Cars Bad – Segregation

#### Automobility causes segregation through the creation of suburbs

Kuswa 2

Kuswa, Director of Debate @ U. of Richmond, Winter, 2002, Kevin, “Suburbification, Segregation, and the Consolidation of the Highway Machine”, The Journal of Law in Society, 31.3, lexis,

Despite egalitarian lures of easy-living, the ideals of suburbia would only offer themselves to a few wealthy families who conveniently found their living and transportation needs subsidized by the federal treasury. At the same time, many downtown regions were surrounded or demolished by massive highway construction, and the revenue generated by these projects did not return to the communities that were losing their churches, schools, and homes to the concrete river. By 1956, the Highway Trust Fund n5 was in full effect, capturing every cent of highway revenue and devoting it to further road construction. The 1950s ushered in a relatively secure source of revenue for the highway machine as the Trust Fund blocked diversionary efforts by tying the income from vehicle registration and road tolls to future construction and maintenance. James Dunn argues the establishment of the Highway Trust Fund demonstrated that national support for highways and the automobile culture were so strong that some level of policy promotion [\*33] was inevitable. No mode of transport has ever "been promoted so successfully and so steadily as autos and highways." n6 Even though the word suburb did not proliferate until the 18th and 19th centuries, suburbs themselves are living arrangements that have been a part of human settlement and congregation patterns for thousands of years. n7 Rather than trying to locate the origin of the process of suburbification however, the unique interaction in the United States between spatial patterns surrounding cities and the surge of the highway machine offers a more specific event for consideration. Before and after 1956, foreshadowed by the Census Bureau's 1950 definition of urban, n8 new borders started to erupt between the urban and the rural, scattering themselves across the cultural landscape. n9 After the arrival of highways and other paved roads connecting cities to one another, American suburbs changed dramatically through the consolidation of the highway machine. Bennet Berger posits: "In the context of the debate over 'suburbia,' what is usually at stake is whose version of America shall become 'American.'" n10 The struggle over what is America had been going on far [\*34] before the advent of suburbia; nevertheless, the sudden invasion of the interstate highway into the heart of the city allows us to traverse the highway's role in the re-making of the city and its surroundings. Although the suburb is primarily an event centered on a particular type of place, the experiences within a given place (and contributing to the creation of that place) are equally significant. In The Public Interest, Berger notes the interplay between the place of the suburb and the diversity of conditions that sustain it: Like the myth of a homogeneous 'suburbia,' which for a long time obscured, and to some extent still obscures, the actual variety of suburban life, complacence about the cultural diversity of cities may blind us to the conditions which sustain it. n11 Berger's realization, in 1966, that suburban regions in the U.S. were diverse and should not be homogenized, is important and valid. Many different people, living distinct and textured lives, populated the suburbs in the 1950s and 60s. The emergence of the suburb did not always translate into segregated living arrangements, particularly when taking into account pre-existing divisions that were not effects of suburbia. The borders within the city and its surroundings have historically involved boundaries based on race, class, and status. These boundaries can be both permeable and rigid, and the associated stratifications did not uniquely arise with the modern city, the automobile, the suburb, or the highway. On the other hand, few events materialized segregation and the internal border as much as the extension of the interstate into urban areas. Berger's comments, therefore, should not obscure narratives that challenge the diversity of the suburb, especially its economic diversity. It is important to pose a viewpoint in opposition to the story of the suburb as a liberated land of plenty teeming with inter-cultural experience.

## Cars Bad – Segregation, Securitization

#### Suburban segregation of the car is a violent practice of separation and securitization providing the impetus for extermination

Kuswa 2

Kuswa, Director of Debate @ U. of Richmond, Winter, 2002, Kevin, “Suburbification, Segregation, and the Consolidation of the Highway Machine”, The Journal of Law in Society, 31.3, lexis

One of the devastating memories of the highway and suburbia during the middle of the last century concerns race and class and the ways many impoverished and minority people were segregated and contained in certain city regions. How is power exercised in these instances? How can these histories be tied together to critique the effects of the highway machine? A relational notion of power can assist critical whiteness in confronting any attempts to govern through a spatial control of mobility and housing that promotes race and class divisions. Power no longer constitutes authority in a bipolar way, for the exercise of power produces positive and negative effects. More specifically, the racing and placing of populations occurs through the highway machine's exercise of pastoral power, not through a barricade set up by the military or forced internment. A concept like pastoral power turns away from analyzing situations in terms of "those with power" against "those without." Pastoral power, for Foucault, involves the individualization and totalization of power's objects: the subject and the flock. n62 Civil [\*55] institutions took it upon themselves to save and improve the citizenry, rather than simply governing the larger social body. Individuals are subject to rigid norms and groups are subjugated by state policies and enforcement. In a less abstract sense, the urban highway subjugates communities that are not able to access the highway, while people who do have access are subject to its restrictions and its path. The subject, or driver, desires easy access to employment as well as a domestic escape from the perceived dangers of city life. Meanwhile, the flock, or abstracted community, desires security and the comforts of modernity. The underside of the subject and the flock is, of course, the non-citizen and the non-community-the elements that must be purged and sanitized for the smooth functioning of society. This is how pastoral power produces subjectivities at the same time that it subjugates others. Through the highway machine, the noncitizen emerges as the residue of circulation and distribution-the immobile person contained in a trap of poverty and walled-in by the very structures designed to expand society's possibilities of travel. The have-nots become the move-nots, resigned to remain within a crowded cage contrasted with the adjacent freedom of superhighways and airports. Through the highway machine, the non-community emerges as the residue of out-migration and gentrification, effectively raising and depressing property rates to squeeze some people in and some people out. Drawing an analogy to a more popularized form of containment will serve to highlight the process. Greene relates the discourse of containment to United States foreign policy in the "third world," by showing how poverty and overpopulation had to be contained in the [\*56] name of democracy. n63 The borderlines between North and South (the North South gap) and between East and West (the East West divide or the Iron Curtain) became regions where containment worked to place and displace particular territories and populations. These logics appeared across the globe in the form of proxy wars (Angola, Nicaragua, Vietnam, Afghanistan); in the emergence of spheres of influence (the bear in the backyard and the domino theory); and in the separation of worlds into the industrialized first world, the industrializing or communist-bloc second world, and the underdeveloped or newly independent third world. Containment worked in these contexts to isolate conditions of political instability, poverty, and rapid population growth. These conditions then marked places that could breed communism or pose a potential threat to the West. Greene focuses on how the population control apparatus adopted containment rhetoric to further birth control, family planning, and health promotion in the so-called third world. This article uses Greene's concept to make a brief comment on the tropes of "cleanliness," "the pristine," "health," and "whiteness" operating within containment. n64 From there, we turn toward the ways these discourses produce racial divisions within American cities. Early in his account of the population apparatus, Greene notes "discourse strategies offer the means for making the conduct of a population visible as a problem" and "a discourse strategy exists as a norm for evaluating [\*57] the welfare of a population." n65 We recognize, though, that these discursive strategies are material and not just descriptive, that rhetorical positioning operates alongside ethical judgment, and that discursive foundations allow the exercise of power to be enabling and disabling at any given moment. n66 Many strategies circulate together to make certain populations visible and judge their productivity. Deploying the need for health, for instance, discursive strategies began to associate the health of the individual with the health of the nation and the health of the social body. A number of techniques combine to determine which populations are unhealthy and how those populations can be distinguished, separated, and contained. The health of a given population works figuratively and literally (metaphorically and physically). As Greene contends: "the individual health/social health couplet allows the language of public health and disease to be deployed in order to pathologize particular practices as 'unhealthy' for both the individual and the social body." n67 Greene's link between the discourse of health and containment is clear in the emergence of a Malthusian couple and state promotion of birth control, making the notion of "racing and placing populations" a significant one to import to the intersection between the suburb and whiteness. n68

## Cars Bad – Superstores

#### Cars have facilitated the growth of superstores and have limited our choice of where to shop

Sloman 6

Sloman, Special Advisor to the Board of Transport for London, 2006, Lynn, Car Sick: Solutions for our Car-addicted Culture, p.

Mass car ownership has favored big retailers at the expense of small independent shopkeepers. Large supermarkets and out-of-town shopping cities are only viable if millions of customers can reach them, travelling long distances and transporting their own goods away afterwards. As car ownership has increased, the superstores have taken advantage of the greater mobility of their customers by building larger stores which have a wider range of goods and can therefore attract people from a larger catchment. The large scale of their operation means they can cut prices, so smaller shops cannot compete. The supermarkets are eager to give the impression that they are offering shoppers more choice than ever before, but the harsh truth is that we now have much less choice of where to shop than our parents' generation. Between 1961 and 1997, the total number of grocery retailers fell by 80 per cent, from 147,000 to less than 29,000.\* Independent fresh food outlets, such as bakers, butchers, fishmongers and greengrocers, had a 40 per cent drop in sales between 1995 and 2000. Even the local newsagent is in decline, with a 9 per cent drop in shops selling confectionery, tobacco and newspapers in just three years between 1997 and 2000.2 The total number of superstores in Britain is now a little over 1,000, and these 1,000 outlets now capture more than half of the money we spend on groceries.3 Mass car ownership is not the only reason for this contraction in choice of where to shop. But it is an important contributory factor. The most significant study of the stranglehold large supermarkets now have on the retail sector was commissioned by the Department of the Environment from property experts Hillier Parker in 1998. Their surveys showed that if a car is available, it is almost certain to be used for food shopping. Instead of considering whether to shop in the town centre or at the out-of-town superstore, and then deciding whether to take the bus or drive, we take the decision the other way around. We decide what means of transport we will use and then choose the shopping location that is most convenient. Not surprisingly, shoppers who have decided to travel by car prefer to patronise the out-of-town store with its large, free car park. The supermarkets are fond of saying that all they are doing is providing the service that people want, and in a sense this is true. As car ownership has gone up, we have chosen to drive to the shops, and once we made this decision we needed the tarmacked acres on offer at the out-of-town or edge-of-town superstore. The change from a nation of small shopkeepers to a nation whose grocery shopping is dominated by just four major international players—Asda/Walmart, Tesco, Salisbury's and Safeway/Morrisons—has taken place over the same period as the explosion of car ownership. I vividly and slightly uncannily remember a prescient item on the local television news when I was a child in the late 1960s, about the opening of the first of a new chain of self-service supermarkets. "Customers will be able to serve themselves rather than wait for a shop assistant," the reporter explained, "but there are worries about the effect of the new supermarkets on existing shops." The change may have been spread over forty or fifty years, but every time you decide to drive to one of the out-of-town giants, you are contributing to the death of a small high-street shop. The Hillier Parker study found that the opening of a new out-of-town or edge-of-centre superstore can have a dramatic impact on local retailers. In Fakenham, a small market town in Norfolk, the proportion of local people shopping in the town centre fell by 64 per cent when a new out-of-town Safeway opened in 1994. One of the two small town-centre supermarkets closed, and turnover at other town-centre shops fell by up to a quarter. In St Neots, turnover at one town-centre store fell by nearly 30 per cent when an out-of-town Tesco opened in 1995, despite the store extending its opening hours. In Leominster, nine town-centre food shops closed when an out-of-town Safeways opened in 1992. This meant there were about a third fewer food shops in Leominster town centre. The number of vacant shops more than doubled. The surviving independent food shops experienced a general decline in business, with turnover at one shop falling by 30 per cent. With the loss of thousands of small shops, we have lost variety and local distinctiveness; it no longer matters whether you are shopping in Aberdeen or Eastbourne, as the products on offer are the same. This is not just nostalgia for a vanished way of life. Small independent shops can source local products, so more of the money you spend in them stays in the local economy. A proportion of the profits will be recycled into other local businesses

## Cars Bad B – Feedback Loop

#### Cars undermine other forms of mobility and through their uninterrupted travel make other forms of travel seem dangerous and inconvenient, forcing society to rely on cars further

Sheller and Urr 2k

 Professors of Sociology, 2000, Mimi and John, International Journal of Urban and Regional Research, 24.4, <http://ideas.repec.org/a/bla/ijurrs/v24y2000i4p737-757.html>

The shortage of time resulting from the extensive distances that increasingly 'have' to be travelled means that the car remains the only viable means of highly flexibilized mobility. Also, other forms of mobility in the city are, by comparison with the car, relatively inflexible and inconvenient, judged, that is, by criteria that automobility itself generates and generalizes. In particular, the car enables seamless journeys from home-away-home. It does away with the stationary pauses necessitated by 'stations', apart from the occasional stop at the gas station. And this is what the contemporary traveller has come to expect. The seamlessness of the car journey makes other modes of travel inflexible and fragmented. So-called public transport rarely provides that kind of seamlessness (except for first-class air travellers with a limousine service to and from the airport). There are many gaps between the various mechanized means of public transport: walking from one's house to the bus stop, waiting at the bus stop, walking through the bus station to the train station, waiting on the station platform, getting off the train and waiting for a taxi, walking though a strange street to the office and so on, until one returns home. These 'structural holes' in semi-public space are sources of inconvenience, danger and uncertainty. And this is especially true for women, older people, those who may be subject to racist attacks, the disabled and so on (see SceneSusTech, 1998). There are gaps for the car-driver involving semi-public spaces, such as entering a multi-storey car park or walking though strange streets to return to one's car or waiting by the side of the road for a breakdown vehicle, but these are much less endemic than for other kinds of travel. Not only do car-drivers gain the comparative benefits of relative mobility and seamless travel, making older ways of travel seem slow and inflexible, but also the matrix of automobility undermines other forms of mobility. The predominance of the car in government policy and planning afforded seamless car journeys while breaking down those linkages that once made other forms of transport possible. In the US, car manufacturers such as General Motors bought and dismantled electric tramway systems in order to make suburbs car-dependent (see Flink, 1988; Wolf, 1996). Zoning laws and building codes enforced suburban sprawl through the separation of business and residential districts, mandatory large-lot sizes and set-backs from kerbs, which destroyed town centres and the public spaces that they once provided (Kunstler, 1994). Auto-intensive middle-class suburbanization resulted in 'auto sprawl syndrome in which cars make urban suburbanization/sprawl possible and in so doing they make those living in such areas dependent upon the use of cars (SceneSusTech, 1998: 100). Freund argues that 'Modernist urban landscapes were built to facilitate automobility and to discourage other forms of human movement. . . [Movement between] private worlds is through dead public spaces by car' (1993: 119).

## Cars Bad B – Global

#### Destruction of non-car infrastructure occurring globally now

Whitelegg 97

Whitelegg, Professor of Sustainable Transport and Sustainable Development, 1997, John, Critical Mass. Pg. 46-47 The invisibility of women around the world is matched by the invisibility of children and the elderly in transport planning and by the invisibility of pedestrians, cyclists, rickshaw pullers and any other group or technology that does not fit the technological and consumerist stereotype of the car. There are approximately 700,000 rickshaws in Bangladesh. Approximately 1.25 million people are directly employed in the driving and maintenance of these and some 5 million people in total (4.5 per cent of the population) depend on them for their subsistence. In the mid-1980s rickshaws contributed 34 per cent of the total value added by the transport sector which was double the contribution of all motorised transport, 12 times the contribution of Bangladeshi railways and 12.5 times the contribution of the national airline. Every day about 7 million trips are made in Dhaka (the capital of Bangladesh) by rickshaw - double the output of London's Underground system. Rickshaws did not exist in government planning in Bangladesh in the 1980s in the same way that bicycles did not exist in China. During the second Five Year Plan in Bangladesh (1980-85) not one transport project in 300 was connected with rickshaws. In the third Five Year Plan rickshaws were dismissed in a single sentence: Slow moving vehicles such as pedal-rickshaws, push and pull carts etc. should be gradually eliminated through development of automotive vehicles and training of existing operators for such vehicles (Gallagher, 1992). This kind of dismissiveness and perpetuation of invisibility has been very much encouraged by the World Bank and other international lending institutions who have put in excess of 80 per cent of their funds into highway projects. In the case of Dhaka and its rickshaws, the planners and politicians perceive a problem. Transport planners dislike large amounts of mixed traffic, each element of which has very different speed characteristics. The result of 40 years of expert opinion and Western training of traffic engineers is a strong desire to ease the flow of 'real' traffic, that is cars, and eliminate any traffic that 'slows down' motorised traffic. Likewise the planners in Delhi in India are clear that small motorised rickshaws (auto-rickshaws) are causing traffic problems and should be removed. In Manila the Philippines government banned 17,000 motorised tricycles from main roads on the grounds that they caused traffic delay and congestion. In Bombay auto-rickshaws have been banned. In Jakarta in Indonesia rickshaws ('becaks') have been banned though they still operate in the suburbs. In 1970 there were 150,000 becaks giving employment to 375,000 drivers and owners, approximately 23 per cent of the city's work force. Between 1980 and 1985 50,000 becaks were seized by the police and thrown into the sea. The animosity towards two-wheeled vehicles, animal drawn transport and rickshaws is a reaction against things that are traditional (that is, not modern) and also a reaction to the enormous traffic jams and congestion in most cities in developing countries. Traditional modes of transport are slow, mix uneasily with cars, lorries and buses, and are also heavily involved in road traffic accidents. The desire to modernise and the desire to clear the way for the private car have been the driving force behind this massive assault on a mode of transport that provides large-scale employment for hundreds of thousands of people, and services the basic access and mobility needs of cities well suited to this form of transport. A transport policy influenced by considerations other than consumption and the convenience of the wealthy would restrict cars in Jakarta, Dhaka and Bombay, provide technical assistance to make the rickshaw easier to pedal (or pull in the case of Calcutta), provide a social infrastructure for the pullers/pedallers that can supply healthcare, social insurance, re-training (where appropriate) and retirement provision, and incorporate rickshaws into environmental strategies to reduce air pollution. In the case of auto-rickshaws alternative technology would have to be found to polluting engines. Bangladesh is very concerned with broad national policies that will see per capita incomes rise, that will modernise traditional sectors of the economy, create jobs and give the country a progressive image. Investing in new roads is a key element in this strategy. In 1989 the president announced that another 7,400 miles of road were under construction. This would triple the existing network, and work was also in progress on 18 major bridges (Gallagher, 1992). Roads are seen as tangible, something that can be implemented quickly, with international aid, and are thought to create jobs. Similarly in Preston, Lancashire County Council (LCC) has an ambitious road building project (developed throughout the 1980s and 1990s and summarised in 'Greening the Red Rose County', 1994), sees the new roads (28 in total) as a key factor in the economic development of 'lagging' regions and expects to get government funds for their construction. Like Bangladeshi politicians, the LCC politicians prefer the quick fix solution of something very tangible - something that the electorate can see rather than something less tangible and slower, but possibly more effective. Both Bangladesh and Lancashire have been around this circuit before and are still seeking the elusive economic Utopia that new roads are expected to bring. Both are driven by the availability of external funds and a strong internal belief in the efficacy of new roads as an agent of economic development. Both have to deploy large amounts of scarce internal resources to keep up the momentum of planning and developing an improved highway system and this in its turn starves other sectors of funds and completely distorts the transport planning process so that it ignores people, local travel, the environment and social goals. The process creates invisible groups and invisible technologies in the pursuit of cars, lorries, tarmac and an economic nirvana that does not exist. Widely varying needs and wants on a global scale provide some insight into the common problems of matching transport provision to basic needs. Both developing countries and developed countries largely fail to respond to basic transport needs and accessibility, preferring to invest in highway projects and higher levels of motorisation that cannot deliver socially just and equitable transport solutions. A commitment to traditional economic growth coupled with new infrastructure ignores the needs of the vast majority of the world's population and perpetuates a system of making choices that will eventually eliminate cycling, walking, low-cost transport and local production-consumption systems.

## Cars Bad B – Ingrained

#### Despite that cars are a recent phenomenon, they have permeated our society to the point where we cannot imagine our lives without them

Sloman 6

Sloman, S-pecial Advisor to the Board of Transport for London , 2006, Lynn, Car Sick: Solutions for our Car-addicted Culture, p.

Cars have come to dominate our culture and our daily lives. It is not simply a question of the amount of time we devote to driving them, earning the money to pay for them and attending to them. We are bombarded by images of cars from billboards, television screens and newspaper colour supplements. The imagery is preposterous: cars in the wilderness, parked on the rim of the Grand Canyon or driving across the sea like a hovercraft. Often the associations are with lifestyle choices and fashion: "It's so every season"; "... every season's must-have accessory"; "Think of all the stylish gadgets you can't leave the house without ...";"... You'll find that the inside is worthy of an interiors magazine." Advertising instils a sense that you are what you drive: that your car reveals to other people your status and outlook in life. Cars permeate our society to such a degree that it is easy to forget what a recent phenomenon they are. Henry Ford may have started the production line rolling before the First World War, but it was not until the 1970s that the process of organising society around the car picked up pace. When the first stretch of the Ml motorway in Britain was being constructed in 1959, the 5,000 men who laboured to build it were brought to work in double-decker buses. Clearly, they were not part of the shiny new car-driving democracy that the road that they were building was intended for. Described by Transport Minister Ernest Marples as a "magnificent motorway opening up a new era in road travel", the Ml was at first only of any use to about one in four households, as three quarters of the population had no regular access to a car. The opening of that first section of the Ml marked the start of a phenomenal and concentrated period of motorway construction, involving a scale of expenditure which seems inconceivable now. The pouring of concrete accelerated from the mid-1960s, and most of the motorway network was constructed in a brief period of just fifteen years. By the early 1980s, Britain's motorway network was substantially complete. The new motorways, and other roads designed for travel at speed, paved the way for more change. Out-of-town supermarkets, located for easy access by car, began to appear during the 1970s. They were followed a decade later by non-food retail parks on the North American model, selling flat-pack furniture, DIY goods, electrical appliances and even children's toys. Then the massive regional shopping centres arrived, offering a whole-day shopping experience, including places to eat and children's play areas as well as hundreds of so-called 'high street' stores. The first multiplex cinema was opened in Milton Keynes in 1985, and followed by over a hundred more in out-of-town sites with acres of car parking close to motorway junctions. In less than forty years, the car has become so intrinsic to the way we work, shop and spend our leisure time that it is almost inconceivable that we once managed without it. It is practically unimaginable that we might be able to use it less. To adapt the name of a famous store, itself a retail park product of the revolution in the way we travel, Cars 'R' Us. The story of how we came to devote so much of our time, money and lives to the car is the story of a generation for whom car travel symbolised a new, high-tech, scientific age. They invested billions in the infrastructure to make it easy to travel fast by car. Civil engineers were the new gods, responsible for the design of grandiose schemes: Spaghetti Junction, hundreds of flyovers, thousands of concrete bridges. Houses were demolished and towns ripped apart to make space for cars to drive and be parked. In London, Bristol and elsewhere, fine Georgian squares were dug up, the plane trees uprooted, to make way for dual carriageways and underground car parks

## Cars Bad B – Social Structuring

#### Society is structured by the image of the car – produces a perpetual feedback loop which destroys social cohesion

Whitelegg 97

Whitelegg, Professor of Sustainable Transport and Sustainable Development, 1997, John, Critical Mass. Pg. 17-18

This chapter will consider the costs and benefits of private motorised transport. The car and the lorry are frequently described as bringers of freedom, progress, independence and economic growth. The advertising world supplies numerous images in support of this vision of freedom and mastery over nature. It is no accident that these images are based on speed, power, open roads, attractive scenery and sexuality. The attractiveness and seductiveness of the car is deeply embodied in our culture and in our psychology. In this it offers a great deal, but as shall be demonstrated in this chapter it actually delivers very few benefits and in fact a large number of disbenefits. In spite of the growth in our knowledge about the negative environmental, social and economic effects of private car use, the car still commands powerful support. Indeed, in his introduction to the fourth RAC (1992) report: 'Cars and the Environment: a view to the year 2020' the vice-chancellor of Cambridge University, Professor Sir David Williams, wrote: 'Few people are unaware of the immense benefits we gain from the ready availability of the car.' The character of Faust is a major figure in Europe's literary heritage. In Marlowe and Goethe the image of a figure determined to increase his power and knowledge at whatever cost is a potent one. Faust's bargain with the devil to sell his soul in return for power and knowledge is a powerful metaphor for the forces that drive human wants and aspirations and for the strength of the inner self to defer any consideration of the final price that must be paid. The story of Faust does, of course, have two endings. In one the final price is paid and Faust is delivered to eternal damnation. In the other he escapes and is reconciled with the Creator. The twentieth century's obsession with the car has many of the characteristics of this Faustian bargain. The car can liberate the self-imprisoned soul from its perceived boredom in a limited geographical area. It can confer strong feelings of power, external signs of material wealth, sexual mastery and status. These benefits are severely constrained by the extent to which the rest of the world shares the same degree of motorised affluence but, more importantly, are purchased at considerable expense. Consequences range from the destruction of health and community in local neighbourhoods to the destruction of planetary life support systems as a consequence of global warming. The ability to crave and enjoy the benefits and the inability to recognise the severity of the price that has to be paid is Faustian in character. The final chapter of this book will return to the question of which ending to the story of Faust is more likely in the context of current obsessions with private motorised transport and hyper-mobility. If it had been possible to carry out an assessment of the technology of motorised transport around the time that Messrs Daimler, Benz and Diesel were making rapid advances in engine and vehicle technology, and Henry Ford was converting the technology into a new organisational and social order, it is highly unlikely that it would have looked like good value for money. The car is extremely efficient at creating ever deepening dependencies on itself and exterminating alternatives.Henry Ford would have been acutely aware of the financial implications of this simple feedback loop. The car does not allow more contact with more things whilst holding constant the number of things that are available, but stimulates a new spatial order so that things are no longer as they were: they have reduced in number whilst increasing in size (for example, schools and hospitals), they have disappeared (for example, small grocery stores/corner shops) or they have become further away (for example, workplaces). Henry Ford was obsessive about waste of time and waste of money. In My Philosophy of Industry published in 1929 he frequently returned to these ideas. The car has ensured that we all spend more time in transit, making more trips to increasingly distant things. The consequence of these longer trips and the greater amounts of time allocated to car travel is that more money must be spent on roads, car parking and all the associated infrastructure of dependency on motorised transport including the police and courts. Henry Ford would not have been impressed by the monster that he was instrumental in creating. An Audit A car consumes vast amounts of finite raw materials and resources in its manufacture, which in turn create the necessity for mining and quarrying activities and their associated spoil and water pollution. Raw materials include metals, glass, plastics and the energy used to manufacture one vehicle (1.77 x 104 kWh or 1.42 tonnes of oil equivalent) (Hill et al, 1995).

## FF Bad – Civ Collapse, Environ

#### We must shift to renewable forms of energy in order to prevent ecological collapse and military conflicts

Droege 6

Droege, Senior Advisor at Beijing Municipal Institute for City Planning and Design, 2006 [Peter, Renewable City : a comprehensive guide to an urban revolution, Pg.10-12

No period in history has seen such dramatic urban expansion as have the past 50 years, and no future period is likely to see it again soon. Yet this recent era, the source of great pride and much hyperbole, is founded on a dirty secret. For much of the 20th century a great illusion has been disseminated, and a vast collective blind spot nurtured in the discourse about cities, urbanism and urbanity. The great majority of current urban development discussions are not only largely disconnected from the true price paid in environmental and ecological damage, but both deaf to and mute on the manner in which cities are powered - the root cause of the massive urban challenge confronting humankind. The global price paid for the *urban century* has been enormous; a Faustian bargain has been struck. Salvation in cities was traded for the diabolical spectre of rapid climate change. As documented in this guide, 85 per cent of global commercial energy supply is fossil-fuel derived, and hence the major source of total anthropogenic greenhouse gas emissions (USGS 2005). Among Organisa­tion for Economic Co-operation and Development (OECD) member countries, three-quarters of this staggering level of coal, oil and natural gas consumption are urban based, used for transport and urban management (OECD 1995). And the use of both dirty power sources, fossil fuels and uranium, is still rapidly rising. They are dirty since jointly they heavily contribute to the vast majority of global and local environmental crises: global warming; fresh water depletion; soil, water and air pollution - to name but a few. Nuclear power especially deserves to be relegated to the science museums, as a curious yet frightening engineering antiquity, the 20th century's great dead-end technology. It has long been decried as hugely expensive in terms of power generation; lethal in its massive production, uranium processing, staggering waste storage requirements and weapons proliferation risks; and enormously wasteful of fresh water along its entire processing and generation chain. Yet, given the demise of oil and natural gas as long-term fuel sources, many governments want to see it reintroduced, even if it means serving only short-term interests. Few appreciate that the global uranium supply is as limited as petroleum with reserves stretching ahead barely two human generations, given current rates of use (Scheer 2002). The continued and accelerated use of dwindling nuclear and fossil energy sources poses massive and mounting military risks. Renewable energy, by contrast, is in infinite supply, and yet, amazingly, much of urban development discourse remains largely oblivious to it. Given these sobering prospects, and the fact that all necessary technologies have long been within reach, it appears startling that a massive, citywide shift to renewable energy has not yet occurred. Renewable energy - clean wind, water, sun and biofuel based power - is capable of replacing fossil fuels and nuclear power within 50 years: this is demonstrated by the recent speed of introduction of renewable power in Germany where current annual capacity growth has been an astonishing 3,000 megawatts in the years leading up to 2005. But Germany is an exception, and a backlash against renewable power may yet be forthcoming. He last great renewable energy rollback was staged after the first ‘Oil Crisis’ of 1973, which consequently remained unheeded as a harbinger of the inevitable petroleum peak. The resulting global interest in renewable energy had so frightened conventional generation, oil and nuclear interests that a concerted effort was made to bury any such initiative in the United States. Indeed, a number of studies have demonstrated the technical potential of renewable energy to replace fossil and nuclear power without any difficulties in sheer capacity terms (Scheer 2005). The price of inaction is far too high: cities are the most advanced, but also the most risky and fragile constructs ever devised by humankind. Humanity has staked its very civilization on their smooth and ever-rising performance – and has done so increasingly since the mid-20th century. But this commitment to terrestrial urbanity occurs at a time when the very foundation of urban prosperity and survival is being eroded. The vast majority of global financial transactions, trade, command and control and cultural production today takes place in and among cities: and yet, the twin realities of fossil-fuel supply peaking and climate change make large, globally networked and conventionally powered cities the least secure setting imaginable for essential functions. The urban renewable energy revolution is an essential, inevitable component of a secure and prosperous future. A historic revolution is in progress: the move is a foot from fossil fuels, nuclear power and other forms of unsustainable energy use generation to a renewable and sustainable power base for urban communities, cities, towns and villages. Many example of positive initiatives encourage, and are testimony to the ability of cities and towns to perform as purposeful communities, and evolve into settings of greater independence from fossil and nuclear power sources. They carry the promise of greater energy autonomy based on renewable energy, of recapturing regional productivity, mobilising local resources and enabling new industries and employment opportunities.

## FF Bad – Civil War

#### In the pursuit of oil, oil corporations intentionally fan civil wars and destroy the lives of millions

Brave 2

Bravo, Ph. D., Biologist and researcher that co-founded Accion Ecologica, 2002, Elizabeth V., World Summit on Sustainable Development, Position Paper No. 2

Dominant groups have used these territories as a resource base, destroying the means of survival of their traditional custodians. In many cases, oil companies have fanned these conflicts, supporting one of the parties involved, in order to benefit their own interests. This is the case of the Ijaw people of Nigeria who live in the Niger River Delta where Shell drilled its first well in 1956 in the community of Oloibiri. Since then, the Oloibiri, with a population of 12,000,000, have suffered unspeakable human rights violations as well as environmental degradation, and have lived with constant violence caused by clashes between oil companies and civil society leading to the deaths of many Ijaw. As a result, in December of 1998, the Ijaw people signed the Declaration of Kaiama, demanding an end to all oil activities (exploration and production), and the withdrawal of all transnationals from Ijawland. But the violence continues. The presence of Shell and other oil companies in the Niger Delta has caused additional conflicts, such as that between the Ogoni, a people victimized by a brutally repressive system. The Ogoni created the Movement for the Survival of the Ogoni People (MOSOP) in response to this aggression. At the end of May 1995, the president of the MOSOP, Ken Saro-Wiwa, was taken into custody for the alleged murders of four Ogoni elders. Eventually, he was executed in extra-judicial proceedings together with eight community leaders who had organized against Shell due to the company’s destructive activities in Ogoni territory. Some sources claim that members of the “Operation for the Restoration of Peace and Order in Ogoni Territory killed Saro-Wiwa,” a committee created by the Nigerian government to protect Shell’s interests in the area.

## FF Bad – HR

#### Oil companies are willing to compromise human rights for oil

Bravo 2

Bravo, Ph. D., Biologist and researcher that co-founded Accion Ecologica, 2002, Elizabeth V., World Summit on Sustainable Development, Position Paper No. 2

Another telling case is that of Aceh, in Indonesia. In that area in North Sumatra, Mobil provided for military support from the government to stop the secessionist Free Aceh Movement (GAM). This movement had been organized, in large part, as a result of the deterioration in the quality of life, the degradation of the environment and the violation of human rights resulting from Mobil’s operations in the area. Most human rights violations suffered in Aceh have taken place in the north, and many victims have testified that Indonesia’s Special Forces (Kopassus) are responsible for said violations. Members of Kopassus are based in Camp Rancong, owned by the PT Arun Oil Company[[1]](#footnote-1). Others claim that they have been interrogated at Post 13, a facility provided by Mobil Oil. Extra-judicial executions and disappearances take place in Aceh. Most of the disappearances have never been explained. A number of people have disappeared while in jail serving long sentences (Aditjondro, 1997). In 1989, an estimated two thousand civilians died while in army custody in Aceh and the north of Sumatra. In that year, counter insurgence operations began against the armed resistance movement (Aditjondro, 1997). The 1989-1993 period was the most difficult for the people of Aceh. Amnesty International charges that women and children were among those executed and that the murders took place both publicly and in secret. While violence has diminished in subsequent years, it has yet to come to an end.

## FF Bad – Imperialism

#### Imperialism driven by oil interests

Socialism Today 6

Socialism Today, Socialism Today, Socialism Today “Oil imperialism” 2006, <http://www.socialismtoday.org/74/oil.html>

US designs on the Gulf are not merely about oil company profits, though. Exxon, Mobil, Chevron, Texaco, and Gulf are eager to take over Iraq’s oil industry. But this is part of a broader strategy of US imperialism. Control of oil resources are an integral element of US imperialism’s global interests. Energy, profit and power are interlinked and cannot be separated. "Oil is high-profile stuff", says Robert Ebel, of the Center for Strategic and International Studies, a Washington think-tank. "Oil fuels military power, national treasuries, and international politics. It is no longer a commodity to be bought and sold within the confines of traditional energy supply and demand balances. Rather, it has been transferred into a determinant of well-being, of national security, and of international power". "Controlling Iraq is about oil as power, rather than oil as fuel", says Michael Klare, author of Resource Wars. "Control of the Persian Gulf translates into control over Europe, Japan, and China. It’s having our hand on the spigot [tap]"

## FF Bad – Imperialism – Africa

#### Control of oil leads to imperialism in Africa

Markowitz 8

Markowitz, History Professor, Rutgers University 2008, Norman, Political Affairs “US Militarism Spans Globe” April 2008, http://www.politicalaffairs.net/article/articleview/6768/1/169/

Africa is the latest target for new military bases. Daniel Volman, director of the Africa Research Project and a scholar specializing in U.S.-Africa military relations, spoke on the U.S. military’s dangerous plans to establish a separate Africa Command (AFRICOM). On this, the Bush administration has met with little success. So far only Liberia was agreed to permit the U.S. to establish headquarters for such a command. Few Americans know about AFRICOM or know about the growing importance, as Volman contended, of African oil to U.S. goals. Today, Nigeria sells more oil to the U.S. than Saudi Arabia. The U.S. is seeking to “diversify” its oil procurement and to use its military command to do in Africa what it is currently failing to do in Iraq. New efforts to establish bases in Africa are much like the colonial powers' 19th century plans for dividing up Africa, and creating enormous new suffering and oppression for its peoples. While the U.S. military advertises itself as bringing about development and reform to the continent, it has no real plans to do anything in Africa besides construct its bases and use them for command and control. Volman argued that some congressional Democrats have given up on any possibility of serious developmental aid to Africa and are starting to believe military promises that militarism would bring development. It is important that AFRICOM be abandoned since it, like Star Wars in the Czech Republic and the crime committed by Britain when it deported 2,000 Chagos Island people, is about using diverse peoples as pawn of militarization, exploitation of oil and other resources, and eventual war.

## FF Bad – War B – Ingrained

#### Oil has become the lifeblood of the United States, this addiction inevitably leads to violence

Molana 7

Molana, Professor of International Relations American University, Washington, D.C, 2007, Hamid, BBC Monitoring International Reports: Text of commentary by Hamid Molana headlined "The imperialism of oil and energy" published by Iranian news-paper Kayhan website on 2 August, August 6, 2007 Monday

In the last few decades, the military interventions of America in the world have been mostly aimed at gaining access to the oil wells and other energy resources of other countries. The current situation of imperialism of oil and energy of America is very similar to the policies and plans, which had been drawn up by Lord Curzon after the end of the First World War, for the British Empire in the Arab and Middle East countries. Based on the plans drawn up by the then British politician Curzon, the government structures in the Arab countries, which were under the control and influence of Britain, would be managed by the indigenous Muslims of those countries and as much as possible, by their Arab populations. [Accordingly] The occupiers of those lands [the British Empire] should not formally annex these countries to the terri-tories of its formal colonies. Instead, it should view them as countries under its protection, control and influence, run and managed by regimes, which on the surface are independent. This is precisely the plan, which the Americans want to implement in Iraq now. However, they have not achieved a great deal of success in this area. During the American military attack on Iraq, for several days, some national and historical museums of Iraq in Baghdad were attacked and many of their historical relics were stolen. On the walls of these museums, there were many unique historical maps of the land of Iraq dating back many centuries. The American military did not make any efforts to protect these maps. The main objective of the American troops, based on the commands and instructions they had re-ceived from Washington, was to protect the Iraqi Oil Ministry and get their hands on the maps and plans for the Iraqi oil wells and reservoirs. For that reason, the only building in Baghdad, which did not suffer from any damage and destruction, was the Oil Ministry building where all the maps and archived documents were kept. The second important plan which the Americans had drawn up and had at their disposal during their attack and invasion of Iraq was a plan which the "Pol-icy-making Group for the Development of National Energy", headed by the American Vice President Dick Cheney, had prepared in 2001. This plan was based on the considerations enshrined in the programmes of the American national security for ensuring that the energy needs of America in the 21st century were met. The American plan was to secure the energy needs of the country and ensure the objectives of its national security by conquering the "rogue and rebellious" oil-rich countries and acquiring full control and access to their oil and natural gas wells and reserves. It was in this con-nection and in pursuit of this plan that the Americans targeted Iraq and Saddam Husayn. Although, in the wake of the military attack on Iraq in 1990, America and Britain had prevented Saddam Husayn from getting his hands on the Kuwaiti oil wells and had imposed a ban on the export of Iraqi oil on the basis of a UN Security Council Resolution. Towards the end of the 1990s, Iraq had entered into negotiations with more than 60 com-panies from France, Russia, China, India, Holland, Indonesia, Canada and Germany with the aim of breaking the sanc-tions and with the help and agreement of the three permanent members of the Security Council - namely Russia, China and France - it attempted to corner and check-mate Britain and America. For example, the plan was for the French oil company - Total - to manage the 23bn barrel oil wells around the Majnun area [in southern Iraq]. However, America and Britain were not pleased with the game being played by Saddam Husayn. America's plan was to turn Iraq into a major energy and military base and use it as a lever to exert pressure on Iran so that if possible, they [the Americans] may even overthrow the Islamic Republic of Iran's political system in the future. In 2003, in his book entitled "The right man", David Frum, the writer of Bush's White House speeches, wrote: "The war against terror was formulated and launched in order to maintain the new stability of one quarter of the planet Earth, which has always been intertwined with violence and bring about prosperity and well-being for all of us through the channels of energy and oil security." One year later, in 2004, Michael Clare, a theoretician in the field of American oil and energy, summarized the existing situation of oil and gas reserves in the world as seen from the American perspective in the following manner: "Oil is no longer a mere commodity and it is in fact a national security issue, which has been brought under the control, supervision and responsibility of the Defence Department. To protect and safeguard it, military intervention is deemed necessary, no matter what the costs may be."

## Urbanism Bad – War

#### Aggressive global urbanism motivates cycles of warfare

Droege 6

Droege, Senior Advisor at Beijing Municipal Institute for City Planning and Design, 2006, Peter, Renewable City : a comprehensive guide to an urban revolution, Pg.27

Global urbanism - the dominant way of life in cities and towns as increas­ingly shared throughout the world - has also emerged as an international vehicle for the aggressive promotion of consumption, a path for the multina­tional corporate warrior, a road to progress for progress's sake, and an end in itself. Marketed as a desirable lifestyle product the concept city grew increas­ingly removed from other interests and aims, whether communal, spiritual or mercantile. As cultural ideal it had become disseminated and implanted glob­ally, through the fossil powered media of advertising and political propaganda, and sometimes under the guise of national interests and liberation. The instant­aneously televised, terrorist destruction of New York's World Trade Center helped trigger the equally spectacular and murderous acts of collective revenge exacted on countless Afghan towns and villages, and the 'shock and awe' style demolition of Baghdad, meted out in a sad and surrogate act of carefully misdirected retribution. Such acts of urban mayhem seem aimed less at routing specific perpetrators of heinous crimes than at destroying the visible, cultural heart of the disobedient - sideshows in the grand narrative of the struggle for oil. Fossil urbanism - the city today - is a form of mass communication, a worldwide advertising medium and, as such, subject to manipulation and abuse in the battle for conventional power dominance.

## S – Cars

#### Bicycles solve cars – pedal power!

Kay 97

Architìture and planning critic for The Nation, 1997, Jane, “Asphalt Nation”, p. 29, Two Wheels at Work

The most zealous of the human-power champions to cross these paths and trails are the bicyclists. Their number is legion, and their politics diverse, from the kids with their first two-wheelers to radical activists. Political, polemical, indefatigable, they pedal double-time in the auto-free cause. Lodged together in planning departments with advocates for pedestrians, the bicyclists sometimes compete, sometimes share their too slim funds to make the landscape fit for human mobility. Like the bus and rail partisans scrapping among themselves, both should be well-funded allies. The 12 million bicyles regularly bought every year—equal to the number of motor vehicles—offer a legion for balanced transportation. "One Less Car" says the 1970s motto of Transportation Alternatives. Bicyclists everywhere have energized the volunteer world with their "pedal power." Launched in 1992 to emulate the swarms of bicyclists who overwhelm the roads in China, the colorful crusaders, under a banner reading "Critical Mass," swarmed up San Francisco's Market Street to show their might. The phrase has spread to other cities, where bicyclists infuse their own streets with a "critical mass" of riders and an array of guerrilla tactics. In Austin, bicyclers took over the streets from cars, creating a fracas that led to arrests. In Edmonton, Alberta, three protesters were hauled off in a paddy wagon when a hundred residents, cyclists, and environmentalists blocked the opening of a scenic road that had been closed to car commuters. Bicyclists use less incendiary tactics to push for sustainable transportation and public space. Activists in Washington and other major cities make their impact felt in both pro-bicycle and anti-automobile activities. Washington's Auto-Free D.C. and New York City's Transportation Alternatives work to free their cities' park systems from cars. Avid bicyclists head the list of grassroots crusaders against the automotive infrastructure and for auto-free zones. They fight to rope off lanes on roads and work to secure separate bikeways and green-ways. In community meetings they agitate for admission to mass transit and for lockers at park-and-ride lots; in offices they push employers to provide showers and locker space. And their influence grows. Every bike rider not only removes a car from the road but also frees a park-and-ride space; a bike rack costs $250, a parking lot $20,000 per space to build. Between the endless road of the automobile and the limited span of the walker, the bike route could be the lane of first resort for commuters or college students. Using bicycles for errands and visits—for the 49 percent of trips three miles or less—could bring mobility to riders and free up seven-eighths of the parking space of an automobile. Car-free, livable college campuses from those at Santa Barbara and Davis, California, to those of the Midwest are positive proof of the benefits of miles switched from horsepower to pedal power.

## S – Demo

**The bicycle has always been the most democratic means of transportation**

Smith 72

Smith, Robert A, Social History of the Bicycle. Ch. 6 it has put the human race on wheels. pg. 111-117. 1972

While some Americans were debating the pros and cons of the bloomer question, others were examining the impact of the bicycle on American society. Many praised the machine's utilitarian and sporting contributions, and a few ap¬plauded the coming of the birotate chariot on the grounds that it would affect broad sociological and political changes in American life. Here and there a fan contended that the bicycle would defend and preserve those qualities upon which the nation's well-being depended. Back in 1884, when the ordinary held sway, the editor of Outing extolled the social virtues of the cycle. He maintained there was something peculiarly democratic about a conveyance that was comparatively cheap to purchase and maintain and was, therefore, within the reach of most Americans. Of course Outing's primary purpose was to encourage cycling, and the editor, no doubt carried away by his job, apparently forgot that $150 represented almost half a year's wages for the majority of Americans. Nevertheless, the feeling that the bicycle was an instrument of democracy continued to grow, and eleven years later another spokesman waxed eloquent on the same theme. He had just witnessed one of the bicycle parades that were held so frequently in the halcyon days. The parade, he said, forcefully suggested to every onlooker the thought that the bicycle is the most democratic of all vehicles. There were men high in the ranks of the professions and heads of immense business enterprises, side by side with the humblest patients or clients they are called upon to serve and the salesmen and saleswomen employed in their establishments. Not only is the bicycle democratic with regard to rules and regulations which govern its use on public thoroughfares, but it has been a minister to that community of feeling among men which marks true democracy. An example of this has been ... the manner in which men of all grades have met in a common effort to secure from legislatures and the city council enactments favorable to the rights of the cyclist when awheel, or, it may be said, when paying his taxes or fighting his damage suits. ]

## S – Equity

#### The bicycle is the most energy efficicent vehicle on the planet – even better than walking – the speed at which it goes makes it the optimal means of transit for a society that strives for equity. Bicycles locate individuals in their life worlds and limit societies’ velocity in a way that is accessible to all

Illich 78

Ivan Illich, philosopher, priest, activist, professor @ Penn St. and Univ. of Bremen, 1978, “Energy and Equity” in Toward a History of Needs. Online: <http://www.cogsci.ed.ac.uk/~ira/illich/texts/energy_and_equity/energy_and_equity.html>. Edited for sexist language

A century ago, the ball-bearing was invented. It reduced the coefficient of friction by a factor of a thousand. By applying a well-calibrated ball-bearing between two Neolithic millstones, a man could now grind in a day what took his ancestors a week. The ball-bearing also made possible the bicycle, allowing the wheel---probably the last of the great Neolithic inventions---finally to become useful for self-powered mobility. Man, unaided by any tool, gets around quite efficiently. He carries one gram of his weight over a kilometer in ten minutes by expending 0.75 calories. [hu]Man on his feet is thermodynamically more efficient than any motorized vehicle and most animals. For his weight, he performs more work in locomotion than rats or oxen, less than horses or sturgeon. At this rate of efficiency man settled the world and made its history. At this rate peasant societies spend less than 5 per cent and nomads less than 8 per cent of their respective social time budgets outside the home or the encampment. [hu]Man on a bicycle can go three or four times faster than the pedestrian, but uses five times less energy in the process. He carries one gram of his weight over a kilometer of flat road at an expense of only 0.15 calories. The bicycle is the perfect transducer to match [hu]man's metabolic energy to the impedance of locomotion. Equipped with this tool, [hu]man outstrips the efficiency of not only all machines but all other animals as well. The invention of the ball-bearing, the tangent-spoked wheel, and the pneumatic tire taken together can be compared to only three other events in the history of transportation. The invention of the wheel at the dawn of civilization took the load off man's back and put it onto the barrow. The invention and simultaneous application, during the European Middle Ages, of stirrup, shoulder harness, and horseshoe increased the thermodynamic efficiency of the horse by a factor of up to five, and changed the economy of medieval Europe: it made frequent plowing possible and thus introduced rotation agriculture; it brought more distant fields into the reach of the peasant, and thus permitted landowners to move from six-family hamlets into one-hundred family villages, where they could live around the church, the square, the jail, and-later-the school; it allowed the cultivation of northern soils and shifted the center of power into cold climates. The building of the first oceangoing vessels by the Portuguese in the fifteenth century, under the aegis of developing European capitalism, laid the solid foundations for a globe-spanning culture and market. The invention of the ball-bearing signaled a fourth revolution. This revolution was unlike that, supported by the stirrup, which raised the knight onto his horse, and unlike that, supported by the galleon, which enlarged the horizon of the king's captains. The ball-bearing signaled a true crisis, a true political choice. It created an option between more freedom in equity and more speed. The bearing is an equally fundamental ingredient of two new types of locomotion, respectively symbolized by the bicycle and the car. The bicycle lifted man's auto-mobility into a new order, beyond which progress is theoretically not possible. In contrast, the accelerating individual capsule enabled societies to engage in a ritual of progressively paralyzing speed. The monopoly of a ritual application over a potentially useful device is nothing new. Thousands of years ago, the wheel took the load off the carrier slave, but it did so only on the Eurasian land mass. In Mexico, the wheel was well known, but never applied to transport. It served exclusively for the construction of carriages for toy gods. The taboo on wheelbarrows in America before Cortes is no more puzzling than the taboo on bicycles in modern traffic. It is by no means necessary that the invention of the ball bearing continue to serve the increase of energy use and thereby produce time scarcity, space consumption, and class privilege. If the new order of self-powered mobility offered by the bicycle were protected against devaluation, paralysis, and risk to the limbs of the rider, it would be possible to guarantee optimal shared mobility to all people and put an end to the imposition of maximum privilege and exploitation. It would be possible to control the patterns of urbanization if the organization of space were constrained by the power [hu]man has to move through it. Bicycles are not only thermodynamically efficient, they are also cheap. With his much lower salary, the Chinese acquires his durable bicycle in a fraction of the working hours an American devotes to the purchase of his obsolescent car. The cost of public utilities needed to facilitate bicycle traffic versus the price of an infrastructure tailored to high speeds is proportionately even less than the price differential of the vehicles used in the two systems. In the bicycle system, engineered roads are necessary only at certain points of dense traffic, and people who live far from the surfaced path are not thereby automatically isolated as they would be if they depended on cars or trains. The bicycle has extended man's radius without shunting him onto roads he cannot walk. Where he cannot ride his bike, he can usually push it. The bicycle also uses little space. Eighteen bikes can be parked in the place of one car, thirty of them can move along in the space devoured by a single automobile. It takes three lanes of a given size to move 40,000 people across a bridge in one hour by using automated trains, four to move them on buses, twelve to move them in their cars, and only two lanes for them to pedal across on bicycles. Of all these vehicles, only the bicycle really allows people to go from door to door without walking. The cyclist can reach new destinations of his choice without his tool creating new locations from which he is barred. Bicycles let people move with greater speed without taking up significant amounts of scarce space, energy, or time. They can spend fewer hours on each mile and still travel more miles in a year. They can get the benefit of technological breakthroughs without putting undue claims on the schedules, energy, or space of others. They become masters of their own movements without blocking those of their fellows. Their new tool creates only those demands which it can also satisfy. Every increase in motorized speed creates new demands on space and time. The use of the bicycle is self-limiting. It allows people to create a new relationship between their life-space and their life-time, between their territory and the pulse of their being, without destroying their inherited balance. The advantages of modern self-powered traffic are obvious, and ignored. That better traffic runs faster is asserted, but never proved. Before they ask people to pay for it, those who propose acceleration should try to display the evidence for their claim.

## S – Freedom

#### The bicycle is a metaphor for the reappropriation of public space from imposed decision making – Bicycling movements allow freedom and choice

D'Andrade, Co-founder of Critical Mass, 1993, Hugh, “Massive Critique”, http://www.processedworld.com/tfrs\_web/history/critique.html

So much of our lives we are forced to accept situations which we have not chosen for ourselves. As consumers, as voters, as employees, we allow crucial decisions about our lives to be made by other, more powerful people. How sad it is then -- and yet how predictable -- that our movements for social change are so often cursed with this same problem. When we join a political party, or sign a petition, or take part in a rally, more often than not we are simply accepting someone else's opinion, chanting slogans we did not create, and endorsing laws we do not understand. Critical Mass is, or should be, something different... A space where people do not have ideas or actions imposed on them, where people can take an active, rather than passive role in building a livable future, in however small a way. Because no one is in charge on our monthly ride, and no set ideology is set forth, participants are free to invent their own reasons for being here. The lively Xerocracy that has sprung up, the preponderance of flags and hand-painted signs that are flourishing on a scale unheard of since the Gulf War -- not to mention the fact that Critical Mass is rapidly spreading to other cities -- these are all signs that we are doing something right.

## S – Oil, Warming

#### Encouraging bicycling as an alternative to oil dependence solves warming and oil dependence

Higgins 5

Higgins, Senior Policy Fellow at the American Meteorological Society, 2005, Paul A. T., “Exercise-based transportation reduces oil dependence, carbon emissions and obesity,” Environmental Conservation 32 (3): 197–202, electronic

Societal dependence on oil leads to increasingly negative social consequences throughout the world, including climate change, air pollution, political and economic instability, and habitat degradation. Reliance on the automobile for transportation also contributes to a sedentary lifestyle, an obesity epidemic and poor health. These problems are particularly pronounced in the USA, which currently consumes c. 27% of global oil production and produces c. 25% of global carbon emissions, and where c. 65% of adults are overweight or obese. Other countries throughout the world that replicate or hope to replicate the automobile-based lifestyle of the USA face similar problems now or in the near future. This paper develops and applies calculations relating the distances that could be travelled through recommended daily walking or cycling with weight loss, oil consumption and carbon emissions. These straightforward calculations demonstrate that widespread substitution of driving with distances travelled during recommended daily exercise could reduce the USA’s oil consumption by up to 38%. This saving far exceeds the amount of oil recoverable from the Arctic National Wildlife Refuge, suggesting that exercise can reduce foreign oil dependence and provide an alternative to oil extraction from environmentally sensitive habitat. At the same time, an average individual who substitutes this amount of exercise for transportation would burn respectively c. 12.2 and26.0 kg of fat per year for walking and cycling. This is sufficient to eliminate obese and overweight conditions in a few years without dangerous or draconian diet plans. Furthermore, a reduction in carbon dioxide emissions of c. 35% is possible if the revenue saved through decreased health care spending on obesity is redirected toward carbon abatement. As a result, exercise-based transportation may constitute a favourable alternative to the energy and diet plans that are currently being implemented in the USA and may offer better development choices for developing countries. Correspondence: Dr Paul Higgins Tel: +1 510 717 4088 e-mail: phiggins@nature.berkeley.edu Keywords: Arctic National Wildlife Refuge, climate protection, energy policy, habitat conservation, Kyoto Protocol INTRODUCTION Use of the automobile for personal transportation confers considerable individual benefits, such as the ability to travel quickly, easily and independently over long distances. However, car travel also causes substantial societal costs in the form of air pollution, climate change, habitat degradation, political instability and economic insecurity. In addition, reliance on the automobile contributes to a sedentary lifestyle and resulting poor health (USDHHS [USA Department of Health and Human Services] 1996; NIH [USA National Institute of Health] 1998; Must et al. 1999; Sothern et al. 1999; Brown et al. 2000). Most notably, low rates of physical activity in the USA partly explain why c. 65% of Americans are obese or overweight (Flegal et al. 2002) because weight gain or loss is determined by the balance of energy intake (eating) and energy expenditure (exercise) (Pi-Sunyer 2003). The resulting health care expenditures are substantial with c. US$ 117 billion spent annually in the USA on health care for obesity and overweight alone (Colditz 1999; CDC [Centers for Disease Control and Prevention] 2003). Including other health care costs associated with physical inactivity leads to even higher estimates: c. US$ 28.7 billion annually for the state of California (Chenoweth 2005) and c. US$ 8.9 billion annually for the state (Chenoweth et al. 2003). Therefore, substitution of recommended daily exercise (Institutes of Medicine of the National Academies 2002), such as walking or cycling, for driving could improve health while reducing oil consumption and carbon dioxide emissions (Higgins & Higgins 2005). I demonstrate here that adopting previously recommended levels of daily exercise by substituting the distances covered during one hour of walking or cycling for car travel could help alleviate three of the most pressing problems that all countries currently face: oil dependence, climate change and health care. In the case of the USA, adoption of recommended exercise guidelines could save more oil than is contained in the Arctic National Wildlife Refuge (ANWR), reduce carbon emissions far below the reduction required by the Kyoto Protocol at no net cost and greatly improve the health of the citizens of the USA. 198 P.A.T. Higgins METHODS

## S – Social Cohesion

#### Cites withour cars become place of thriving cultural and social activity

Crawford 2

Crawford, Former Lecturer in Architecture at Universidade Independente, 2002, J.H., Carfree Cities, p.

Mankind first settled in cities about 7000 years ago, and cities have served as the cradle of civilization ever since. I believe that the future of cities is assured. Culture is hosted by cities because only cities can support great libraries, symphony orchestras, extensive theater districts, major-league sports teams, and vast museums. Cities also provide the principal setting for economic activity. Jane Jacobs believes that the wealth of nations is generated mainly by innovators located in urban areas with the broad infrastructure base needed to support the establishment of new enterprises. Innovators need a vast range of goods and services close at hand, plus, of course, good transport and communications. Only cities can provide such depth of resources. Cities ought to be places where great buildings and lively outdoor spaces are found, which was usual until modern times. The European capitals still provide many wonderful examples of good urban spaces. Piazza San Marco is perhaps the greatest of them all, peaceful yet vibrant. Most Italian cities have gorgeous squares, a few of which have been protected from cars. New York, Boston, and San Francisco still have great districts, as did most US cities until cars and suburban sprawl bled their hearts dry. When thinking about cities, we must remember that sub­urbs are an urban, not rural, form. This reality clashes with the suburban leitmotif: fleeing the city to live in the country­side. However, few US suburbs still offer even the illusion of country life, and they depend on central cities for work, health care, and culture. The "national automobile slum" is thus the worst of both worlds: vast areas of forest and farm­land are turned into low-density residential neighborhoods organized around automobile transport. Inhabitants of these auto-centric areas must drive great distances through repul­sive surroundings to reach virtually every activity.

## S – Virlio’s Accident

#### Cycling is critical to transforming our relationship with place, reorienting city life away from speed and distance and toward community and responsibility

Whitelegg 97

Whitelegg, Professor of Sustainable Transport and Sustainable Development, 1997, John, Critical Mass. Pg. 97-113

Sustainable transport policies transform the role of time in the urban planning process, as well as its significance as an important dimension of lifestyle. A move away from fossil fuel dependence is a move towards slower forms of transport, especially the bicycle and walking. The de-prioritising of speed re-prioritises accessibility and the importance of local facilities and neighbourhood activities. Time previously spent in traffic jams and on long commutes can be reallocated to interaction time with friends and neighbours. Paradoxically, a reduction in speed and its concomitant reduction in journey length gives people more time, reversing the historic trade off between speed and distance. The last 40 years or so have seen the deployment of vast amounts of fossil fuel energy to generate the speed that stimulates the substitution of short distance trips by longer distance trips. Sustainability is not just about reducing per capita energy consumption or CO2 production, but is also about enriching lifestyle and the economy. Local residents will have more time and, if they choose to dispense with the car, will have more money. The cash previously spent on cars can be reallocated to other purposes some of which will benefit local shops, local services and local activities. All this becomes possible because of the opportunity provided by a sustainability policy framework to improve environment and lifestyle opportunities. Sustainability has the potential to deliver dramatic improvements in quality of life in ways that rising levels of demand for motorised transport and rising levels of roads and car provision never can. Sustainable development is about working towards clearly articulated goals with careful planning and allocation of budgets. It is also about consensus building rather than social engineering. The shift to a sustainable city and a sustainable society will come about as a result of the exercise of individual choice. Cities that are relatively car free will be far more popular with their residents and inward investors than those that are sacrificed to the car. Places that have low crime rates because of high levels of street activity, use of public space, and interaction with neighbours will be more attractive than the privatised and sterile worlds of car travel and streets without people. Places where children and the elderly can move around without noise assaults and breathe clean air will be more highly prized than environments that exacerbate asthma and make conversation difficult or impossible because of noise. Public policy and spending can create these choices and let the market have its way. The central paradox of the free market economy that is involved in support of car ownership and use is that it is as far away from any 'free market' as it could be. The car has exterminated other choices and a choice of environments is not available. When that choice is made available we will see the attractiveness of non-car futures and reduced dependency, and will be firmly set on a path to sustainable development.

## S Mech – Biketivism

#### Our demand is a form of biketivism that politicizes the bicycle as a vehicle for social movements challenging alternatives to corporate goverance

Furness 5

Furness, Ph.D. in Communication at the University of Pittsburgh, 2005, Zachary Mooradian, Put the Fun Between Your Legs: The Politics and Counterculture of the Bicycle, Doctoral Thesis. pp. 48-52

Through a dialectical process of action (protest and everyday practice) and communication (media), the cycling counterculture calls the technological decision making process into question and it simultaneously creates new narratives about technology that emphasize both individual empowerment and collective struggle. Collectively, these processes are intended to “transform the cognitive structures that help people to interpret ideas/issues/arguments”112 about bicycling and car culture. To put it another way, one goal of biketivism is to make the bicycle stand for something, to communicate messages through the technology. This is not to ascribe an independent agency to the technology, rather, it is a way of looking at how activists can attach specific meanings to particular technologies that communicate messages to the public—even in the absence of an accompanying discourse. This is essentially the inversion of the branding method of advertising that is well-documented by Naomi Klein, in which corporations ‘breathe life’ into commodities in order to make them communicate specific messages long after our televisions have been turned off and the magazine covers have been closed. Take for example the Hummer SUV, a technology that is tied to a narrative of adventure and excitement through selective media representation and advertisements that feature images of Hummers climbing up steep hills, tearing through forests, and ultimately resting atop the summits of mountains. Because of the association that people have between the automobile and this particular narrative, the Hummer continues to communicate a message without the presence of an accompanying advertisement, sales pitch, or stunt driver: A Hummer SUV no longer exists as a product of engineers’ planning and workers’ labor at General Motors, a complex machine made of metal, glass, and rubber, or even a vehicle to get the kids to soccer practice. Instead (coached a bit by Madison Avenue) the H2 takes on a personality of rugged individualism, a bit of military imperial invincibility, and a ready-made landscape of untrammeled, open, and distinctly non-suburban terrain.113 Over the last two decades, a practice of branding inversion known as *culture jamming* has emerged within various facets of the anti-corporate, anti-capitalist, and anti-globalization movements.114 As a series of tactics that attempt to invert and politicize both the products and function of mass culture, culture jamming can be seen as one way in which individuals have individually and collectively transcended Horkheimer and Adorno’s ominous assertion that “anyone who resists can only survive by fitting in.”115 Culture jammers critique capitalist and corporate institutions through direct action tactics such as billboard modification116 and street theatre,117 and also through the manipulation and re-circulation of advertisements,118 music,119 technologies,120 and other mass produced commodities.121 Culture jammers are extremely diverse because there are a number of different intellectual influences that have shaped both the theoretical dispositions and practices of specific groups. Some of the predominant influence include, but are not limited to, the Frankfurt School, William Burroughs, the Yippies, Guy Debord and the Situationist International (SI), second wave feminism, activist guru Saul Alinsky, and punk rock. Mark Dery is correct in referring to culture jamming as an “elastic category, accomodating a multitude of subcultural practices”122 because different groups have wide ranging interpretations of who, or what, should be targeted (for disruption, satire, or critique), what media or objects should be utilized, which audiences should be targeted, and what criteria is used in order to evaluate success or failure. However, despite the variety of theories and tactics used by culture jammers there are common objectives that are collectively shared by the majority of culture jammers, including some the following: 1) to demystify corporate power, undermine consumer culture, and critique capitalism through “semiological guerrilla warfare”123 and technological manipulation, 2) to politicize and publicize a host of issues that have been effectively masked by corporate dominance of the media environment such as public vs. private use of space, rampant advertising, citizens rights, sweatshop labor, intellectual property laws, and institutionalized discrimination, 3) to ultimately change people’s communication habits, i.e. to teach them oppositional strategies for decoding messages in both the public and private spheres124 and 4) to encourage, motivate, and educate other people on how to utilize ‘Do It Yourself’ (DIY) tactics in order to create their own cultural practices and products—as opposed to merely consuming those sold by corporations. Culture jammers have shown how one can manipulate such images and narratives in order to tell an entirely different story about a particular commodity, whether it is a Hummer or a McDonald’s cheeseburger.125 Through techniques such as direct action, billboard modification, satire, and the subversive use of images/text, culture jammers demonstrate the idea that branding can be used in an entirely different manner than was intended. By changing the images and texts associated with a particular commodity, one can possibly change the way in which people learn to evaluate images/texts, and ultimately, change the way in which they perceive that commodity. Along the same lines, biketivists attempt to change public perceptions about the bicycle through creative forms of direct action, inventive use of cycling technologies, subversive images/texts, and the production of positive images/texts that are intended to teach people how to ‘read’ bicycles in a different way. Ultimately, the goal is to not only have people ‘read’ bicycle/cycling in a different way, bike activists also work towards cultural changes that result from changes in both consciousness and discourse: “groups, as well as individuals or institutions, through their rhetorical tactics and strategies create social movements, changes in public consciousness with regards to a key issue or issues, measurable through changes in the meanings of a cultures keyterms in public discourse.”126 This focus on transformation and long-term social change is one of the important differences that separates politicized cyclists from most—but not all—culture jammers who are more focused on aesthetic rebellion and pranks than sustained political initiatives.

## S Mech – DB8

#### Technical solutions to the problem today – only through activism and debate alongside policy proposals can we shift away from car dependence and rehumanize the roads on the scale of the bicycle

Sloman 6

Sloman, Special Advisor to the Board of Transport for London, 2006, Lynn, Car Sick: Solutions for our Car-addicted Culture, p.

One slide stood out amongst the hundreds that their teams presented to us, crammed with facts and figures. It showed the journey length profile for different types of travel: by car, bus, train, cycling and walking. Not surprisingly, most walking journeys are really quite short, and most train journeys are quite long. But if you look at journeys by car, bus and bicycle, they have an almost identical profile. Roughly half of all car trips in London are shorter than two miles, as are roughly half of all bus and cycle trips. Another third of car trips are between two and five miles long, and again, the same is true for bus and bike trips. In other words, most car journeys are very local, and of a similar length to the journeys that we make by bus or bicycle. And unlike tram lines, buses and bicycles can take you pretty well where you want. Car dependence and its consequences are not simply technical problems, which can be solved by engineers with surveying poles and bulldozers. We need traffic engineers and civil engineers, but working at a smaller scale than that which some of them are accustomed to. Rather than using their skills on billion-pound projects to build wider faster roads, or on schemes to squeeze the largest possible number of cars through our city streets, we need them to work alongside urban designers to rehumanise the roads we already have. "We need barefoot engineers, if you like, responding to the needs of local communities, using simple and inexpensive remedies to make it easier for people to get about on bike and bus and by foot. Many of these engineers are already employed by local councils. Some are very good at the job of rehumanising our streets; others would really rather that the human beings did not get in the way of their traffic-flow computer models. But even the better engineers and urban designers need help to tackle the problem of car dependence. The problem is not just one of road design; it is also a problem of our own thoughtlessness. Driving has become the normal, habitual, expected means of transport, and other options are not even considered. Engineers cannot tackle this. The sort of people who might be able to tackle it—schooled in psychology and behavioural science, familiar with the techniques of marketing and advertising, skilled in the art of persuasion—are few and far between in local council transport departments, and are employed on short-term contracts with little back-up. The evidence for the potential of this new approach, combining barefoot engineering with the softer skills of persuasion, is set out in the following pages. We will look at successful trial projects and city-wide initiatives in the UK, in the rest of Europe and across the world. The lessons are not just for developed, car-dependent countries. They are also important for countries where car ownership has not yet reached critical levels. In China and India, the civil engineers and technical men from the World Bank and the multinational consulting firms rule the roost. Billions of dollars of development money are spent on elevated highways and expressways, and low-tech, sustainable, efficient means of transport are ignored or despised. These countries are making the same mistakes that we made in the 1970s, with even more far-reaching consequences for their societies and for the global environment. Ivan Illich showed that, far from saving time, the car consumes a quarter of our waking lives. Instead of enabling us to do more, it constrains us to doing less. Car-orientated transport policies have gobbled up time and effort and money. The consequences of carrying on with the same old policies are grim. It is no good paying lip service to sustainable travel while still devoting 90 per cent of the cash to more cars and more roads. Cars have come to control us, rather than the other way around, and it is about time that we got back in charge again. There is no law that says that traffic levels will always rise. As we will see later in this book, there are towns where people now use their cars less than they did thirty years ago. We can change our society so that it is not geared to cars, if we want to. We can have less traffic within our communities, and less traffic shuttling to and fro between them. The future has not happened yet, and we can decide what we want that future to look like. ' >

## S Mech – Imagination

#### Imagining and discussing the displacement of cars by bikes in and of itself calls into question today’s dominant ideology

D’Andrade 93

D'Andrade, Co-founder of Critical Mass, 1993, Hugh, “Massive Critique”, http://www.processedworld.com/tfrs\_web/history/critique.html

Another group who would seek to impose the stamp of their political ambitions on Critical Mass, and who have been to some extent more successful, are those who advocate an aggressive, antagonistic stance for the ride. Tactics along these lines have included surrounding and harassing motorists who attempt to drive through our mass, baiting the police, and pedaling up to the front of the ride and abruptly turning off the agreed route in an attempt to "hijack" the ride. The purpose is presumably to "radicalize" Critical Mass by pushing it in a more confrontational, even violent direction, an idea that recalls Noam Chomsky's comment that tactics, in an of themselves, do not amount to radicalism. What both of these approaches share is an impatience with the slow, painstaking task of educating others and organizing toward a future worth living. A truly radical approach to the social problems we face would be to build community and to offer an alternative -- a fact that apparently eludes those who believe people have to be tricked or stampeded into creating a better world. Obviously, no one should be barred from expressing themselves or sharing their thoughts or opinions. We all want to see Critical Mass be a space where diverse political strategies can be debated and experimented with. The point is that if you want to see Critical Mass go in this or that direction, make copies of your ideas and pass them around. Only cowards and authoritarians shrink from the challenge of persuasion! It could be that all we're doing is riding from HERE to THERE on bikes. But what is so amazing is that in attempting such a simple task so many important and provocative questions come up, and for a moment, a window is opened onto a possible future: a future where no one is in charge and everyone rides a bike!

## S Mech – Protest

#### Discussion and active protest against automobility create changes in policy

Sheller and Urry 2k

Professors of Sociology, 2000, Mimi and John, International Journal of Urban and Regional Research, 24.4, <http://ideas.repec.org/a/bla/ijurrs/v24y2000i4p737-757.html>

Civil society’s mobilization around automobility began in relation to consumer protection. In the US, consumer advocates like Ralph Nader represented 'the public interest in demanding car safety, road safety, 'lemon laws to protect consumers against unscrupulous car-salesmen, and industry-wide standards for recalls of defective models and fair pricing (Nader, 1965). The oil-crisis of the 1970s sparked public concern over energy use and the growing demand for 'greener cars with higher fuel economy and in some instances interest in the recycling of the metals, plastics and rubber that make up the car. As the wider environmental movement developed, the petroleum industry became a target of protest. There were campaigns against the expansion of oil extraction into wilderness areas such as Alaska or various off-shore sites; there were protests against pollution caused by oil extraction, processing and shipping (e.g. the Exxon Valdez oil spill); and there were eventually protests against the transnational corporations that controlled oil production (culminating in the Greenpeace campaign against Shell Oil in the early 1990s). Finally, with the Gulf War, many critics of the car culture recognized the extent to which American and European foreign policies are driven by the petroleum interests driving the global economy. Dependence upon oil and the lengths to which societies would go to protect access to oil were highlighted in public debate. Furthermore, the unavoidable flexibility necessitated by the fragmented time-space of automobility has become an issue not only of personal management, but also of public policy. In the 1970s, urban quality of life became a crucial political issue as cities were choked with fumes and smog, as well as beset by traffic flow and parking problems. In this period the car began to be viewed as more polluting than the train (Liniado, 1996: 28). Many cities such as Amsterdam, Stockholm and Portland, Oregon, developed explicit policies to upgrade and prioritize cycle lanes and public transport, in order to wean people away from their cars. Later, cities such as Athens attempted to control access of private cars in and out of the city centre, with some success, while others imposed commuter restrictions or incentives such as park-and-ride schemes or enforced car-pool lanes with four occupants required per car. More symbolically, some European cities have instituted an annual 'leave your car at home' day. The debate over better provision of public transport (and overall urban design) has moved to the fore in a number of countries as various governments wrestle with controlling traffic and many drivers seek to find viable alternative means of transport. Integrating better mass transportation into urban design has been crucial to planning burgeoning new metropolises such as Singapore and Hong Kong (Owen, 1987). Questions of congestion pricing systems, taxation of car use and of petrol have become key aspects of government transport policy from California to Britain. It is only in thinking about what it would take to get people out of their cars that we can see the enormous transformations that automobility has wrought in the social organization of time, space and social life. Overall, although many people may 'love their car, the system that it presupposes is often unloved, resisted and raged against. Civil society is significantly remade through contestations over the power, range and impact of the system of automobility. The same people can be both enthusiastic car-drivers, as well as being very active protesters against schemes for new roads (see Macnaghten and Urry, 1998: Chapter 6, on how cars generate intense ambivalence). By 1994, in the UK, the scale of grass-roots protest against the construction of new roads had risen to such a level that it was described as 'the most vigorous new force in British environmentalism (Lean, 1994). There were by then an estimated 250 anti-road groups, a movement significantly impacting upon civil society. The array of direct actions has also diversified as protesters have become more expert, through the use of mass trespass, squatting in buildings, living in trees threatened by road programmes and digging tunnels (hence the iconic Swampy who tunnelled underground to stop a road from being built in Britain). Stopping traffic has itselfbecome a significant form of symbolic direct action, as practised in 'Reclaim the Streets events. Protesters also became more sophisticated in the use of new technologies, including mobile phones, video cameras and the internet. These have enabled almost instantaneous dissemination to the media (see Macnaghten and Urry, 1998: Chapter 2). Thus, the politics of automobility is generating new forms of public protest and changing civil society s repertoires of contestation. The recent protests over petrol prices across Europe demonstrate that the traffic-stopping impacts of new styles of direct action are both against and in favour of an automobilized society.

## S Mech – Revolution

#### We must criticize cars at every turn – not matter what the impact. It is a revolutionary, inclusive struggle – Promoting bicycles is key

Kay 97

Kay, Architìture and planning critic for The Nation, 1997, Jane, “Asphalt Nation”, p. 286

There is no question, however, that deposing the car from its dominion over the earth is a radical, even revolutionary, move. It is not only an attack, however; it is an invitation to create alternatives in our most basic decisions on how to go from here to there—and, indeed, whether this hypermobile society truly needs the endless motion that long defined its settlement and existence. Those who enlist in this countercultural rescue movement cannot be simply automobile antagonists, however. We must be promobility advocates: pro-walking, pro-bicycling, pro-transit. We must be pro-stability as well in cultivating our own gardens. Every move we make must be examined and adjusted, then reexamined and readjusted. To go with this outlook, we need the tools and will to install it as shown in these solutions. From the fight to "just say no" to highways, to the battle to create codes to release us from bondage to bad land use practices, to traffic calming and the depaving of the kingdom of the car, to the proper pricing of our mobility and the political fight to install mass transit, the struggle engages a new constituency. The process is as participatory as democracy itself. The smallest householder and the largest corporation, the humblest local government maneuver and the grandest federal program must figure in the sea change for a new century

## S Mech – Smart Growth – Mil

#### The affirmative’s challenge to the annihilation of urban space is simultaneously a challenge to global militarism – the image of the reenergized city is the necessary antidote to today’s global fundamentalisms that threaten global destruction

Graham 4

Graham, Professor of Human Geography, University of Durham, 2004, Stephen, “Postmortem City: Towards and Urban Geopolitics,” http://www.marxsite.com/ Postmortem%20City. pdf, p. 196-198

To conclude this extended essay, it is strikingly clear that urbanists and urban researchers can no longer neglect either attempts to deny, destroy or annihilate cities, or the «dark» side of urban modernity which links cities intimately to organised, political violence. In this «post 9/11» and «post-war on terror» world, urban researchers and social scientists – like everyone else – are being forced to begin addressing their taboos about attempted city-killing, place annihilation, «urbicide», and the urbanisation of war. In a parallel process, international relations theorists, geopolitical researchers, and sociologists of war, are being forced to consider urban and subnational spaces as crucial geopolitical sites, often for the first time. As a result, researchers in both traditions are now, once again, starting to explore, and excavate, the spaces and practices that emerge at the intersections of urbanism, terrorism and warfare There is a growing acknowledgement that violent catastrophe, crafted by humans, is part and parcel of modern urban life. A much needed, specifically urban, geopolitics is thus slowly (re)emerging which addresses the telescoping connections between transnational geopolitical transformations and very local acts of violence against urban sites. This emerging body of work is trying to unearth, as Diken and Laustsen put it, «the way in which discipline, control, and terror coexist in today’s imaginary and real urban geographies» (2002, p. 291). As an exploratory synthesis, this essay has developed a particularly broad perspective of the ways in which the purposive destruction and annihilation of cities, in war, terror, planning and virtual play, are utterly interwoven with urban modernity. Two conclusions are apparent from this wide-ranging discussion: First, as the gaze of critical urban social science starts to fall on the purposive ruination and annihilation of place, so this synthesis underlines five, related, urban research challenges. First, the research and professional taboos that cloak the geopolitical and strategic archaeologies, and spatialities, of modern urbanism must be undermined, and understood. Second, the «hidden», militarised histories and spatialities of modern urban planning and state terror must be excavated and relentlessly exposed. Third, the characteristics of city spaces and infrastructures that make them the choices par excellence of those seeking to commit terrorist acts require detailed analysis, as do the impacts of these acts on the shape, condition, and imagining of cities and urban life. Fourth, the telescoping, transnational connections between the geopolitics of war and «empire», and political economies of production, consumption, migration, the media, and resistance require rigorous theorisation and analysis. And finally, the fast-growing, and usually hidden, worlds of «shadow» urban research, through which the world’s military perceive, reconstruct, and target urban spaces must be actively uncovered. Our second conclusion, of course, must be politically, rather than analytically, normative. This reflects the palpable risk that a global polarisation will emerge around the two alternative fundamentalisms that currently so threaten to destabilise, and devastate, our world. The clear imperative here is to forcibly reject both of the racist, masculinist fundamentalisms which are currently locked in a globe-spanning circle of intensifying atrocity and counter-atrocity. As Rosalind Petchesky has argued, these offer a choice between «the permanent war machine (or permanent security state) and the reign of holy terror» (cited in Joseph and Sharma, 2003, p. xxi). Untrammelled, the self-perpetuating cycles of atrocity between urban terror and state counter-terror, that these discourses legitimise and sustain, offer up an extremely bleak urban future indeed. This, perhaps, is the ultimate urban dystopia? For it is crucial to realise, as the Israeli-Palestinian quagmire demonstrates, that informal terror and state counter-terror tend to be umbilically connected. In the end, they tend, tragically, to be self-perpetuating in an endless circle of intensifying atrocity (Graham, 2004d). As Zulaika argues: «the ultimate catastrophe is that […] a categorically ill-defined, perpetually deferred, simple minded Good-versus-Evil war [“against terror”] echoes and re-creates the very absolutist mentality and exceptionalist tactics of the insurgent terrorists. By formally adopting the terrorists’ own game – one that by definition lacks rules of engagement, definite endings, clear alignments between enemies and friends, or formal arrangements of any sort, military, political, legal, or ethical – the inevitable danger lies in reproducing it endlessly» (Zulaika, 2003, p. 198). As a global polarisation threatens to occur between those who are pro-«Western» and those who are pro-«radical Islam» – stoked by sickening and self-fulfilling circles of informal and state terror and fundamentalist propaganda – one thing is sure. Normatively, cities must be seen as key sites, perhaps the key sites, for nurturing the tolerances, diasporic mixings, and multicultural spaces that are needed to push fundamentalist fantasies of all sorts to the lunatic fringes where they belong (Safier, 2001; Sandercock, 2003). Arguably, our planet currently faces no greater challenge.

## S Mech – Incentives

#### Incentivizing bike usage is one way to create change

Sheller and Urry 2k

Sheller and Urry, Professors of Sociology, 2000, Mimi and John, International Journal of Urban and Regional Research, 24.4, <http://ideas.repec.org/a/bla/ijurrs/v24y2000i4p737-757.html>

There would also have to be incentives to both car manufacturers and consumers to produce a new culture of automobility (through extensions of already existing legislation, taxation and penalties). Through such means a number of key objectives could be met: • Reduced energy consumption and polluting emissions through design of smaller vehicles, use of fewer private vehicles, and curtailment of traffic proliferation and road building; • Redirection of investment to new and better modes of public transportation, bike and soft' vehicle lanes, and more diversified multifunctional stations and public spaces; • Reduced risks to human safety inside and outside the slower and lighter car; • Minimizing social exclusion through better planning of networks and intermodality.> The key to such a system could be the use of a multifunction 'smart-card' that would transfer information from home to car, to bus, to train, to workplace, to web site, to shop-till, to bank (a system already under development). Cars for cities could then be partially deprivatized by making them available for public hire through using such a smart-card to pay fares on buses, trains, or more flexibly routed collective mini-vans; cards for welfare reci5pients, students, families with young children and the elderly could be partially subsidized. But all of these vehicles would have to become more than technologies of movement — they would also have to be hybridized with the rapidly converging technologies of the mobile telephone, the personal entertainment system and the laptop computer. The carrot' for car manufacturers is that small cars would no longer be at the bottom of the profit scale; the innovation of new ICT applications would provide an endless source of novelty, desirability and profitability. The hook for car-drivers is that the micro-cars and all other forms of transport would be personalized with their own communication links (e-mail addresses, phone numbers, world-wide-web addresses etc.) and entertainment applications (digitally stored music, programmed radio stations etc.), but only when initiated by inserting the smart-card. Thus, any public vehicle could instantly become a home away from home: a link to the reflexive narratives of the private self in motion through public time-space scapes. The streetscapes of global cities could thus be transformed through a more mixed flow of slow-moving, semi-public micro-cars, bike lanes, pedestrians and improved mass transport. Public-friendly cars would allow people to travel lighter, if not weightlessly (as virtual' electronic travel is often depicted), and would restore some of the civility to urban public space that has been destroyed by current traffic flows and by the spatial patterns of segregation and fragmentation generated by automobility. Could such an urban smart-car be the best way to lure twentieth-century speed-obsessed car-drivers to give up their dependence on dinosaur cars and fossil fuels, a system that is unsustainable on every conceivable measure and is really a very old-fashioned Fordist technology? Urban planning that recognizes the need for a radical transformation of transport can use existing legislation and regulation in new ways, to build truly integrated' and intermodal' public transport systems. Rather than trying to stifle mobility, however, which has been the strategy until now, cities must draw on the power of the democratic urge to be mobile. Civil society can itself be mobilized to demand this radical automobilization. Overcoming the terrific constraints of automobility will require us to recognize and harness its peculiar auto-freedom.

## S Mech B – Gov Key

#### Bicycling cannot emerge as long as federal policies discriminate against bikes

Wyden 6

Wyden, Democratic United States Senator from Oregon, 2006, Ron, “Bicycle Commuters Benefits Act – Statement for Introduction,” April 24, <http://www.bikesbelong.org/node/910>

I know that I am speaking for many people in this country who want to do something concrete about our nation’s dependence on oil and gas. They do not think our national energy policy is doing enough. They are eager to do things that make them feel like they can take responsibility for overcoming their dependence on oil and gas. As gas prices continue to climb this spring and summer, more and more people are going to be looking for something that they can do to free themselves from this dependency. The bill I am introducing today gives Americans more incentive to give up the cars and trucks that they drive to and from work everyday and get on their bicycles instead. According to recent Census reports, more than 500,000 people throughout the United States commute to work by bicycle. They are freeing themselves from sitting in traffic. They are saving energy and overcoming their dependence on oil and gas. They are getting exercise, avoiding obesity, and helping us keep our air clean and safe to breathe. Yet, they are commuting by bicycle at their own expense. Their fellow employees who take mass transit to and from work have an incentive created in the Transportation Equity Act for the 21st Century that enables their employers to pay for their bus or subway ride. This incentive is great for mass transit commuters but it discourages people from riding their bikes to and from their jobs. The Bicycle Commuters Benefits Act of 2006 will eliminate this discrimination against bicycle commuters. The bill extends the fringe benefit that employers can offer their employees for commuting by public transit, to those who ride their bicycles to and from their jobs. Our bill amends the tax code so that public and private employers can offer their employees a monthly benefit payment that will help them cover the costs of riding their bikes, instead of driving and parking their cars where they work. The bill also provides employers the flexibility to set their own level of benefit payment up to a specified cap amount. That way, employers and their employees can decide how much of an incentive they need to stop driving and start riding their bikes. Those who currently ride the bus and/or subway to work would also gain an extra incentive to ride their bikes. Employers can deduct the cost of their benefit payments from their taxable income. This reduces the taxes that they pay to the federal government. And, in turn, employees will receive anywhere from $40–$100 per month as a non-taxable benefit, to help them pay for the costs of riding their bikes.

## S Mech B – Gov Key B – Desire

#### Choosing bicycles over cars structures social priorities in favor of equality over privilege

Whitelegg 97

Whitelegg, Professor of Sustainable Transport and Sustainable Development, 1997, John, Critical Mass. Pg.34-35

Car travel and aviation expand freedom and choice for those able to capture a disproportionate amount of the commodity on offer, but demand grows in response to market signals (for example, cheap fuel) and to the availability of new infrastructure. The expansion of these choices restricts other freedoms, particularly of vulnerable groups, for example, children and the poor. Women in developing countries and those who travel short distances are unlikely to benefit from strategies that encourage longer distance travel. A comparison between shopping in developed countries and the acquisition of food, water and fuel in developing countries reveals a great deal about freedom and whose freedoms are expanding as a consequence of the operation of global markets. The demand for transport in developed countries does not follow some inexorable law of the universe. It is there, and growing fast, because of the forces that shape the major components of lifestyle and of consumption. Transport planning has traditionally focused on the supply side of the equation and not the demand side: if more people wish to travel by air then it appears very logical to supply the necessary runway and airport capacity. This is the central argument for the construction of a new terminal at Heathrow airport which will add an extra 30 million passengers per annum to a 1996 total of 54 million passengers per annum (see Chapter 6). If more people live further away from their work and use the car to commute and to shop then it appears only logical to supply the roads and bypasses that will make this increased travel possible. This supply side approach is very attractive. It allows decision makers and politicians to fall back on market forces, to extol the virtues of freedom and choice, and to pour scorn on those who suggest different arrangements which would reduce the demand for transport. Any suggestion of social engineering - telling people how they can travel, by what mode of transport and under what circumstances - is dismissed. There are many inconsistencies in the supply side approach and with the advocacy of market forces and the rejection of social engineering. The most important inconsistency is that the whole idea of meeting demand is very partial from a public policy perspective. In the UK, as in most developed countries, there is a large homeless population, large numbers of children deprived of pre-school (kindergarten) facilities, large numbers without access to the kind of medical attention they need and large numbers of elderly with insufficient income to pay for basic energy needs in order that they may keep warm in the winter. It is quite clear in all these instances that the political process has decided not to meet demand. The demand is there, but resources have not been allocated to whatever needs to be done to meet that demand. A supply side solution has been adopted instead to reduce demand (or more accurately ignore it). There were a number of conferences on aviation and the environment in the UK in 1994 and 1995. At these conferences many speakers advanced the idea that aviation was very damaging for the environment, was heavily subsidised and should be denied public funds for its expansion and subject to a tax on aviation fuel. These suggestions met with a robust response, and not only from within the aviation industry. To increase the price of air travel, it was argued, would be iniquitous because it would deny lower income groups the pleasures of such travel, and air travel broadens the mind and helps us to appreciate the world, and so on. Leaving aside for a moment issues of mass tourism and environmental damage, and the even more difficult issues, for instance sex tourism in Thailand, this robust defence of air travel sits very uncomfortably alongside the lack of such defence for housing, healthcare and life-saving winter heat for the elderly. Transport represents a very clear example of 'special pleading' for relatively well-off groups in society who are in a position to take three or four holidays abroad each year and drive the family's new multi-purpose vehicle to the supermarket each week. A concern for basic equity within and between groups would lead us more in the direction of many more local facilities, car-free environments, increased walking, cycling and public transport, and a society where housing, warm homes, healthcare, and access to local jobs, schools and shops has priority over the longer distance alternatives. Governmental and political confusion about choice, freedoms and markets is very pronounced and is currently wreaking havoc, for example, in eastern Europe where the 'choice' to use railways for freight and dense networks of urban public transport for passenger trips is being replaced by the 'choice' to use roads and private motorised transport. Governmental intervention structures the choice regime in favour of road transport and then reduces the overall amount of choice. The process of weighting the bias in favour of roads and privatised transport modes is supported by the rhetoric of the market and by specific liberalisation policies such as privatisation and deregulation. The political bias in this process can best be understood by considering a hypothetical situation. It is illuminating to ponder the implications of a transfer in the UK of a high ranking health official to the Department of Transport and a similar transfer in the opposite direction. If both officials are faithful to the experience and world view of their 'home' department there would be a massive expansion in hospitals, numbers of nurses, number of intensive care beds, GPs and support workers. The transport official will have been promoted and gained experience within a culture where predictions of future demand are made and then facilities are put in place to meet that demand. The health official, on the other hand, has gained experience within a culture where demand has to be constrained by resource availability. This is why waiting lists are long and why mere is frequent discussion about rationing, for example, no hip replacement joints if the patient is over 65 years old. The health official now at the Department of Transport would find many reasons for scrapping the road building budget, closing roads (very uneconomic, particularly in rural areas), cutting staff concerned with roads and ensuring that as many people as possible used the remaining roads as much as possible so as to increase their utilisation rate, reduce unit costs and use waiting lists (queues) as a rationing mechanism. This fantasy dramatically illustrates how different are the (hidden) ideologies underpinning the two departments in question. Motorised transport, particularly cars, has successfully colonised key aspects of human psychology. People believe cars offer freedom, power, sexual fantasy and reinforcement of personal esteem and ego. The fact that most of this applies to men and not women has not gone unnoticed in the advertising world and the arcane world of motoring magazines. In March 1994 a motoring correspondent in Top Gear, a BBC magazine, thought it perfectly acceptable to refer to a new car model he was testing as capable of 'snapping knicker elastic at 50 paces'. An understanding of psychology is more important than a morbid fascination with the sexual fetishes of motoring correspondents. If cars can be sold on the basis of this nonsense and if the advertising industry works in the same way then society is in deep trouble. Sex, freedom and power score very highly as behavioural drivers and motivators. Going by bike, walking or catching the bus are not likely to conjure up anywhere near as powerful a cocktail. It is for these reasons that inducements to leave the car at home or use an alternative mode of transport have to be equally powerful and cover as many policy angles as it is possible to design. But cars do not deliver the freedom that their advertisers spend hundreds of millions of pounds telling us that they do. Cars get stuck in traffic jams, they pollute their own occupants with health damaging VOCs, they are prone to being used for, and subject to, crime, and they confer no immunity from personal attack. They also cost a lot of money and take up a lot of time in working to pay for them, fuel them and maintain them. A small car in Germany owned by a middle-income individual will take 470 hours of work to pay its yearly cost. If these hours are added to the calculation of average journey speeds over a year taking into account congested traffic conditions then a new average speed can be calculated. This works out at 17kph. This is further reduced to 13kph when the external costs (see Chapter 2) are taken into account. Figure 3.1 shows for the bicycle, small car and large car average speeds as they would normally be calculated over a year. These are compared with average 'social' speeds when time taken to work to pay for the vehicle is taken into account. The car does not represent particularly good value for money when compared with the bicycle. The car kills children - both child pedestrians and the children of parents who have supplied a car to their nearly adult offspring. There are very few adults or 17 year olds who have not had direct personal contact with friends and relatives who have lost a 17-21 year old in a car crash fatality. These immense personal tragedies are avoidable but not within the fantasy world created by the advertisers, the car manufactures and the media onslaught on adolescents that works tirelessly to prepare them for their role as hyper consumers. Cars do not bring freedom of choice. They narrow choice. In heavily motorised societies like the US and Australia it is very difficult not to own a car and drive it on journeys as short as 100m. Walking is seen as a deviant activity (more in the US than in Australia), cycling is dangerous and fume sodden, and public transport sparse to non-existent. These relationships are not accidental. In the US during the 1920s and 1930s, combined efforts on the part of car manufactures, oil companies, tyre manufacturers and highway builders bought up and closed down public transport systems. This process is described in some detail in Glen Yago's (1984) The Decline of Transit. So active were the representatives of the automobile industry in undermining rail transit in the US during this period that they were investigated by the FBI. By the mid- to late-1950s the auto, rubber and oil companies had achieved their objectives and largely eliminated rail transit from US cities.

## AS: Alt/Efficient Cars

#### The compulsion to use more efficient energy conceals the inversely proportional relationship between energy and equality – we should just ride bikes instead

Illich 78

Ivan Illich, philosopher, priest, activist, professor @ Penn St. and Univ. of Bremen, 1978, “Energy and Equity,” in Toward a History of Needs. Online: [http://www.cogsci.ed.ac.uk/~ira/ illich/texts/energy\_and\_equity/energy\_and\_equity.html](http://www.cogsci.ed.ac.uk/~ira/%20illich/texts/energy_and_equity/energy_and_equity.html). Edited for sexist language.

It has recently become fashionable to insist on an impending energy crisis. This euphemistic term conceals a contradiction and consecrates an illusion. It masks the contradiction implicit in the joint pursuit of equity and industrial growth. It safeguards the illusion that machine power can indefinitely take the place of [hu]manpower. To resolve this contradiction and dispel this illusion, it is urgent to clarify the reality that the language of crisis obscures: high quanta of energy degrade social relations just as inevitably as they destroy the physical milieu. The advocates of an energy crisis believe in and continue to propagate a peculiar vision of man. According to this notion, [hu]man is born into perpetual dependence on slaves which he must painfully learn to master. If he does not employ prisoners, then [s/]he needs machines to do most of his work. According to this doctrine, the well-being of a society can be measured by the number of years its members have gone to school and by the number of energy slaves they have thereby learned to command. This belief is common to the conflicting economic ideologies now in vogue. It is threatened by the obvious inequity, harriedness, and impotence that appear everywhere once the voracious hordes of energy slaves outnumber people by a certain proportion. The energy crisis focuses concern on the scarcity of fodder for these slaves. I prefer to ask whether free [hu]men need them. The energy policies adopted during the current decade will determine the range and character of social relationships a society will be able to enjoy by the year 2000. A low-energy policy allows for a wide choice of life-styles and cultures. If, on the other hand, a society opts for high energy consumption, its social relations must be dictated by technocracy and will be equally degrading whether labeled capitalist or socialist. At this moment, most societies---especially the poor ones---are still free to set their energy policies by any of three guidelines. Well-being can be identified with high amounts of per capita energy use, with high efficiency of energy transformation, or with the least possible use of mechanical energy by the most powerful members of society. The first approach would stress tight management of scarce and destructive fuels on behalf of industry, whereas the second would emphasize the retooling of industry in the interest of thermodynamic thrift. These first two attitudes necessarily imply huge public expenditures and increased social control; both rationalize the emergence of a computerized Leviathan, and both are at present widely discussed. The possibility of a third option is barely noticed. While people have begun to accept ecological limits on maximum per capita energy use as a condition for physical survival, they do not yet think about the use of minimum feasible power as the foundation of any of various social orders that would be both modern and desirable. Yet only a ceiling on energy use can lead to social relations that are characterized by high levels of equity. The one option that is at present neglected is the only choice within the reach of all nations. It is also the only strategy by which a political process can be used to set limits on the power of even the most motorized bureaucrat. Participatory democracy postulates low-energy technology. Only participatory democracy creates the conditions for rational technology. What is generally overlooked is that equity and energy can grow concurrently only to a point. Below a threshold of per capita wattage, motors improve the conditions for social progress. Above this threshold, energy grows at the expense of equity. Further energy affluence then means decreased distribution of control over that energy. The widespread belief that clean and abundant energy is the panacea for social ills is due to a political fallacy, according to which equity and energy consumption can be indefinitely correlated, at least under some ideal political conditions. Laboring under this illusion, we tend to discount any social limit on the growth of energy consumption. But if ecologists are right to assert that nonmetabolic power pollutes, it is in fact just as inevitable that, beyond a certain threshold, mechanical power corrupts. The threshold of social disintegration by high energy quanta is independent from the threshold at which energy conversion produces physical destruction. Expressed in horsepower, it is undoubtedly lower. This is the fact which must be theoretically recognized before a political issue can be made of the per capita wattage to which a society will limit its members. Even if nonpolluting power were feasible and abundant, the use of energy on a massive scale acts on society like a drug that is physically harmless but psychically enslaving. A community can choose between Methadone and ``cold turkey''---between maintaining its addiction to alien energy and kicking it in painful cramps---but no society can have a population that is hooked on progressively larger numbers of energy slaves and whose members are also autonomously active. In previous discussions, I have shown that, beyond a certain level of per capita GNP, the cost of social control must rise faster than total output and become the major institutional activity within an economy. Therapy administered by educators, psychiatrists, and social workers must converge with the designs of planners, managers, and salesmen, and complement the services of security agencies, the military, and the police. I now want to indicate one reason why increased affluence requires increased control over people. I argue that beyond a certain median per capita energy level, the political system and cultural context of any society must decay. Once the critical quantum of per capita energy is surpassed, education for the abstract goals of a bureaucracy must supplant the legal guarantees of personal and concrete initiative. This quantum is the limit of social order. I will argue here that technocracy must prevail as soon as the ratio of mechanical power to metabolic energy oversteps a definite, identifiable threshold. The order of magnitude within which this threshold lies is largely independent of the level of technology applied, yet its very existence has slipped into the blind-spot of social imagination in both rich and medium-rich countries. Both the United States and Mexico have passed the critical divide. In both countries, further energy inputs increase inequality, inefficiency, and personal impotence. Although one country has a per capita income of $500 and the other, one of nearly $5,000, huge vested interest in an industrial infrastructure prods both of them to further escalate the use of energy. As a result, both North American and Mexican ideologues put the label of ``energy crisis'' on their frustration, and both countries are blinded to the fact that the threat of social breakdown is due neither to a shortage of fuel nor to the wasteful, polluting, and irrational use of available wattage, but to the attempt of industries to gorge society with energy quanta that inevitably degrade, deprive, and frustrate most people. A people can be just as dangerously overpowered by the wattage of its tools as by the caloric content of its foods, but it is much harder to confess to a national overindulgence in wattage than to a sickening diet. The per capita wattage that is critical for social well-being lies within an order of magnitude which is far above the horsepower known to four-fifths of humanity and far below the power commanded by any Volkswagen driver. It eludes the underconsumer and the overconsumer alike. Neither is willing to face the facts. For the primitive, the elimination of slavery and drudgery depends on the introduction of appropriate modern technology, and for the rich, the avoidance of an even more horrible degradation depends on the effective recognition of a threshold in energy consumption beyond which technical processes begin to dictate social relations. Calories are both biologically and socially healthy only as long as they stay within the narrow range that separates enough from too much. The so-called energy crisis is, then, a politically ambiguous issue. Public interest in the quantity of power and in the distribution of controls over the use of energy can lead in two opposite directions. On the one hand, questions can be posed that would open the way to political reconstruction by unblocking the search for a postindustrial, labor-intensive, low-energy and high-equity economy. On the other hand, hysterical concern with machine fodder can reinforce the present escalation of capital-intensive institutional growth, and carry us past the last turnoff from a hyperindustrial Armageddon. Political reconstruction presupposes the recognition of the fact that there exist critical per capita quanta beyond which energy can no longer be controlled by political process. A universal social straitjacket will be the inevitable outcome of ecological restraints on total energy use imposed by industrial-minded planners bent on keeping industrial production at some hypothetical maximum. Rich countries like the United States, Japan, or France might never reach the point of choking on their own waste, but only because their societies will have already collapsed into a sociocultural energy coma. Countries like India, Burma, and, for another short while at least, China are in the inverse position of being still muscle-powered enough to stop short of an energy stroke. They could choose, right now, to stay within those limits to which the rich will be forced back through a total loss of their freedoms. The choice of a minimum-energy economy compels the poor to abandon fantastical expectations and the rich to recognize their vested interest as a ghastly liability. Both must reject the fatal image of [hu]man the slaveholder currently promoted by an ideologically stimulated hunger for more energy. In countries that were made affluent by industrial development, the energy crisis serves as a pretext for raising the taxes that will be needed to substitute new, more ``rational,'' and socially more deadly industrial processes for those that have been rendered obsolete by inefficient overexpansion. For the leaders of people who are not yet dominated by the same process of industrialization, the energy crisis serves as a historical imperative to centralize production, pollution, and their control in a last-ditch effort to catch up with the more highly powered. By exporting their crisis and by preaching the new gospel of puritan energy worship, the rich do even more damage to the poor than they did by selling them the products of now outdated factories. As soon as a poor country accepts the doctrine that more energy more carefully managed will always yield more goods for more people, that country locks itself into the cage of enslavement to maximum industrial outputs. Inevitably the poor lose the option for rational technology when they choose to modernize their poverty by increasing their dependence on energy. Inevitably the poor deny themselves the possibility of liberating technology and participatory politics when, together with maximum feasible energy use, they accept maximum feasible social control. The energy crisis cannot be overwhelmed by more energy inputs. It can only be dissolved, along with the illusion that well-being depends on the number of energy slaves a [hu]man has at his command. For this purpose, it is necessary to identify the thresholds beyond which energy corrupts, and to do so by a political process that associates the community in the search for limits. Because this kind of research runs counter to that now done by experts and for institutions, I shall continue to call it counterfoil research. It has three steps. First, the need for limits on the per capita use of energy must be theoretically recognized as a social imperative. Then, the range must be located wherein the critical magnitude might be found. Finally, each community has to identify the levels of inequity, harrying, and operant conditioning that its members are willing to accept in exchange for the satisfaction that comes of idolizing powerful devices and joining in rituals directed by the professionals who control their operation. The need for political research on socially optimal energy quanta can be clearly and concisely illustrated by an examination of modern traffic. The United States puts between 25 and 45 per cent of its total energy (depending upon how one calculates this) into vehicles: to make them, run them, and clear a right of way for them when they roll, when they fly, and when they park. Most of this energy is to move people who have been strapped into place. For the sole purpose of transporting people, 250 million Americans allocate more fuel than is used by 1.3 billion Chinese and Indians for all purposes. Almost all of this fuel is burned in a rain-dance of time-consuming acceleration. Poor countries spend less energy per person, but the percentage of total energy devoted to traffic in Mexico or in Peru is probably greater than in the United States, and it benefits a smaller percentage of the population. The size of this enterprise makes it both easy and significant to demonstrate the existence of socially critical energy quanta by the example of personal mobility. In traffic, energy used over a specific period of time (power) translates into speed. In this case, the critical quantum will appear as a speed limit. Wherever this limit has been passed, the basic pattern of social degradation by high energy quanta has emerged. Once some public utility went faster than 15 mph, equity declined and the scarcity of both time and space increased. Motorized transportation monopolized traffic and blocked self-powered transit. In every Western country, passenger mileage on all types of conveyance increased by a factor of a hundred within fifty years of building the first railroad. When the ratio of their respective power outputs passed beyond a certain value, mechanical transformers of mineral fuels excluded people from the use of their metabolic energy and forced them to become captive consumers of conveyance. This effect of speed on the autonomy of people is only marginally affected by the technological characteristics of the motorized vehicles employed or by the persons or entities who hold the legal titles to airlines, buses, railroads, or cars. High speed is the critical factor which makes transportation socially destructive. A true choice among practical policies and of desirable social relations is possible only where speed is restrained. Participatory democracy demands low-energy technology, and free people must travel the road to productive social relations at the speed of a bicycle.

## A2: Cars Good – A2: Choice

#### The ‘choice’ narrative is a joke that conceals the artificial nature of the freedom promoted by car culture.

Furness 5

Zachary Mooradian Furness, University of Pittsburgh, 2005, Put the Fun Between Your Legs: The Politics and Counterculture of the Bicycle. Doctoral Thesis. pp. 47-48

Unlike the democratic governmental structures that we pride ourselves upon, our collective ability to make substantial decisions about which technologies we choose to utilize are explicitly determined by the profit incentives of select corporations and the tenets of the ‘so called’ free market. In the same way that media conglomorates create the illusion of choice by convincing audiences that they “vote with their remotes,”109 corporations that specialize in transportation technologies, specifically automobiles, create the illusion of technological choice by creating a seemingly endless array of commodities that one can choose from. By focusing upon the needs of the individual through interrelated narratives of freedom (of choice), autonomy, and ‘cool’,110 automobile, oil, and advertising corporations disguise personal technological choices as collective choices. This paradigm not only confuses individual consumer choices with democratic decision making processes, it obscures the fact that individuals are incapable of making technological choices that cannot be supported by larger economic and technological infrastructures: “Our capitalist society doesn’t really care what we buy or which toys we like to play with, as long as we keep working within a system that systematically excludes us from decisions about the shape of our lives or the technologies we must choose.

## A2: Cars Good – A2: Dun

#### This is the worst form of automotive ideology. Their arguments about freedom conceal the forced choice that car culture imposes on the traveler. Their charges of elitism hide the privileged status of the auto driver. All told, their arguments positively reinforce a social arrangement that disenfranchises people.

Furness 5

Zachary Mooradian Furness, University of Pittsburgh, 2005, Put the Fun Between Your Legs: The Politics and Counterculture of the Bicycle. Doctoral Thesis. pp. 29-32

In Driving Forces, James Dunn provides a blistering critique of anti-automobile activists while he attempts to show how the “automobile is the solution to most Americans’ transportation problems and has been for at least two generations.”63 Driving Forces is based upon James Dunn’s vision of a politically realistic, pragmatic approach to automobile policy and automobile infrastructure that is unfortunately situated within a scathing analysis of transportation activists. Dunn acknowledges the fact that cars are not without their problems, however he consistently frames these problems in a way that negates either the immediate or potential ability for people to criticize the larger infrastructure of the automobile. Rather, Dunn wants to “focus debate on policy proposals that acknowledge the benefits the auto provides.”64 While Dunn clearly has a profound respect for both the automobile and its place in American culture, his position ironically reveals the fundamentally ignorant perspective of the pro-automobile, anti-activist, American driver. In short, Dunn’s critique is the preeminent example of automotive ideology at work. His arguments are highly problematic and laced with both a clear disdain for the rights of car-less individuals and the opinions of people who focus on the positive aspects of car-free transportation: “These ‘enemies’ of the automobile choose not see it as the most successful mode of transportation and the most popular means of personal mobility ever created.”65 While driving a car can be useful and enjoyable, Dunn seems oblivious to the fact that most people do not choose to drive cars at the expense of other forms of transportation or possible social arrangements. Dunn wrongly assumes that Americans necessarily desire “new automobiles that will be able to meet their individual and collective needs”66 as opposed to transportation systems that are convenient, inexpensive, and safe. This perspective ignores the *forced choice* that Americans are faced with, wherein they can only choose between the *type* of automobile that will accommodate their needs, as opposed to choosing between autos and other forms of transport. Because America’s geography has been largely designed to accommodate automobile transportation,67 viable transportation options have largely disappeared from most places in the country, with the exception of bigger cities—a situation that Ivan Illich refers to as a “radical monopoly.”68 However, even in places where there are viable alternatives to the automobile, which excludes almost all rural areas, this does not necessarily account for the lack of funding that makes bus, train, or trolley travel a potentially limited option. Dunn chooses to frame the issue of auto use in terms of empowerment or personal choice instead of critically examining the powerful historical influence of automobile and oil industries public transportation. As a result, the myth of personal choice and personal empowerment that Dunn ascribes to auto use69 hides the political and economic realities that have shaped people’s ability to genuinely choose what sorts of transportation they can utilize. Furthermore, these narratives hide the fact that such transportation choices ultimately shape the ways in which our communities are built and maintained. In short, such myths prevent people from realizing that there are viable, sustainable options such as public transit, biking, and the creation of walkable communities. In addition to Dunn’s baseless claims regarding the empowering and equalizing effects of auto use, his position is supplemented by one of the oldest strategies used by conservatives against critical thinkers, that being the imposition of the “elitist” label. In order to avoid a serious engagement with texts that critique car culture or the automobile, Dunn instead lodges contrived character attacks against auto critics that have been widely embraced by mainstream media, politicians, and vast segments of the right-leaning American public. For example, in response to Jane Holtz Kay’s calls for action in Asphalt Nation, Dunn suggests the following: “She is heartened because she sees anti-auto sentiments spreading from the Birkenstock and sneaker-wearing crowd who attend Greenwich Village conferences on auto-free cities and clamor for ‘devehicularization’ to the suit-and-tie clad engineers and traffic planners meeting in suburban Howard Johnsons’ executive suites to discuss ‘Implementing Regional Mobility Solutions’.”70 While Dunn’s disdain for comfortable footwear, communication, and community building efforts are all too evident, his ultimate failure is based upon his inability to recognize the fact that cars are a prerequisite of the *elite class* within the United States. Instead of admitting the reality of a situation in which elitism is defined by economic power and policy influence, Dunn paints the picture of a ‘vanguard’ comprised of “an elite group of anti-auto activists whose progressive ideas and individual agenda complement and reinforce one another.”

## A2: Illich Old

#### Illich’s numbers have only changed a little

Sloman 6

Sloman, Special Advisor to the Board of Transport for London , 2006, Lynn, Car Sick: Solutions for our Car-addicted Culture, p.

"The typical American male devotes more than 1,600 hours a year to his car. He sits in it while it goes and while it stands idling. He parks it and searches for it. He earns the money to put down on it and to meet the monthly installments. He works to pay for petrol, tolls, insurance, taxes and tickets. He spends four of his sixteen waking hours on the road or gathering his resources for it. And this figure does not take into account the time consumed by other activities dictated by transport: time spent in hospitals, traffic courts and garages; time spent watching automobile commercials or attending consumer education meetings to improve the quality of the next buy. The model American puts in 1,600 hours to get 7,500 miles: less than five miles per hour. In countries deprived of a transportation industry, people manage to do the same, walking wherever they want to go, and they allocate only three to eight per cent of their society's time budget to traffic instead of 28 per cent." So wrote Ivan Illich in his book Energy and Equity, published in 1974.1 Today, in Britain, the cost of running a car is lower, compared with typical annual salaries, than it was in America in the 1970s. But still, if you rerun Ivan Illich's calculation, the result is a startling one. The typical car-owning Briton today devotes nearly 1,300 hours a year to his or her car. It takes him over 500 hours to earn the money first to buy the car and then to pay for petrol, insurance, repairs and parking. He spends another 400 hours every year sitting in his car while it goes and while it waits in traffic jams. More than 250 hours are devoted to a myriad small tasks associated with a car: washing it, taking it to the garage for repair, filling it with petrol, looking for the car keys and walking to the car, de-icing the windscreen in winter, and finding a parking space at the end of every trip. Finally, he has to work about 100 hours every year to earn the money to pay the extra building society interest because he has chosen a house with a garage rather than one without.2 All in all, the typical British car driver in 2005 devoted three and a half of his sixteen waking hours to his [OR HER] car. For this time, he travels a little less than 10,000 miles per year. His [OR HER] average speed is less than 8 miles an hour— roughly the same as the speed at which he could travel on a bicycle.

## A2: Ks – Plan 1st

#### The aff is a prerequisite to the kritik solvency – the way cars structure social space makes resistance impossible

Rajan 6

Sr. Fellow @ the Tellus institute, 2006, Sudhir, “Automobility and the Liberal Disposistion”, Against Automobility, p. 126-7

Why were there no more serious threats to the lifeblood of the city at a time of general disaffection with the rest of established urban regularity? There are several explanations, all obvious to an Angeleno and each providing clues to understanding both the character of the rebellion and the prevailing contexts of automobility in California and elsewhere. The network of roads and freeways facilitating automobile movement is too extensive and well structured to suffer significant damage from any kind of onslaught. Not only are there no specific locations that could be easily targeted even in a carefully planned insurgency, the results of any intended disruption to automobility would be harmful to the perpetrators themselves. In fact it is hardly conceivable that something as diffuse and abstractly situated as the freeway system could be imperilled by anything other than a massive, indiscriminate event like an earthquake - like the one that did shake up LA substantially in 1994. The very layout of urban space in an edge city permits physical access to the built environment only in prescribed forms favouring automobiles rather than virtually any other form of travel. Indeed, a protest demonstration would be impossible on a freeway or even on the myriad 'surface arteries' that frustrate passage by pedestrians. Looting, arson, and urban upheaval of any kind demand a certain amount of 'free' obstreperous movement carried out collectively, and if citizens cannot place themselves in these 'public' spaces because of the physical arrangement of the built environment, then even spontaneous tumult is sequestered to certain areas and patterns.9 The exclusion of the pedestrian from much of urban space is only one of the ways in which automobility extends its power. For the citizen actually identifies herself through her own amputation; her desire to don wheels and her acquired skill to navigate space and time as a driver displaces any possible inclination to take to the streets *as* a pedestrian activist. It is after all the speeding citizen-driver who terrifies the pedestrian with her far superior armour and speed on the tarmac. 'Citizenship', in terms of the right to dissent, is then defined in terms of a prescribed set of subjects allowed to express controlled forms of 'no!' within an automobilized society. These may include certain categories of teenage speed-freaks (ie, white, male and college-bound), environmentally conscious bicyclists participating in 'critical mass' events (although this is an ambiguously acceptable group) and the regulated protest march that effectively rents space on the road for a permitted amount of time. Any other type of opposition will have to be anarchist and singular: a sniper, speeding drunk driver or some other criminal fleeing the law. In short, it is perhaps only the *terrorist,* the shadowy non-citizen, who actually resists the edifice, but even her actions are mostly pathetic, not necessarily because they are always ineffective but because they convey a deep and fundamental impotence. For finally, this rebel is inevitably one without a constituency; at best, she represents the repressed minority rather than the noble revolutionary with *just* cause. Thus it was even in the insurrection in Los Angeles, the disruption though major was powerless, and turned out to be a rather clumsy and formless expression of resistance whose effectiveness was measured by the scale of looting rather than in any other terms expressing the depth of protest. In the wilderness of Milton Keynes, Southern California or the West Bank, few pedestrians are expected to disarm the smooth flow of (liberal) auto-drivers. But even here one can discern a weak but dual demand to accommodate pedestrians: their existence in fact - whether as recent immigrant workers, the aged, children or potential terrorists - and the growing nostalgia among citizen drivers for a 'community', defined as comic-book towns representing the 'new urbanism' where citizens nod politely as they walk past each other on clean sidewalks with potted plants and outdoor cafes. It is this fantasy that the unruly pedestrian confounds, either by jumping across roads and highways that actually have no access for walking or by remaining the stranger that he is. And no matter how much the upright citizen-driver would like to tolerate him, it seems that he will not learn; not even a sound beating appears to correct his recalcitrance.

## A2: You Demonize Cars

#### This is not about demonizing cars, but chaning the social relationships they embody – the automobile has monopolized our political imaginations making it impossible to imagine alternative modes of transport

Illich 78

Ivan Illich, philosopher, priest, activist, professor @ Penn St. and Univ. of Bremen, 1978, “Energy and Equity,” in Toward a History of Needs. Online: [http://www.cogsci.ed.ac.uk/~ira/ illich/texts/energy\_and\_equity/energy\_and\_equity.html](http://www.cogsci.ed.ac.uk/~ira/%20illich/texts/energy_and_equity/energy_and_equity.html). Edited for sexist language

Beyond underequipment and overindustrialization, there is a place for the world of postindustrial effectiveness, where the industrial mode of production complements other autonomous forms of production. There is a place, in other words, for a world of technological maturity. In terms of traffic, it is the world of those who have tripled the extent of their daily horizon by lifting themselves onto their bicycles. It is just as much the world marked by a variety of subsidiary motors available for the occasions when a bicycle is not enough and when an extra push will limit neither equity nor freedom. And it is, too, the world of the long voyage*: a world* where every place is open to every person, at his [or her] own pleasure and speed, without haste or fear, by means of vehicles that cross distances without breaking with the earth which man walked for hundreds of thousands of years on his own two feet. Underequipment keeps people frustrated by inefficient labor and invites the enslavement of [hu]man by [hu]man. Overindustrialization enslaves people to the tools they worship, fattens professional hierarchs on bits and on watts, and invites the translation of unequal power into huge income differentials. It imposes the same net transfers of power on the productive relations of every society, no matter what creed the managers profess, no matter what rain-dance, what penitential ritual they conduct. Technological maturity permits a society to steer a course equally free of either enslavement. But beware---that course is not charted. Technological maturity permits a variety of political choices and cultures. The variety diminishes, of course, as a community allows industry to grow at the cost of autonomous production. Reasoning alone can offer no precise measure for the level of postindustrial effectiveness and technological maturity appropriate to a concrete society. It can only indicate in dimensional terms the range into which these technological characteristics must fit. It must be left to a historical community engaged in its own political process to decide when programming, space distortion, time scarcity, and inequality cease to be worth its while. Reasoning can identify speed as the critical factor in traffic. Reasoning combined with experimentation can identify the order of magnitude at which vehicular speed turns into a sociopolitical determinant. No genius, no expert, no club of elites can set limits to industrial outputs that will be politically feasible. The need for such limits as an alternative to disaster is the strongest argument in favor of radical technology. Only when the speed limits of vehicles reflect the enlightened self-interest of a political community can these limits become operative. Obviously this interest cannot even be expressed in a society where one class monopolizes not only transportation but communication, medicine, education, and weapons as well. It does not matter if this power is held by legal owners or by entrenched managers of an industry that is legally owned by the workers. This power must be reappropriated and submitted to the sound judgment of the common [hu]man. The reconquest of power starts with the recognition that expert knowledge blinds the secretive bureaucrat to the obvious way of dissolving the energy crisis, just as it blinded him to the obvious solution to the war in Vietnam. There are two roads from where we are to technological maturity: one is the road of liberation from affluence; the other is the road of liberation from dependence. Both roads have the same destination: the social restructuring of space that offers to each person the constantly renewed experience that the center of the world is where [s/]he stands, walks, and lives. Liberation from affluence begins on the traffic islands where the rich run into one another. The well-sped are tossed from one island to the next and are offered but the company of fellow passengers en route to somewhere else. This solitude of plenty would begin to break down as the traffic islands gradually expanded and people began to recover their native power to move around the place where they lived. Thus, the impoverished environment of the traffic island could embody the beginnings of social reconstruction, and the people who now call themselves rich would break with bondage to overefficient transport on the day they came to treasure the horizon of their traffic islands, now fully grown, and to dread frequent shipments from their homes. Liberation from dependence starts at the other end. It breaks the constraints of village and valley and leads beyond the boredom of narrow horizons and the stifling oppression of a world closed in on itself. To expand life beyond the radius of tradition without scattering it to the winds of acceleration is a goal that any poor country could achieve within a few years, but it is a goal that will be reached only by those who reject the offer of unchecked industrial development made in the name of an ideology of indefinite energy consumption. Liberation from the radical monopoly of the transportation industry is possible only through the institution of a political process that demystifies and disestablishes speed and limits traffic-related public expenditures of money, time, and space to the pursuit of equal mutual access. Such a process amounts to public guardianship over a means of production to keep this means from turning into a fetish for the majority and an end for the few. The political process, in turn, will never engage the support of a vast majority unless its goals are set with reference to a standard that can be publicly and operationally verified. The recognition of a socially critical threshold of the energy quantum incorporated in a commodity, such as a passenger mile, provides such a standard. A society that tolerates the transgression of this threshold inevitably diverts its resources from the production of means that can be shared equitably and transforms them into fuel for a sacrificial flame that victimizes the majority. On the other hand, a society that limits the top speed of its vehicles in accordance with this threshold fulfills a necessary-though by no means a sufficient-condition for the political pursuit of equity. Liberation which comes cheap to the poor will cost the rich dear, but they will pay its price once the acceleration of their transportation systems grinds traffic to a halt. A concrete analysis of traffic betrays the truth underlying the energy crisis: the impact of industrially packaged quanta of energy on the social environment tends to be degrading, exhausting, and enslaving, and these effects come into play even before those which threaten the pollution of the physical environment and the extinction of the race. The crucial point at which these effects can be reversed is not, however, a matter of deduction, but of decision.

## Fast Cap Imp

#### the collapse of time and space from centralized mobility structures everyday life while destroying communal cohesion and the environment

Whitelegg 97

Whitelegg, Professor of Sustainable Transport and Sustainable Development, 1997, John, Critical Mass. Pg. 73-75

Changes in accessibility over time and between regions and cities redefine who gains and who loses in an urban regional system. This is one reason why there is so much competition for high speed rail station stops in France and Belgium. Cities with better transport links are often thought to be in a better competitive position than those without good links, though this rather naive determinism is difficult to demonstrate in practice. Donald Janelle's 1969 paper 'Spatial reorganisation: a model and a concept' was the first to try and explain the phenomenon that he called space-time convergence. Figure 5.4 is a diagrammatic representation of Janelle's proposal in which the process of cumulative linkage advantage (better accessibility) is triggered by greater demand for accessibility from some part of the economic system, for example, a pair of cities or individual businesses. If demand is sufficiently high, this leads to an early search for technological developments that result in transport innovation in the form of either a complete new mode, for example railways over horse-drawn wagons and waterways in eighteenth-century Britain, or improvements to existing systems, for example motorways over single carriage roads. The effect of these innovations is a time-space convergence by increasing the speed of travel between centres, or by enabling the movement of larger volumes of traffic. The net result is a reduction in the real cost of moving from place to place, leading to the development of high priority corridors along which greater interaction occurs. Thus the benefits of better transport and communication linkages between larger cities has been, in effect, to draw these areas closer together, whilst those towns or cities where innovation has been retarded have remained at a similar or increasing distance away from each other. Janelle's one-dimensional formulation takes no account of the heavy resource costs of intensified interaction over longer distances, nor of the damaging consequences for intervening areas and local production by heightened competition from outside the area brought in with improved infrastructure. There is a central paradox here. Improved communications can produce more interaction and more traffic but this can actually damage local economies as their employment and economic structures are destroyed by competition from afar. Poor physical communications may well 'shield' a local economy and stimulate local production, innovation and marketing strategies. This chapter has questioned the social, economic and psychological impact of speed, time compression and space expansion. The impacts are wide-ranging and fundamental, and they redefine the meaning of place and the linkages between people and places. This is important because it is purchased at an enormous cost in terms of energy, physical and financial resources, and environmental destruction. It is also pursued on the assumption that it must be a good thing even though there is very little evidence to support the contention that travelling further, sourcing goods and services over longer distances and having a global range for tourism has produced gains in income, welfare, air quality, community cohesion or security. The prioritisation in investment decisions and in the psychology and status of distant things is intimately bound up with the loss of high quality, rich and diverse local neighbourhoods. If anything, this process has intensified during the 1980s and 1990s so that most places now struggle to maintain their environmental, economic and psychological integrity. This obsession with speed and saving time has almost destroyed place.

## Fast Cap Card

#### Automobility creates the seamless space that makes it seem there is no alternative, dividing people and reducing their view to the two-dimensional world of the windschield as the car becomes an extension of their body

Sheller and Urry 2

Professors of Sociology, 2000, Mimi and John, International Journal of Urban and Regional Research, 24.4, <http://ideas.repec.org/a/bla/ijurrs/v24y2000i4p737-757.html>

Indeed, large areas of the globe now consist of car-only environments — the quintessential non-places of super-modernity (Auge, 1995). About one-quarter of the land in London and nearly one-half of that in LA is devoted to car-only environments. And they then exert an awesome spatial and temporal dominance over surrounding environments, transforming what can be seen, heard, smelt and even tasted (the spatial and temporal range of which varies for each of the senses). Such car-environments or non-places are neither urban nor rural, local nor cosmopolitan. They are sites of pure mobility within which car-drivers are insulated as they 'dwell-within-the-car . They represent the victory of liquidity over the urban. One such non-place is the motel, immortalized in the UK by the TV soap Crossroads. Clifford notes that the 'motel has no real lobby, and it s tied into a highway network — a relay or node rather than a site of encounter between coherent cultural subjects (as would, he implies, be found in a hotel; 1997: 32). Motels 'memorialize only movement, speed, and perpetual circulation since they 'can never be a true place and one motel is only distinguished from another in 'a high-speed, empiricist flash (Morris, 1988: 3, 5). The motel, like the airport transit lounge or the motorway service station, represents neither arrival nor departure, but the 'pause , consecrated to circulation and movement and demolishing particular senses of place and locale. This 'sense of sameness and placelessness' is accompanied by a 'social organization of space that helps to further auto-dependence and to mask any realistic alternatives to automobility (Freund, 1993: 11). As a rolling private-in-public space, automobility affords dwelling inside a mobile capsule that involves punctuated movement 'on the road from home-away-home. Domesticity is reproduced on the road through social relations such as the 'back-seat driver or the common dependence upon a partner for navigation and map-reading; the car creates a transpersonal mobile agent. Moreover, a variety of services have become available without leaving the car, as the 'drive-in becomes a feature of everyday life. Since the 1950s halcyon days of the drive-in movie and the drive-in 'automat' where 'fast food is served, more recent car-dwellers, especially in the US, have been treated to the conveniences of drive-through banking, drive-through car washes, drive-through safari theme parks, and even drive-through beer distributors in some states (not to mention drive-by shootings and drive-up mail delivery). Thus, fragments of time are increasingly compressed into taskscapes that can keep people inside their cars, while the 'coming together of private citizens in public space is lost to a privatization of the mechanized self moving through emptied non-places. Protected by seatbelts, airbags, 'crumple zones , 'roll bars and 'bull bars , car-dwellers boost their own safety and leave others in the city to fend for themselves in a 'nasty, brutish and short world. In each car the driver is strapped into a comfortable armchair and surrounded by micro-electronic informational sources, controls and sources of pleasure, what Williams calls the 'mobile privatization' of the car (see Pinkney, 1991: 55). Many aspects involved in directing the machine have been digitized, at the same time that car-drivers are located within a place of dwelling that insulates them from much of the risky and dangerous urban environment that they pass through. The Ford brochure of 1949 declared that 'The 49 Ford is a living room on wheels' (Marsh and Collett, 1986: 11). Features such as automatic gearboxes, cruise control and CD-changers 'free' drivers from direct manipulation of the machinery, while embedding them more deeply in its sociality. Yet it is a room in which the senses are impoverished. The speed at which the car must be driven constrains the driver to always keep moving. Dwelling at speed, people lose the ability to perceive local detail, to talk to strangers, to learn of local ways of life, to stop and sense each different place (see Freund, 1993: 120-1). The sights, sounds, tastes, temperatures and smells of the city are reduced to the two-dimensional view through the car windscreen, something prefigured by railway journeys in the nineteenth century (see Schivelbusch, 1986). The sensing of the world through the screen has, of course, become the dominant way of dwelling in contemporary experience. The environment beyond the windscreen is an alien other, to be kept at bay through the diverse privatizing technologies incorporated within the contemporary car. These technologies ensure a consistent temperature (with the standardization of air-conditioning), large supplies of information, a relatively protected environment, high-quality sounds and sophisticated systems of monitoring. They enable the hybrid of the car-driver to negotiate conditions of intense riskiness on high-speed roads (roads are increasingly risky because of the reduced road-space now available to each car). And as cars have increasingly overwhelmed almost all environments, so everyone is coerced to experience such environments through the protective screen and to abandon urban streets and squares to the metallic cages-on-wheels. The driver's body is itself fragmented and disciplined to the machine, with eyes, ears, hands and feet all trained to respond instantaneously, while the desire to stretch, to change position, or to look around must be suppressed. The car becomes an extension of the driver's body, creating new urban subjectivities (see Freund, 1993: 99; and Morse, 1998: Chapter 4, on the overlaps between driving, shopping and viewing television). A Californian city planner declared even in 1930 that 'it might be said that Southern Californians have added wheels to their anatomy' (cited in Flink, 1988: 143). The machinic hybridization of the car-driver can be said to extend into the deepest reaches of the psyche. A kind of libidinal economy has developed around the car, in which personalities are deeply invested in the car as object. There is a sexualization of the car itself as an extension of the driver's desirability and fantasy world. The car takes part in the ego-formation of the driver as competent, powerful and able (as advertisers have tapped into). Various 'coming-of-age' rituals revolve around the car, at least since the discovery of bench-seats and 'lover's lanes'. Car-sex has itself become an element of fantasy in everything from music videos to 'crash culture' (see Ballard, 1973). At the same time, the car feeds into our deepest anxieties and frustrations, from fear of accident and death at one extreme, to the less life-threatening but nevertheless intense frustration of being stuck behind a slow vehicle while trying to save precious fragments of time. Within the private cocoon of glass and metal intense emotions can be released in forms that would not otherwise be socially acceptable. Outbursts of 'road rage' represent a breakdown in 'auto-regulation' of the driver, in the double sense of both self-control and of following the rules of the road.

1. PT Arun is a partner of ExxonMobil in Indonesia. [↑](#footnote-ref-1)