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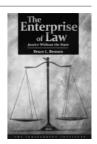
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Jurisdictional Arbitrage

People around the world are looking for opportunities to vote with their feet. Some would like to start a venture in an environment free of corruption. Others would like simply to practice their religion without fear. And what about those protecting their businesses from strangling regulations? Their savings from punishing taxation? Their children from failing school systems?

Predatory governments cover great swaths of the earth. So competitive governance is about neither idealism nor perfection. It's about the fact that some social operating systems are better than others.

In other words, there are still places where the State still more or less protects good institutions—the "rules of the game"—better than others. The term for taking advantage of this is "jurisdictional arbitrage." The idea is that you'll probably increase your chances of success if you move from one place to another. For example, people are moving from California to Texas because the overall business climate, while certainly not perfect, is better in the Lone Star State. Free Staters find lower taxes and a love of liberty in New Hampshire. Migrants come to the United States from Mexico because America's rules still give rise to more opportunities overall, compared to those of its southern neighbor.

This sets people to thinking: What if you could transplant good rules to countries with really bad rules? Or what if you could experiment with new rules by creating new nations somewhere?

An intrepid group of freedom-minded entrepreneurs led by Michael Strong recently got close to founding a "free city" in Honduras. And seasteaders are working out how to build lives in the one place on Earth not already occupied by the State.

The Honduran project met with a setback. Still, we should remain hopeful. There are plenty of precedents for free cities. Hong Kong and Singapore, though their legal systems were byproducts of imperialist powers, have thrived due to relatively good institutions (and decent helpings of benign neglect). So how can we create new opportunities for exit from inferior systems?

If the benefits of working on the open water outweigh the "Ocean Tax"—that is, the costs associated with life

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on the sea—people may start moving there. We want to explore this idea, because a pragmatic future is going to involve creating new escape valves for liberty—that is, new systems of law to compete with more sclerotic and venal systems.

We should also keep our eyes to the heavens. The private space industry is burgeoning. Will it be possible for humanity to create new civilizations on the moon, or on Mars?

It's not even necessary that all systems of rules attach to territory. The fact that laws link to the land comes from a human past in which travel was hazardous and forming new communities—or changing from one to another—was fraught with peril (to say nothing of the layers of conquest and reconquest by warring groups with different systems of rules). But might the next phase of human social evolution come in divorcing a great many of the rules we live by from territories? Might new technologies allow us to "exit" bad systems—like fiat currencies—without having to leave our homes?

A right of exit is a check on power. But at present, exiting one system to enter another usually seems like moving from the plantation of a harsh master to that of a gentler one. Even so, an exodus can be a potent driver of institutional change. After all, it's more difficult to prey on people when they are no longer around. This issue of *The Freeman* tells the stories of people trying to create new institutions. Even when they fail, they provide inspiration.

The seas might be the best remaining option for those seeking escape from State overreach. **Ivan Osorio** describes seasteading, pirate radio, and the prospects for voting with your boat when there's nowhere left to go with your feet.

Honduran REDs seemed like the best bet for testing out free-cities concepts, **Tom Bell** says, but the Honduran Supreme Court recently put the kibosh on them. Where does that leave the free-cities movement? **Bill Walker** argues they have an answer in New Hampshire.

The development of private spaceflight might actually turn space into a frontier, final or not. We interview **Lee Valentine** of Princeton and XCOR Aerospace about space development's exciting growth.

Eschewing some of the trappings of modern technology during childbirth is every woman's right, but, says **Mike Reid**, it's by no means more "natural."

If you live in Illinois, the school bus could be bringing union intimidation to a town near you. **Charles Baird** looks at freedom of association and unionization in the busing business.

In honor of FEE founder Leonard Read, and in hope of a better economic future, the Competitive Enterprise Institute (CEI) has released a new short film adaptation of "I, Pencil." **Nicole Ciandella** says its message is as timely as ever

Arguments that money is a creature of the State are not only wrong, they're dangerous. **Alex Salter** explains how, perhaps more than anything else, money is the prime example of Hayek's spontaneous order.

Frank Norris's 1899 novel *McTeague* is one of the great neglected masterpieces of American Realist literature. It's also, according to **Sarah Skwire**, a useful reminder that "realist literature" does not mean literature that is exactly like real life.

Technological progress can lead to some scary times. Fortunately, says **Luca Gattoni-Celli**, it also places an unprecedented amount of power in the hands of ordinary people.

Milton Friedman believed State-run schools strangled the productivity improvements to be had from competition; John Stuart Mill believed they strangled independence of thought. Both views have plenty of empirical support, says Nathan Smith.

We introduce several new columnists this month. Editor **Max Borders** explains how progressivism remains authoritarian even when the word "peer" is added—as well as how network libertarianism is an altogether different beast; **Doug Bandow** explains that liberty can't be separated into "economic" and "everything else"; and **Jeffrey Tu cker** uses his GPS to find some important—and exciting—lessons about private innovation.

Our book reviewers examine the private provision of justice and women's crucial contributions to human liberty.

—The Editors

From the Sea, Freedom!

IVAN OSORIO



Courtesy Anthony Ling

or as long as governments have overreached, people have sought escape.

Indeed, some have dreamed of exiting the State completely. From the defunct Republic of Minerva (perhaps the only nation ever to fall prey to Tongan imperialism) to the short-lived Oceania project, a number of individualist mavericks have tried to create societies outside the bonds of established states. Most have failed.

Yet if any of these ventures can be called a success, it's the Principality of Sealand. Sealand's founder, Roy Bates—also known as Prince Roy of Sealand—ruled for 45 years. He died October 9.

Bates first took to the seas in the 1960s to establish Radio Essex. He set up outside of the United Kingdom's territorial waters, where he could broadcast free from the heavy-handed regulation and censorship that made British broadcasting a dull affair in those days. Whereas most pirate radio jockeys worked from boats, Bates found an abandoned World War II-era platform fort located seven miles off England's east coast.

Bates's station was one of many such "pirate" stations. When the British government moved to shut down unlicensed broadcasters operating off its coastline, officials fined Bates the princely sum of £100. Bates declared his independence from the U.K. In 1967, his platform became the Principality of Sealand—and Bates named himself the head of state. His wife Joan would be his princess.

Bates went further than other offshore, unlicensed broadcasters to escape state control. What distinguished the British radio pirates from other efforts to escape state jurisdiction was their distinctly commercial motivation. The radio pirates didn't go out to sea because they wanted simply to be there. Rather, it gave them a competitive advantage over regulated rivals on shore. (This type of voting with your boat is known as jurisdictional arbitrage.)

Go Wet, Young Man

If future extraterritorial pioneers are to succeed,

they should seek a similar competitive advantage over their more heavily governed rivals. One of the latest and most ambitious efforts in this movement is that of the Seasteading Institute, which "work[s] to enable 'seasteads'—floating cities—which will give people the opportunity to peacefully test new ideas about how to live together." At a recent

conference in San Francisco, much of the discussion focused on the commercial viability of seasteads.

To encourage such enterprise, the Seasteading Institute created the "Poseidon Award," which it hopes to bestow by 2015. It is to be given to "the founder of the world's first seastead that hosts at least 50 full-time residents, is financially self-sufficient and politically autonomous, and is willing to offer its real estate on the open market," according to Josh Harkinson, who covered the conference for *Mother Jones* magazine.

That's quite a challenge. But the good news is it doesn't require reinventing the wheel, thanks to the precedent set by Bates and his fellow unlicensed broadcasters. They saw an unmet demand for variety in radio programming and discovered a novel way to meet it. Finding similar niches is the big challenge for modern-day seasteaders,

in addition to the technical, engineering, and legal challenges. Modern communication technologies provide new opportunities for entrepreneurs to free themselves from State interventions now so prevalent throughout the developed world.

The radio pirates' story is chronicled in University of Chicago historian Adrian Johns's book, *Death of a Pirate: British Radio and the Making of the Information Age.* Interestingly, Johns notes, the link between the unlicensed

British broadcasters and classical liberalism is more than casual. One leading unlicensed radio entrepreneur was an ardent free-marketer. Oliver Smedley, the founder of Radio Atlanta, was a fan of F. A. Hayek, who was intent on breaking the BBC's monopoly and helped Antony Fisher establish the influential Institute of

SEASTEADING is ambitious, but it doesn't require reinventing the wheel. Pirate radio, along with Roy Bates's Kingdom of Sealand, set numerous precedents.

Economic Affairs, Britain's leading free-market think tank.

The political left has long sold romanticized versions of its story—from Alberto Korda's iconic image of Che Guevara to the self-important narratives that arose from Paris 1968. To that distorted history, Bates and his fellow radio pirates offer a welcome antidote. Their story is now seen by most of the public as a valiant struggle against overreaching government bureaucrats—as the 2009 film *Pirate Radio* shows.

In the 1977 song "Capital Radio One," punk pioneers The Clash celebrated the fact that, "A long time ago there were pirates, beaming waves from the sea." Roy Bates went further, as he proclaimed in Sealand's motto: "From the Sea, Freedom!"

Ivan Osorio (iosorio@cei.org) is Editorial Director at the Competitive Enterprise Institute.

What would it take to get you to move to a seastead?

A decent job, a good library, and a good community of people to talk to.

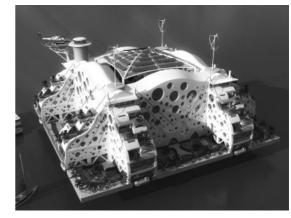
- Zachary Caceres, Guatemala

Stability. In all senses of the word. My wife gets seasick, and with a young family we would have to be concerned about personal security. It would have to be a reasonable size, otherwise things could get really boring really fast. To be honest, it would need a reasonable chance of an absolutely amazing, and to me unimaginable, upside to convince us to abandon dry land.

- Graham Brown, United Kingdom

A very large community with millions of people and a thriving economy. I am a radical libertarian, and yet, right now my best option is to live in New York City, one of the most highly taxed and regulated places in the U.S. The sheer value of the social networks in NYC makes up for the taxation. I would be much freer in a place like New Hampshire, and yet it is too provincial for me.

- Arthur Breitman, USA



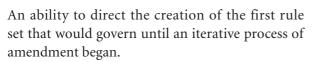
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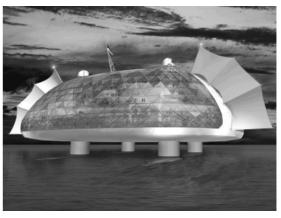
András Győrfi/Seasteading.org

It boils down to opportunity costs. If things on land get bad enough, I'd get in a rowboat with a tiger. Realistically, though, seasteads would have to offer a record of success and secure exit options before they could lure me away from terra firma.

- Tom Bell, USA



- Salton Rice, USA



Marko Järvela/Seasteading.org

Peer Progressivism vs. Network Libertarianism

MAX BORDERS



You may know the writer from his work on innovation and emergence. (I'm a big fan, myself.) Johnson has now produced something of a manifesto on what he calls "peer progressivism" in a book titled *Future Perfect*. The idea of peer progressivism

is that peer networks will accelerate our civic engagement, especially at the local level. So far so good.

Recently, however, I came across Oliver Burkeman's review of *Future Perfect* for *The Guardian*, which Johnson himself (in a tweet) called "nuanced." To be fair, I haven't read *Future Perfect*—not yet, anyway. So unfortunately you're getting something rather "meta" with this column: a review of a review. As we'll see, the *Guardian* review is nuanced to the extent that its libertarian caricatures are rich and its straw men are stitched up tightly with plausible misunderstandings about our worldview.

I never thought Johnson was a libertarian. But I thought he might lean that way. After all, once you appreciate the idea of self-organization in the natural world, it's a short step to appreciating emergent order in society. Johnson gets self-organization. But what he fails to appreciate, I think, is the extent to which such orders emerge and thrive without central authority. Progressivism, after all, is an authoritarian doctrine at root due to its reliance on State power. Does sprinkling in technology or adding "peer" to the front end fundamentally change that? My goal for this column is not to review Johnson's book, but to clarify what we might call "network libertarianism."

From Burkeman's review:

But this identification of progress with free-market libertarianism, the technology writer Steven Johnson contends, is as mistaken as Legrand-style central planning. Real progress, he argues in *Future Perfect*, emerges from "peer networks" such as the internet

because they're open and collaborative, not because of private, profit-motivated competition. His book is a call to support what he presents as a new kind of politics, based neither on traditional left-wing ideas of big government nor traditional right-wing ideas of big markets. "We believe in social progress, and we believe the most powerful tool to advance the cause of progress is the peer network," he writes, describing himself and his fellow-thinkers. "We are peer progressives."

That passage makes me want to channel Bugs Bunny: *He don't know us very well, do he?*

Before going into my concerns about Burkeman's review, I'm reminded of what Milton Friedman said after finding himself chatting in New York's intellectual salon:

[W]hen they heard real arguments instead of caricatures, they had no answers, only amazement that such views could be expressed by someone who had the external characteristics of being a member of the intellectual community, and that such views could be defended with apparent cogency. Never have I been more impressed with the advice I once received: "You cannot be sure that you are right unless you understand the arguments against your views better than your opponents do."

New York-based Burkeman does not understand our arguments better than we do. And, I fear, neither does Steven Johnson.

"Peer progressivism" seems to be built either on one big misunderstanding about markets, or one big philosophical difference about authority. Consider Burkeman's claim that "collaborative peer networks outperform free-market arrangements all the time." Well, maybe. The trouble is, by libertarian lights a *collaborative peer network is a species of market*. I claimed as much in a tweeted reply to Steven Johnson himself. In his response to me (which I was honored to get), Johnson wrote: "I think it's the reverse:

markets are peer networks, as I say in the book; but not all peer networks are markets." Hmmm. Are we talking past each other?

Maybe Johnson is right to point out the trouble with our libertarian shorthand. It's true that when network libertarians say "market," people sometimes hear "big business." What Johnson may not realize, however, is that we libertarian types have quite a liberal definition of markets. Indeed, most of us would define a market as any system in which a participant in said system can pursue some value through voluntary interaction. Is that definition too broad? Or should we libertarians lose all the "markets" talk? Because when it comes right down to it, we are more interested in the voluntary nature of interaction and not whether the interactions are transactional per se. We have

come use the term "markets" in contrast to "mandates."

I suppose one could define market narrowly, as Johnson and Burkeman do. And we would not want to throw out all market prices or private property with the bathwater. But we network

libertarians are far more interested in rules that reduce "transaction costs" in the Coase/North sense (tinyurl.com/ bstp5oj). And of course we want to preserve the human dignity that comes with freedom, not to mention the true communitarianism that arises when communities actually self-organize. I suppose we could restrict the term "market" to transactions for immediate profit. But then we'd just have to stop using the term "market" for what we actually mean. We would not have to change our position.

creation.

Or we could keep our liberal definition that includes interactions among peers and value systems that arise from communities of cooperation. To us, markets are big enough to include peer networks because the latter are also just systems of value creation. These peer networks are libertarian to the extent that joining is voluntary and exiting is fairly low cost. I cannot, for example, exit the U.S. healthcare system or tax code without significant cost to me. But I can exit a mutual-aid society or Facebook group at fairly low cost. Indeed, lowering the cost of exit and experimenting with new social operating systems are the central ideas behind seasteading (which unfortunately, Burkeman characterizes rather crudely.)

MARKETS ARE

big enough to include peer

networks because the latter

are also just systems of value

So markets may include direct one-to-one exchanges, resource pools, crowdsourcing, micro-donation, co-ops, favor exchanges, reputation systems, communities, mutual aid associations, few-to-many exchanges and even online commons (like wikis). Because a market, under a network-libertarian construal, is just a system of voluntary association, we see no conflict with many of the goals of the peer progressives. Even if you wanted to let "peer networks" be the umbrella term and "markets" fall under it, that's fine too—as long as participation is not compelled. Again, maybe our definition of "market" is too liberal. But I think Johnson's "nuanced" reviewer would have a hard time stuffing any libertarian straw men if he had to reckon with all such voluntary systems—whatever

you want to call them.

It may be that the critical while peer progressives talk

difference between network libertarians and peer progressives is that the latter really do have a soft spot for authority and authoritarian democracy. It may be that,

a big game about equal relationships, in their hearts they share old progressivism's fetish for power and planning dynamics that can only work by subordinating some people to others. You might want the digital hive to bestow power, but is that a future perfect? Not by our lights. At least peer progressives and network libertarians agree about one thing: most government is too powerful and many corporations are too powerful. Now if we could just agree that each form of organization gets its power from the other in a perverse corporate-state mutualism we call crony capitalism.

Vincent Ostrom wrote that "the most radical source of inequalities in human societies is the 'ruler-ruled' relationship. The fashioning of a truly free world depends upon building the fundamental infrastructures that enable different peoples to become self-governing." Progressivism, past or peer, originates in that ruler-ruled relationship even if your peers have more say about who rules you. **FEE**

Max Borders (mborders@fee.org) is editor of The Freeman and author of Superwealth: Why We Should Stop Worrying About the Gap Between Rich and Poor.

No Exit: Are Honduran Free Cities DOA?

TOM W. BELL

ager to bring Hong Kong-style growth to their beleaguered Central American country, Honduras amended its constitution in 2011. The new provisions allowed the creation of quasi-sovereign special development regions. Libertarians thrilled at the prospect.

By making it easier to escape from bad government to better government, the Honduran plan would put the forces of competition and choice in the service of the Honduran people. Formerly, Hondurans who voted with their feet had to flee their homeland. Now, they could stay and wait for good government to come to them—or at least to the neighborhood.

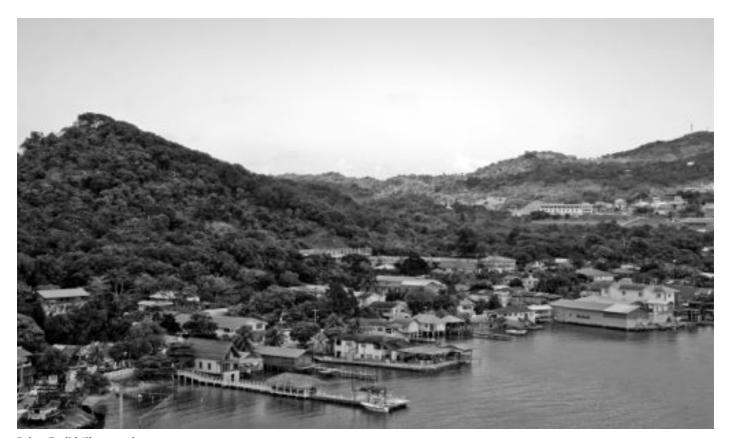
Those grand visions came to nothing, however. Instead, the Honduran Supreme Court struck down the constitutional amendments as . . . unconstitutional. Does

that spell the end of the Honduran experiment in newer, freer cities?

The Plan

The Honduran special development regions, called "REDs" after their Spanish acronym, were supposed to attract foreign investors with low taxes, free trade, and transparent government. Instead, the plan attracted academic grandstanding, critical news accounts, and crippling litigation. Opponents of the REDs have even demanded treason prosecutions of those who voted for the program. If failure represents a learning opportunity, the REDs have a lot to teach us about government reform.

Few people doubt that the Honduran people deserve better government. According to the UN—and thanks



Robert English/Shutterstock.com

largely to a drug war imported from the U.S.—Honduras has the world's highest per capita murder rate. The World Bank reports that over 59 percent of Hondurans fall below the poverty line; over 36 percent fall below the extreme poverty line. Politicians in other countries woo voters with t-shirts or civil service jobs; Honduran politicians hand out free coffins.

One bright spot: Honduran free-trade zones, created in the mid-1980s, generated around 140,000 jobs on-site and another 400,000 jobs in the rest of the country. REDs, the brainchild of Octavio Sanchez and other Honduran reformers, were meant to build on that success. These special development regions would offer low taxes, streamlined regulations, and institutional safeguards against political interference. The plan gained momentum when President Porfirio Lobo Sosa appointed Sanchez as his chief of staff, and in January 2011 the Honduran Congress voted 124–1 in favor of a constitutional amendment authorizing the creation of REDs.

The REDs were designed to implement decentralization from above, bringing something like federalism to what was otherwise a system of government run largely out of Tegucigalpa, the capital. The REDs were afforded a great deal more independence than U.S. states enjoy, however—theoretically at least.

Once up and running, the REDs were to have far-reaching authority to set up their own public administration, commercial and civil laws, police forces, and courts. REDs would be able to establish and spend taxes (subject to mandatory caps), enter into international agreements (with congressional approval), and set immigration policies (so long as Hondurans were not barred entry).

An independent Transparency Commission and Normative Council elected by each RED's permanent residents was to oversee the new cities, ensuring respect for certain fundamental rights. Despite those limits, the REDs heralded a revolution in governance—free-trade zones have been around awhile, but nobody's ever seen a free-law zone.

Celebrity Economists and REDs

Around the same time that Sanchez and his fellow reformers were developing REDs, American economist Paul Romer began promoting a facially similar idea: charter cities. Under Romer's plan, a host country would invite a trusted first-world counterpart—he often cited Canada as an example—to help govern a portion of its territory. In this way, Romer argued, people languishing under poor governments would not need to emigrate to better ones. Instead, charter cities would bring good government to the developing world.

Thanks to his fame as a respected academic and successful entrepreneur, many came to see Romer as the genius behind the Honduran RED project. He wasn't, but it must be admitted that citing Romer's work—including his very convincing TED talk—helped the Lobo administration sell REDs to the Honduran Congress. Romer visited Honduras, advised the government, and evidently viewed the REDs as an opportunity to implement charter cities. It was not to be, however.

The Hondurans balked at Romer's proposal to have foreigners—even ones as friendly and competent as Canadians—govern their territory. Romer, who admits that others find him "like Spock," failed to appreciate the powerful emotions that nationalism can stir up, especially among people who, like the Hondurans, have suffered colonial rule.

Romer also presumed too much about his role in forming the REDs, taking offense when the Hondurans proceeded without his approval and making a public show of resigning his position on the interim Transparency Commission (a position that Honduran officials say they never gave him anyway).

Charter City, Free City, or Nativism?

Instead of inviting in foreign countries to govern the REDs, the Hondurans planned to implement local but independent control. On September 4, 2012, through a public-private partnership, the Honduran government gave approval for Grupo MGK to find investors, buy land, and begin building the first RED. After that promising start, however, Honduran courts got involved.

On October 18, 2012, the Honduran Supreme Court ruled the REDs unconstitutional on grounds that they violated the country's sovereignty and alienated its territory. Grupo MGK left the country for more promising venues.

Will Honduras resurrect REDs in a form more agreeable

to the Honduran Supreme Court? By all knowledgeable accounts, we will not know until after Honduras holds its next general election, in November 2013.

The failure of the Honduran REDs disappointed a great many people, not least among them libertarians. The REDs were never designed to become private cities, much less Galt's Gulch-style utopias. The Hondurans' bold attempt nonetheless deserves the admiration and support of all who rue the human toll of statism. Should they try again and succeed, the Hondurans may well show the world a better way to better government.

Tom Bell (tbell@chapman.edu) is a professor at Chapman University School of Law.

From the Trenches – The Free State Project BILL WALKER

Then he was a graduate student at Yale, Jason Sorens began brainstorming more effective ways to convince the nation of the viability of the free society. Why not, he wondered, concentrate libertarians on building an actual working model in one state?

Sorens, now a political scientist at the University of Buffalo and a Mercatus Center scholar, came up with the Free State Project (freestateproject.org). The idea sounds relatively simple: get a bunch of libertarians to move to one state, forming a political bloc big enough to reform state and local governments.

Sorens also added a twist: The Pledge. This means the FSP would get 20,000 people to commit to move to a particular state before any resources were expended. Free Staters established a website and held a complicated Condorcet vote in 2003 to select the state. New Hampshire won easily. A core group of Free Staters then began a drive to sign up 20,000 movers.

Over the next few years, Free Staters wandered into New Hampshire one family at a time. About 1,100 people have moved so far. My wife and I moved in the middle of winter 2008.

Was it worth it? We think so. In New Hampshire, libertarian ideas were already a strong force. Pro-liberty presidential candidate Ron Paul came in second place in the Republican primary here in 2012. Even the license plates already said "Live Free Or Die."

With a pro-liberty population and a political system where big money can't dominate, politically active libertarians win major-party offices. A dozen Free Staters were elected as state representatives in 2010, along with more than 50 other pro-liberty legislators. There are currently two pro-liberty state senators.

Since the November 2012 election, the number of Free Stater representatives has stayed about the same (though the party ratio has changed), in spite of the more partisan national pendulum swing. This was due in no small part to groups like New Hampshire's largest proliberty organization, the nonpartisan New Hampshire Liberty Alliance.

In the past session of the legislature, liberty groupendorsed candidates drove the legislature to cut state spending by 11 percent, passed school choice for lowincome families, and eliminated many obsolete laws. They also passed a marijuana decriminalization bill, though the lame-duck governor vetoed it. Many expect a similar antiprohibition bill to pass in the coming session.

It certainly feels like the liberty movement is gathering momentum in New Hampshire. At our current pace, it won't be too long before you can "vote with your feet"—and unlike in most elections, have real alternatives to choose from. If moving isn't a realistic option for you, you can still help build a haven for liberty—and at least you'd have a nice place to retire. In the meantime, come to the Liberty Forum in Nashua and check out the state while you're here.

"Live Free, Or Die," we say. In the long run, it's not like there's really another option.

Bill Walker (walkerbill76@msn.com) is a Free Stater living in New Hampshire.

The Next Frontier: An Interview with Lee Valentine



Courtesy Xcor.com

We at The Freeman are excited about the budding private space industry. So we decided to reach out to Dr. Lee Valentine, Executive Vice President of the Space Studies Institute at Princeton and an XCOR Aerospace board member. Here is the result. (Full disclosure: Dr. Valentine has a financial interest in XCOR.)

The Freeman: Space exploration—public, private, or both?

Valentine: That is an interesting way to phrase the question. The real question should be about space development rather than space exploration.

The Freeman: Fair enough.

Valentine: Both space exploration and space development are, and have been, both public and private. The question is how this mix will evolve.

A peculiarity of space transportation, as opposed to every other form of transport, is that it was developed from a technology base suitable only for a one-way trip. Throwaway engines only make sense for missiles. No other form of transportation, on which so much of the economy depends, uses throwaway vehicles.

This peculiarity was a direct outgrowth of World War II and the subsequent Cold War mentality—in which

rocketry was developed primarily for war. Nazi Germany developed the first ballistic missile capable of reaching space at a cost of billions of dollars. The United States and the Soviet Union then built larger and more capable rockets for intercontinental nuclear war. Those rockets became the first space launchers. Cold War exigencies dictated bypassing the development of a reusable space transportation system in favor of winning the Moon Race using existing ballistic missile technologies.

At the very beginning, however—in the United States, Germany, and even Soviet Russia—space development was privately financed. Ordinary citizens financed the German effort, e.g., members of the VfR (Organization for Spaceship Travel). Daniel Guggenheim funded Goddard's work in the United States. A Brooklyn subway conductor's wages funded Reaction Motors Incorporated, the company that built the engines for the X-1.

So, after a hiatus of nearly 70 years, private enterprise has now resumed the leading role in development of rocket propulsion technology. So, no more throwaway or partly salvageable vehicles. And for sound economic reasons, safety must improve by a factor of a thousand.

Space has become an important part of the global economy. Much of that importance is now telecommunication. Privately owned telecommunication satellites are a multibillion-dollar annual business worldwide.

The real opportunities for people on Earth, however, lie in businesses that do not yet exist because the cost of space transportation is so high. One of those is satellite solar-power stations, which would transmit clean base load electrical energy to Earth from geostationary orbit. For the present design of power satellites, a cost per pound to low Earth orbit of less than \$250 should allow them to be economically competitive with ground-based sources of electricity. That transportation number is a factor of ten lower than the present cost, but is well within the range of costs estimated for a mature system. Propellant costs are

INTERVIEW

roughly ten dollars per pound to orbit for a LOX [liquid oxygen]/kerosene launcher.

The Freeman: Why have any exploration then?

Valentine: Both the public and private sectors have specific functions that they must perform. One of the government's functions is national defense. Space is the high ground for reconnaissance. For that reason, the U.S. military will continue to own and operate the satellites that provide ballistic missile early-warning and secure navigation signals. An important defensive function that has been largely ignored by the federal government is defense against asteroid impact. The first requirement for asteroid defense is finding threatening asteroids soon enough to deflect them. In my view, that is the most important job of the government space exploration program. They're not doing a very good job.

Pure space exploration provides the United States with an element of 'soft power.' The primary value of the latest Mars Rover to the American people is not likely to be its science return, but rather the enhancement of softer forms of power of the United States. No other nation has ever done such a dramatic thing in space. Thanks to the Internet, people around the world know about it. Foreign enemies surely ask themselves, "If they can do that, what else can they do?" Having said that, I am sympathetic to Felix Baumgartner's view that the \$2.5 billion spent on the Mars Rover might have had better uses.

The Freeman: So are we.

Valentine: Well, the private sector absolutely lowers costs and improves service. We have already seen that a small innovative company, SpaceX, has lowered the price of space transportation enough that neither the Russians nor Chinese can effectively compete. Governments monopolized the space launch market for 55 years with no improvement in the cost of transportation. That unusual era is now coming to an end with the emergence of capable private launch companies. Competition among them should drive the cost of space transportation as low as it can feasibly go.

The Freeman: What do you see as the next big thing(s) for the private space industry? What's possible (i.e., potentially profitable) in the next 20 years?

Valentine: The next big thing will be flights of the first

fully reusable space launcher. That will be the two-man XCOR Lynx Mark 2 that should enter service in 2014. (The Lynx Mark I prototype spacecraft will fly early next year, but will not reach space as officially defined.) That vehicle will be a game changer for the scientific-sounding rocket market currently valued at about a hundred million dollars per year. Lynx will be able to carry scientific payloads to space for a fraction of a percent of their current cost, and then return those instruments to the researcher for re-flight. For \$20 million and an operating cost (per hour) less than a military jet, an organization can have its own manned space program. It is hard to predict how many private astronauts will be created over the next few years. But between XCOR and its competitors I expect the number to be many, many thousands.

Within the next ten years, I expect XCOR and one or more of its competitors to field a fully reusable orbital transportation system. If the cost per pound to low Earth orbit is as low as our CEO Jeff Greason believes it can be, many new market segments will be profitable. The first of these may well be large high-power communications relays in low Earth orbit. With low-cost launch, it will become economical to assemble orbit satellites of much larger size and much higher power than currently exist. The large engineering costs associated with making highly reliable satellites, because they cannot be repaired, will disappear. Cheaper, larger, and more effective satellites, assembled in orbit, may replace much of the terrestrial cell phone infrastructure.

With a mature Earth-to-orbit transportation system, space hotels will be affordable for people with a few hundred thousand dollars to spend. The orbital tourism market is now about \$50 million per year, but should expand smartly as the cost comes down. Robert Bigelow



of Bigelow Aerospace is confident enough in that market that he'll be spending a few hundred million dollars over the next few years to develop it.

Another market—a huge one—is building satellite solar power stations in geostationary orbit to transmit electrical energy to Earth.

It is also possible that we could be mining extraterrestrial resources within twenty years. Fifty years ago, Arthur Clarke, the visionary inventor of the geostationary communications satellite, forecast asteroid mining in 2030. He may yet be right. The supply of platinum group metals on Earth is extremely limited. These metals have so many potential uses that a cheap supply would revolutionize many aspects of engineering. With a cheap supply of these refractory metals it would be possible to increase the efficiency of turbine engines by 30 percent. That would increase the range and decrease the cost of every jet airliner, and would cut the fuel bill for

gas turbine generators by 30 percent. So there is a powerful reason to search for a cheap source of these metals. No richer source exists than the metallic asteroids. A forprofit company, Planetary

EXTRATERRESTRIAL RESOURCES within twenty years.

could

b e

Resources, has been started to exploit asteroidal resources.

We

The Freeman: Can you talk a little bit more about what XCOR does and how it fits into the bright future you describe?

Valentine: The company was founded to develop a mature transportation system for orbital flight. The characteristic of a mature system is that its operating costs are a single-digit multiple of its energy cost. That characteristic cost is typical of automobiles, trains, ships, and airplanes.

The key technology that is required for a mature space transportation system is highly reliable and long-lived engines. It is not generally appreciated that the rocket engines for all previous space launchers wear out after a few dozen on-off cycles. So, if you had recovered the vehicle for reuse, you would have to replace the engines every few

dozen flights. Since the engine cost is one-quarter to one-third of the total vehicle cost, it should be obvious that replacing the engines every few flights cannot give the low transportation cost typical of a mature system. A robust, reliable, pump-fed, long-lived propulsion system is the *sine qua non* of a mature space transportation system, and only XCOR has that technology today. That remarkable engine technology is a reason United Launch Alliance has contracted with XCOR to develop a new upper-stage engine for ULA's Atlas V and Delta IV launch vehicles.

A mature—that is lowest-cost—system must also be safe. That should be obvious. If a vehicle is unsafe, it must be replaced frequently, increasing costs. If a vehicle is unsafe, insurance costs might dominate the total cost of operation.

The Freeman: What do you know? The market helps ensure safety.

mining

Valentine: Yep. All of XCOR's vehicles are designed

to be recovered intact from any point after brake release. That is why they are all horizontal takeoff and horizontal landing vehicles. Vertical takeoff, vertical landing rocket ships all have dead zones in which the

vehicle will be destroyed, if, for example, there is an engine failure. XCOR's design philosophy is to have backup systems for all flight critical hardware except the wings. The wings have a high safety factor.

We ensure reliability through exhaustive testing. It does not rely on [modeling] analysis or simulation that is often erroneous. It insists on rigorous and exhaustive testing in the real environment.

Our culture is designed to generate and test innovative solutions to engineering problems as rapidly as possible. The rapid testing of alternative engineering solutions is one of the secrets of Intel Corporation's success. Jeff Greason, XCOR's CEO, introduced that part of Intel's culture to XCOR.

We have about 46 employees, so it's about the same size as the famous Lockheed Works of SR-71 fame. The small size and high caliber of our technical employees allow development to proceed much more rapidly than in a larger company. Although XCOR's employees work long and hard, they have a perk: They will all become astronauts when they fly in the Lynx.

The successor to the Lynx spacecraft is a piloted two-stage orbital vehicle. For safety reasons, it is also a winged vehicle, which takes off from a runway. Both the first and second stages will be piloted. The orbital vehicle is already well along in development. It incorporates much Lynx technology, as well as lessons learned from Lynx development, in both the lower and upper stages. That vehicle should be in flight test before the end of this decade. The senior engineering team expects the cost per pound for cargo to low Earth orbit to be below \$250 per pound. That number is below the \$600 per pound price point at which the space transportation is expected to take off.

The Freeman: Describe the Lynx for us, if you can.

Valentine: Lynx is XCOR's third rocket plane and the world's first fully reusable space launcher. It is a two-person suborbital spacecraft. Lynx will fly to a maximum altitude of about 68 miles and a maximum speed of Mach 3.5. It is a horizontal takeoff, horizontal landing spacecraft. It looks like a jet fighter. Four rocket engines burning liquid oxygen and kerosene power it. Each engine generates about 3,000 pounds of thrust. Lynx can fly four flights per day with a ground crew of five and a pilot. Except for reloading the propellants, no 'touch labor' is required on the spacecraft between flights.

That's quite a difference from the nine months of rebuilding required to turn around the Space Shuttle.

Lynx was designed to serve three markets: private astronaut flights, scientific missions, and small satellite launch using an expendable upper stage. The Lynx is designed to carry a dorsal pod that can carry up to 750 pounds of external scientific instruments, or a small satellite and its disposable upper stage.

The Lynx has redundant systems for all flight functions except for the wings. The reaction control system engines, necessary for maneuvering the spacecraft in space, are dual string redundant. Spacesuits provide backup to the cockpit pressure vessel.

The pilot's eyes are backup for the cockpit instruments. He can visually line up the reentry vector without recourse

THE RESOURCES

of the solar system are sufficient to support a human population a billion times larger than that of Earth until the sun dies.

to the instruments. To maximize safety and minimize operational costs, Lynx uses only non-toxic propellants. The spacecraft's structural components have a safety factor of two, approximately 1.5 times greater than NASA safety factors.

The Lynx is the operations and technology pathfinder for XCOR's next operational spacecraft. That vehicle will be a two-stage fully reusable horizontal takeoff, horizontal landing piloted orbital spacecraft designed to fly at least once a day from spaceports in the United States.

The Freeman: If you could change anything—a policy, a rule, or whatever—for the private space industry, what would it be and why?

Valentine: That would be contingent fee lawsuits and sky-high punitive awards. Here I'm going to quote Bob Lutz, "[these] are cancers eating society, dangers to commerce, killers of intelligent risk-taking and innovation, and disincentives to improvement." Despite its long history, space transportation is still an immature industry. To obtain the immense benefit of a mature space transportation system, continuous improvement and intelligent risk-taking and innovation are essential.

The Freeman: How important is all this?

Valentine: The opportunities and benefits of bringing the rest of the solar system into mankind's sphere of economic activity are so immense that people don't believe it if you tell them. As an example, the entire Earth receives one 500 millionth of the sun's energy output. The resources of the solar system are sufficient to support a human population a billion times larger than that of Earth until the sun dies. A robust, private, and competitive American space transport sector will begin to unlock these enormous resources within the next few decades.

A Natural Birth

MIKE REID



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ere I am in the hospital. The odor of antiseptic cleaner stings my nostrils. The sound of my pulse pounds in my ears. My wife is in labor.

The joy, of course, is in the event. But we also find joy in the wonders of modern medicine at our disposal. Thanks to antibiotics, incubators, heart monitors (one for mom and one for baby), and a host of other incredible devices, my wife and child are both very likely to come out of this alive and well.

But to listen to some people, it would seem that all this medical technology and material progress has some kind of dark side. It's corrupting, or immoral, or maybe alienating. It is, in a word, "unnatural."

Throughout our pregnancy, various experts encouraged us repeatedly to have a "natural" birth. This means, among other things, no pain medication for my wife.

In the last century, innovators developed powerful techniques to reduce the pain of childbirth. The most ingenious of these, perhaps, is the epidural—a cocktail of painkillers injected directly into the tissue coating the mother's spinal cord. It leaves enough pain so that the mother can feel contractions, while insulating her from the worst of the suffering.

But apparently, you shouldn't use an epidural, or any chemical painkiller. It's unnatural.

Epidurals and Instincts

In "Why Natural Childbirth?" Judith A. Lothian, a professor at Seton Hall and a prominent advocate of birth without anesthetics, says "natural childbirth is not about suffering. It is about having the freedom to find comfort in many different ways . . . for example, moving freely, listening to music, taking a shower or bath, and having [the mother's] feet and hands massaged."

That is, to be sure, a kind of freedom. But natural childbirth also means avoiding certain methods of relieving pain, and using other, less potent ones, such as "taking a shower or bath." Lothian and her colleagues claim the title of "natural" for their methods because they believe theirs are in tune with women's "deep, intuitive instinct about birth." And maybe they are.

The shower in our hospital room had propane-heated water pumped through copper pipes into a plastic tub specially outfitted with a chrome guardrail for safety and ease of entry. It was very nice. But was it natural? Instinctive? Does Lothian think human females have an instinct to deliver their babies in naturally occurring hot springs?

For the advocates of natural birth, a heated shower in a plastic tub fits with their idea of "natural" simply because it's something we now take for granted in the industrialized West. Surrounded by the wealth and innovation of 200 years of relatively open markets, we've had hot baths at home for long enough that perhaps they now seem like a natural part of life.

By contrast, the epidural, even though it's been used since 1940, is only administered in hospitals. Because it requires skilled technicians who use highfalutin medical terminology, natural birth advocates have concluded such painkillers are just not what nature intended.

To be morally good, they think, one must be natural. To be natural, one must attempt to be pre-technological.

On those grounds, during one of the most dangerous and emotionally volatile moments of a woman's life, she should also endure horrendous pain. That pain has becomes fetishized somehow. To endure such pain is a sacred rite of motherhood. To dull the pain is to make childbirth profane.

The Technological Animal

The truth is, humans are by *nature* technological animals.

Even 200,000 years ago—when our species first appeared (by the earliest estimates)—the more primitive species from which we evolved already had clothing, fire, temporary shelters, and stone tools. Our own species evolved only *after* our predecessors had developed a cluster of technologies. With it they were able to survive, develop, and expand.

Today we can survive without fur because our ancestors invented clothing and campfires. We can make do with our small, dull teeth because our ancestors invented cooking and utensils. Innovation is human.

Choices and Costs

Now, I would never suggest forcing the latest technology on anyone. Each new technique has costs that can only be weighed by the people who pay them. That epidural, for instance, sometimes leaves the mother's legs too weak to stand on until the next day, so for her there is a trade-off between reducing pain and retaining mobility. No one can decide for a woman which is most important to her experience of birth.

And not every invention is necessarily wonderful. One wonders, for example, whether that 5,000-year-old invention called the State will ever fall into obscurity. Indeed, the State's intrusion into the hospital through varying degrees of socialized medicine makes it difficult for anyone to calculate the true costs and tradeoffs required for any procedure.

Would the soft, transparent plastic used to transport the epidural painkiller be better used to make iPod cases or children's toys? Because prices aren't allowed to send the right signals between producers, providers, and patients, we just don't know.

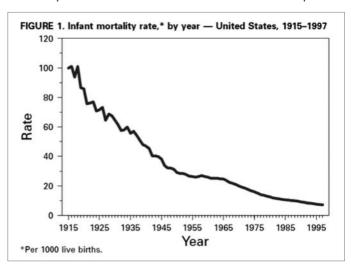
Whatever the case, healthcare systems in most advanced nations (quasi-socialized as in the U.S., or fully socialized as in Canada) can afford to be profligate and parasitic thanks to the bounty of markets beyond healthcare.

Infant Mortality and Human Progress

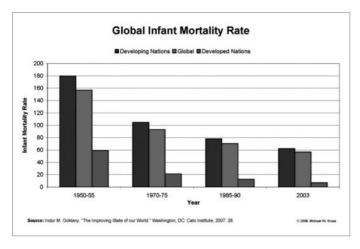
Until the invention of safe Caesarean sections in the late 1800s, many women and children were doomed to death because a human infant's head is often too big to pass safely through the mother's birth canal.

For those children who survived delivery, fully one third died in their first year throughout the precapitalist European Middle Ages. Even by 1900, with the sweeping progress of industrialism and markets, more than 10 percent of all children died in their first year in every country in the world except Sweden (that is, according to this source: tinyurl.com/bdpku9h.)

Since 1900, infant mortality everywhere has fallen dramatically. In advanced capitalist economies, it's now usually below 1 percent. Here's a chart from the Centers for Disease Control showing the steady decline of infant mortality in the United States over the 20th century:



And this graphic from Indur Golkany's *The Improving State of the World* shows the glorious drop in the number of infant deaths per 1,000 live births in four data periods from 1950 onward.



Today, even most "third-world" countries have infant mortality below Sweden's 10 percent achievement in 1900. This is largely due to the spread of dirt-cheap technologies used first by the rich but now used by almost everyone—like sterilized water and generic antibiotics.

In the quest for a natural childbirth, should we abandon these advances too?

What Is Natural?

Often, people make a connection between the false ideal of natural living and the traditions of the feathered and painted peoples now lumped together in the Eurocentric category of "primitive." The idea is that somehow *their* technologies don't really count.

But when we put on a pedestal the cultures of such people, we are only romanticizing a snapshot from the 200,000-year-long technological progress of our species.

Would you say the Ju/'hoan hunters of the Kalahari desert, often considered one of the oldest cultures in the world, are "unnatural"? Why not? The bows and arrows they used to hunt for game before colonization were invented probably less than 30,000 years ago. And what about the paralytic poisons they use for taking down big giraffes with small arrows? These occur naturally. But their application for hunting is a technological advance.

Would you call the tribal Yanomamo of the deep Amazon

"unnatural"? Why not? Their entire traditional economy was based on growing plantains, a kind of banana imported from Asia by Europeans only 500 years ago.

What would a completely "natural," truly non-technological human look like? Natural clothing would have to mean pure nudity, of course. Natural foods might mean raw rabbits caught with one's bare hands. And all-natural medicine would mean no potions or powders, no sewing needles, and obtaining whatever medical benefits the edible plants around us might yield.

Such cultures do not exist, and they never have.

In this sense, there are no "natural" humans.

We humans haven't got any fur, or claws, or armor, or camouflage. We're not poisonous. We can't fly. Our two legs are much slower than other animals' four, and we're not even born with the proper instincts for walking on them.

"Naturally," we're pitiful, misshapen creatures. "Naturally," we should be extinct.

Put another way, what's truly natural for humans is invention. We've invented campfires and clothing, arrows and agriculture, iPods and epidurals. Invention is who we are.

WHAT'S TRULY NATURAL FOR HUMANS IS INVENTION.

So when my daughter finally came into this world, after my wife and I had spent 43 hours in the hospital, she did so surrounded by the buzzing and beeping of a dozen lifesaving and pain-reducing devices.

My little girl was born in the natural, human way—with the best technology available to ensure her survival and her mother's.

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Indivisible Liberty: Personal, Political, and Economic

DOUG BANDOW



At least they say they're for freedom. Politicians wax eloquent when talking about America's liberties in general. Advocates for free speech and civil liberties aren't hard to find. Champions quickly rise up to battle threats against privacy. And

most people intuitively understand that intimate personal and family decisions don't belong to government.

But when it comes to economic liberty, a lot of people

suddenly change their tune. It's as if economic liberty doesn't count. Indeed, this facet of freedom seems to stand alone, vulnerable to state regulation and control. Some of those who fervently declare their devotion to freedom disappear when property rights, entrepreneurship, or freedom of contract is under attack.

SOME OF THOSE

who fervently declare their devotion to freedom disappear when property rights, entrepreneurship, or freedom of contract is under attack.

government to violate economic liberty.

Regulators rarely acknowledge they are abrogating anyone's freedom. Often they claim to be protecting the consumer. In effect, political elites have created two classes of freedoms: important and economic. If the question is about the freedom to criticize government, have sex, choose whom to marry, or keep one's personal life private, most politicians at least say these are important enough to preserve. Some of the people who most support intervening in the economy argue that these personal liberties are fundamental, deserving of respect.

By contrast, if you are deciding what business to create, which profession to choose, where to work, how much to earn, what hours to work, where to advertise, which product to produce, whom to hire, and how to spend your money—then those in power view these liberties as less important. Government is not only

allowed to regulate various commercial activities, they say; it ought to.

Running Your Life Through Your Wallet

Today Congress and state legislatures are far too busy dreaming up new ways to run our lives. Some of those democratic *diktats* are directed at both our personal and economic affairs. For instance, healthcare "reform" empowered the national government to control many more of our medical decisions, as well as how we must fund those decisions.

So the bulk of what legislators do is manipulate the economy. They offer high-minded excuses for doing so: to create jobs, to ensure fairness, to alleviate poverty. The bottom line is that nearly everything they do requires

Higher Pursuits

To most people, the right to protest seems higherminded than running a business or making a living. Economic activity seems mundane in contrast. Choosing a life partner and engaging in sex are more personal than buying a product or hiring an employee. And the ability to keep one's private life private would seem to go to the essence of being a human being. Buying and selling in the marketplace strikes many as common.

But economic liberty is much more important than first appearances suggest. We might be inspired by "higher"

THE FUTURE BELONGS TO LIBERTY

Indivisible Liberty: Personal, Political, and Economic

pursuits, for which people exercise their personal and political freedoms. But there is perhaps nothing more fundamental than the freedom to improve our lives and to care for ourselves and our families in the manner we see fit.

During the 20th century, we decisively answered the question of whether economic liberty delivers economic prosperity. If you desire a better future, then you need economic freedom.

But economic liberty delivers more than dollars and cents. Most people view work as an outgrowth of themselves. It turns out an open marketplace rewards

honesty, hard work, initiative, inspiration, and other unsung virtues, as well. Economic freedom is also a chance to promote our beliefs, achieve success, pursue happiness, and develop as a person. Will you direct the fruits of your

F R E E D O M means more than profits and losses.

labor to satisfying personal needs, supporting good causes, or making sound investments?

Indeed, when you graduate from college the most important freedom probably is to work, in order to earn and save. Other freedoms—to vote or protest, for instance—are obviously important. But the most pressing liberty involves choosing a career, or at least landing a job. How will you earn a living? To what will you devote much of your life? Where will you spend most of your waking hours? In the economy.

Economic liberty has important spillover effects, too. Freedom in one area encourages it in others. For example, a dollar you don't earn or can't keep is a dollar you can't spend on a noble social or political cause.

Freedom of the press is not just the right to speak out, but it is also the right to acquire the means of speaking out. In some countries, government controls the supply of newsprint and access to the airwaves. In such cases, media freedoms are at risk. Who needs censorship when one can silence critics through economic means? However, the spread of computers, fax machines, cell phones, and Internet access makes it more difficult for authoritarian regimes like China to control their growing populations.

More broadly, increased economic prosperity encourages people to embrace political liberty. If your

children are starving, you worry about feeding them. If your children are well-fed and healthy, you have the luxury of worrying about other things—like supporting a cause, a candidate or a campaign. In countries that have gotten richer—like Mexico, South Korea, and Taiwan—growing middle-class populations forced ruling political elites to give way. That may eventually happen in China.

Economic freedom means more than profits and losses. Economic freedom fits within a larger free society in which resources are more freely available for an array of possible

pursuits. In the developed world, many people give up a life of commerce for one of service or contemplation. You can work for a nonprofit, go to seminary, become a permanent graduate student, or join a monastery. And in

most areas of the economy, anyone can opt out. If you don't like the products or services a business is selling you, you can simply exit. Or you can find another provider, like a local co-op. The richer a society is, the more these kinds of options are available.

Indivisible

Finally, economic success enables one to more fully take advantage of other liberties. Earn a little and then travel the world, go to graduate school, start a newspaper, give to charity, back a Kickstarter campaign, or support the politician of your choice. Create a new online service—say Twitter or Facebook—and empower political dissenters and protestors around the globe. Or rely on a full bank account to switch careers, whether to contemplate your navel or to help mankind. People with few economic liberties have fewer options like these.

The punchline? Liberty is indivisible. Economic freedom is as important as personal or political freedom, because the personal, the political, and the economic are strands of the same braid: liberty. Thus, the only way to achieve and protect a free society is to defend liberty in all its forms.

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School Buses, Teamsters, and Rent-Seeking

CHARLES W. BAIRD

new statute in Illinois makes safety the primary consideration in public schools awarding contracts to school bus operators. This replaces the taxpayer-friendly rule that contracts should be awarded to the qualified provider that bids the lowest price. Safety has already been part of qualification. The statute passed the Illinois legislature at the behest of the Teamsters Union, which has a master agreement with First Student School Bus Transportation Services (a subsidiary of the U.K.'s First Group). The agreement makes it difficult for First Student to compete on price with relatively union-free operators such as Durham School Services (a subsidiary of the U.K.'s National Express Group).

John T. Coli, a Teamster official, exclaimed, "The new law will finally ensure that driver safety, skills and student security are not trumped by reckless, fly-by-night owner-operators hoping to win contracts with the lowest possible bid." Which operators are "reckless and fly-by-night"? To the Teamsters and their political satraps, they are, by definition, union-free operators.

Another Teamster boss, James T. Glimco, passionately proclaimed, "It's one thing for the state to want to save money on its transportation services, but we cannot jeopardize student safety to help Illinois save a few extra bucks on its contracts." But the new statute has very little to do with student safety. It is really about rent-seeking—that is, decreasing the competitive advantage of operators who are relatively free of excessive Teamster-imposed labor costs. Illinois safety bureaucrats will always rank a Teamster-impaired school bus operator as safer than any of its competitors, notwithstanding that actual safety records show no significant differences.

And First Student is definitely union-impaired. In its commentary regarding First Student's financial prospects for fiscal year 2012, Bank of America wrote, "We believe that the current school bidding season will be challenging, with [First Student] protecting its margins at the cost of volume, and thus potentially losing a number of contracts to competition." It has to protect its margins because of its Teamster-driven increases in labor costs.

How did First Student fall prey to the Teamsters? Beginning in 2001 the union undertook a corporate smear campaign to depreciate First Student's reputational capital. In 2006, Martin Gilbert, the chairman of FirstGroup, signaled surrender when, at the U.K. company's Annual General Meeting, he promised to "stamp out antiunion behavior" and declared that the company "would do everything in its power to ensure the company was neutral on the issue of employee representation." From 2006 to 2008 the Teamsters and their favorite academic union apologists-e.g., John Logan of San Francisco State University and Lance Compa of Cornell University attacked First Student for its alleged failure to live up to the promises of 2006. Curiously, Logan and Compa argued that United Nations and International Labor Organization rules require employer neutrality in union representation campaigns.

In 2008 First Student fully surrendered to the Teamsters by adopting a "Freedom of Association" policy that compels it to remain neutral in all Teamster organizing efforts. First Student's freedom of association policy requires it "to refrain from management conduct . . . which is intended to influence an employee's view or choice with regard to labor union representation." The result? According to William Gould, chairman of the National Labor Relations Board in the Clinton administration and a monitor of First Student's neutrality policy, First Student's "union membership increased from approximately 18 percent to more than 80 percent" from 2008 through 2010. Gould thinks this is



wonderful, but it is actually nothing more than a malign consequence of surrender through neutrality.

When a company that is a target of union organizing refrains from providing its employees with reasons to remain union-free, it trespasses against its employees' freedom of association.

Freedom of association has two parts: any person can agree to associate with any other person (or group) and any person can refuse to associate with any other person (or group). In brief, freedom of association means any person is free to associate with any other person who is willing to associate with him.

To give effect to worker freedom of association the National Labor Relations Act (NLRA) was amended in

1947 to permit and encourage employer free speech in union organizing campaigns. Freedom of association requires that workers make an uncoerced, informed choice regarding unionization. That choice requires that workers hear both sides

of the unionization debate. Employer neutrality is a trap for employers and employees.

The Teamsters are trying to capture Durham in the neutrality trap, but Durham has chosen to speak vigorously and truthfully against unionization whenever and wherever the Teamsters try to corral more dues payers among its employees.

Durham has a Workplace Rights Policy (WRP) to protect its employees' freedom of association. Item 1 of the policy states that "Everyone shall have the right to freedom of association with others, including the right to form and join trade unions." Further, "No one may be compelled to belong to an association, either directly or indirectly through the compulsory financial support of such association." This is in exact conformity with Article 20 of the UN's Universal Declaration of Human Rights (1948), which says: "(1) Everyone has the right to freedom of peaceful assembly and association," and "(2) No one may be compelled to belong to an association."

Item 2 of the WRP guarantees employee freedom of choice through secret-ballot representation elections. It affirms that "[E] veryone shall have the right to vote for representatives in genuine elections which shall be held by secret ballot, guaranteeing the free expression of the will of the electors." Durham will not agree to surrender its employees to the Teamsters through cowardly card-check agreements in which secret-ballot elections are replaced by employee signatures collected by union organizers in threatening face-to-face encounters with employees.

Item 3 of the WRP guarantees that in representation elections, "Everyone shall have the right to freedom of expression . . . and the freedom to hold opinions without interference." This conforms to Article 19 of The UN Declaration of Human Rights, which asserts, "Everyone

has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers."

Durham tolerates no gags on employer or employee free speech.

Item 4 of the WRP underscores the importance of free speech by stating that "Everyone shall have the right to obtain or impart information necessary to make an informed choice [which is] a necessary corollary to the rights of freedom of association and secret ballot elections for representatives." This conforms to the 1947 amendments to the NLRA.

In Conclusion

E M P L O Y E

employees.

NEUTRALITY

is a trap for employers and

In May the Teamsters sent alleged employee victims of Durham's resistance to unionization to National Express's Annual General Meeting in London. Fortunately all their weeping and wailing fell on skeptical ears. The National Express board of directors affirmed that Durham would continue to speak vigorously and truthfully against unionization whenever and wherever the Teamsters try to importune its employees. Debate, yes; surrender, no!

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The Enduring Lesson of "I, Pencil"

NICOLE CIANDELLA

In honor of FEE founder Leonard Read, and in hope of a better economic future, the Competitive Enterprise Institute (CEI) has released a new short film adaptation of "I, Pencil." You can watch the film and help share it with new audiences at IPencilMovie.org.

s President Obama embarks on his second term, we'll have to see whether he conjures up the specters of his controversial campaign moments. Recall the controversy over the line, "You didn't build that." It upset a lot of people because it sounded like he was saying they hadn't built their businesses. But here's the thing about that memorable line: If you have a business, there is a sense in which you didn't build it all on your own.

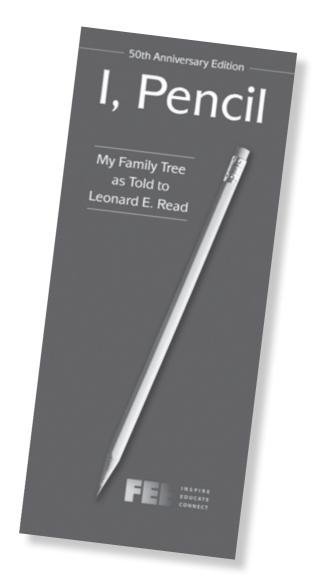
Obama was right—but for the wrong reasons.

The President implied business owners are dependent on government largesse and infrastructure, as well as on community goodwill. In fact, business owners rely on a much bigger and more sustainable resource: the millions of self-interested individuals who engage in market activity around the globe. If this had been what Obama was implying, we might be on our way to a quick recovery.

Declaration of Interdependence

In his 1958 essay "I, Pencil," Leonard E. Read explains how an ordinary wooden pencil is made. It's a long, complicated process, from the harvesting of cedars for the pencil body to the mixing of clay for the eraser. No man on earth can make a pencil by himself, Read says, because the pencil is the end product of a complex chain of human activity.

Not even the CEO of a pencil company possesses the knowledge necessary to make a pencil. The CEO relies on loggers, truckers, miners, and factory workers; and these workers in turn rely on the men and women who manufacture saws, trucks, equipment, and machines. All of these individuals contribute little bits of know-how to the production of an ordinary pencil, and they do so in pursuit of their own interests. Their voluntary cooperation



makes the pencil possible.

Every single modern business owner, like the CEO of a pencil company, must depend in part on the knowledge and labor of others. It's interdependence. Even a small business owner working out of her home relies on others to develop software tools and other services she needs. She is not relying on others' charity, goodwill, or civic duty. She is relying on the fact that they'll be looking for rewards for serving her well. This is not to argue that charity, goodwill, and civic duty are unimportant. It's that these can't make a pencil.

Contrary to myth, entrepreneurs are not islands unto themselves. Nobody acting in markets is self-sufficient; markets, by their nature, incentivize cooperation among people. Indeed, markets pull individuals to arrange themselves into interactive patterns of connectivity, trade, and production that go beyond traditional, cultural, and national boundaries. In pursuit of their individual interests, people who are strangers to each other—who might even hate each other if they ever met—unwittingly work in collaboration. This collaboration makes possible products that would otherwise be impossible. And every day, new interactions seed new markets worldwide.

Yet people take this incredible cooperation for granted. President Obama's comments about business owners and the immediate backlash both fell into a strange set of false narratives that pit community values against market values. In truth, markets are connecting forces, aligning individual interests so that people are helping people they'll never meet.

Energies Uninhibited

In the words of Leonard Read, the lesson of "I, Pencil"

is: "Leave all creative energies uninhibited." Today, federal regulations cost Americans \$1.75 trillion annually, according to my CEI colleague Wayne Crews. Many of these regulations significantly and unduly curb creative economic activity, preventing the founding of new businesses or the growth of existing ones. High taxes and fees suffocate fledgling markets; tariffs thwart trade across our borders; and strict immigration laws restrict collaboration with talented people born in other countries.

As our leaders begin to deal with the serious economic challenges that confront us, they'd do well to acknowledge the best economic stimulus would be to help unleash Read's creative energies. Voluntary activities—coordinated largely by prices and property rights—have given rise to the everyday wonders of our modern world. It's through entrepreneurial fire, productivity, and free exchange that we'll eventually grow our way out of our troubling economic conditions. In fact, it's the only way we will.

Nicole Ciandella is a media coordinator at the Competitive Enterprise Institute and the author of the screenplay for CEI's "I, Pencil" film.

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The Nature and Origins of Money

ALEX SALTER

he study of spontaneous orders—systems of coordination resulting from human action but not of human design—is one of the most important tasks facing economists. Austrian economist and Nobel laureate F. A. Hayek even claimed that understanding these phenomena was the single most important concern of the social sciences.

With its evolving networks and patterns of exchange, the free-market economy is perhaps the best-known example of spontaneous order. However, the extensive division of labor common in advanced market economies (and thus often taken for granted) itself rests on another self-organizing and self-perpetuating system. You can find evidence of that system every time you open your wallet.

A commonly accepted medium of exchange, what we call "money," is necessary for the division of labor in a given society to progress beyond the most rudimentary level. To see

why, consider the limits to specialization and trade facing humans in an environment where use-goods trade directly for use-goods—that is, barter. In a barter economy, economic calculation is impossible because there is no common denominator that can be used for accounting purposes. Calculations of profit and loss are indispensable signals for entrepreneurs; without them they have no way of knowing which lines of production should be expanded and which should be abandoned.

In addition, without profit-and-loss accounting, there is no way to single out the economically efficient way of producing a good from the many technologically feasible ways to make that good. This means entrepreneurs cannot create the network of goods and services that are used to make goods for final consumption. The use of capital in a barter economy is severely curtailed. Without capital to facilitate the division of labor, labor productivity—and thus wages and living standards—remains abysmally low. Advanced, capital-intensive economies cannot exist

without money serving as the standard that guides profitseeking entrepreneurs.

Chartalism vs. Bottom-up Money

It's obvious then that there are massive gains to be had from moving from a barter economy to an economy characterized by indirect exchange, or exchange via money. But how did this system come about? Some scholars attribute the creation of money to the State. This theory, called Chartalism, holds that the demand for money was created by governments imposing obligations on their citizens, and then requiring said citizens to pay these obligations (taxes) in the form of a particular commodity. This commodity then became widely desirable because it made discharging obligations to the government a simpler

matter for both State and citizen. Lending weight to this theory is the significant role governments around the world have in supplying money, usually with the help of a central bank.

However, that government has a role in money provision now does not mean this was always the case. The origins of money may have quite a different story, as we'll see. Chartalism also cannot explain why some commodities that governments demanded—such as precious metals—almost universally emerged as money all around the world, while others—such as livestock—did not. We need a theory that can explain why some commodities appear to be "better" forms of money than others. Once again, the Austrian school of economics provides an answer,

this time in a theory developed by the school's founder,

Money is necessary for the division of labor in a given society.

Menger and Money

Carl Menger.

Menger laid out his theory in an 1892 journal article titled "On the Origins of Money." Menger described, starting from a system of barter, the economic forces that led to the emergence of a commonly accepted medium of exchange. The answer lies in the concept of

salability—characteristics of a good that make it relatively more marketable than other goods. To be salable, a medium needs three things: homogeneity, divisibility, and low storage costs. Homogeneity means one unit of the commodity, whatever it is, is more or less the same as other units. Divisibility means the commodity can be split into smaller parts without damaging the resale value of the commodity. Low storage costs are self-explanatory.

We can see from these criteria that precious metals are quite salable. An ounce of gold is identical

to another ounce of gold; an ounce of gold can be split into a half-ounce without diminishing the ability of the gold to satisfy a want (say, to make jewelry); and gold is relatively cheap to store. Livestock, on the other hand, exhibits none

of these qualities. One cow can be quite different from another; you cannot split a cow in two without killing it; and cows are costly to keep, since they must be fed and protected from predators and disease.

So much for salability. But how do these salable commodities become money? In a barter economy there is an additional exchange friction relative to a money economy: Not only do you have to find someone who has something you want, but that someone also has to want what you have. This problem, known as the double coincidence of wants, greatly increases the costs of trading. Due to differences in salability across commodities, some traders are going to have their desires frustrated more often than others. However, given that the terms of an exchange are frequently visible to third parties, enterprising traders can engage in a bit of strategic behavior: Instead of only exchanging their commodity directly for the one they want, they will also offer to exchange their commodity for one that is more salable than the one they currently have. Traders have an incentive to do this since commodities that are more salable are by definition more marketable. By trading their less-salable commodity for a more salable one, they increase their chances of making the trade that was their desire all along. This strategic behavior makes the trader better off, since he is now able to satisfy his wants more easily.

Other traders have an incentive to copy this behavior for the same reasons. As more and more salable commodities become desired for strategic trading purposes, demand for these commodities increases. The process repeats itself until the most salable commodities are almost universally demanded for their exchange value rather than

their consumption value. Eventually the process terminates with one commodity (or sometimes a few) serving as the generally accepted medium of exchange. The money economy has been created—not by any social planner or State, but as the result of the behavior of many,

many individuals pursuing their own interests. It is the quintessential example of spontaneous order.

The State of Money

t h e

i s

quintessential

spontaneous order.

Money

example

How money economies are created and sustained has important implications for economic policy. If the State is the prime mover behind money, it is much more likely that policy can shape its development than if money is the spontaneous result of decentralized market behavior. This is why the debate on the origins of money is not limited to academic publications but also features in today's most prominent periodicals, such as *The Economist*. While the debate has been going on for more than a century—Chartalists and Mengerians have a poor track record of changing one another's minds—it is crucial that students of society actively engage in this debate. In light of the recent financial crisis and the uncertain fate of both the dollar and the euro, money is too important a phenomenon to be misunderstood.

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Blood and Gold

SARAH SKWIRE

Prank Norris's 1899 novel *McTeague* is one of the great neglected masterpieces of American Realist literature. Filled with so much jealousy, obsession, murder, blood, and gold that twentieth-century composer William Bolcom turned it into an opera, *McTeague* is a useful reminder that "realist literature" does not mean literature that is exactly like real life.

Realism is, instead, literature that focuses on the lives and experiences of ordinary men and women—particularly in an urban context. *McTeague*'s events and characters are not realistic. They are brutal, often vile, and even melodramatic. But they are intended as an antidote to decades of novels that attended almost exclusively to the doings of the wealthy and conveyed an essentially romantic view of human nature.

Erich Von Stroheim translated *McTeague* into a 9½-hour silent film in 1924, which was cut into incomprehensibility by the studio. He titled it *Greed*. And the dangers of obsessive accumulation are front and center in the novel. As the story begins, McTeague is a dentist in a busy working-class neighborhood in San Francisco. When Trina Sieppe, the girlfriend and cousin of McTeague's best friend Marcus, comes to McTeague to have a tooth pulled, McTeague and Trina begin to date. Shortly afterward, Trina wins the phenomenal sum of five thousand dollars in the lottery. Marcus, who feels that McTeague stole not only his girlfriend but also his fortune, becomes McTeague's enemy. Trina and McTeague begin to consider what to do with their windfall.

As they settle into married life, Trina's "household duties began more and more to absorb her attention, for she was an admirable housekeeper, keeping the little suite in marvelous good order and regulating the schedule of expenditure with an economy that often bordered on positive niggardliness. It was a passion with her to save money . . . she hoarded instinctively, without knowing why." This perhaps excessive economization rapidly turns into an uncomfortable parsimony. When a house they have



long wanted comes onto the market, McTeague and Trina consider buying it, but Trina almost instantly rejects the idea, despite their considerable savings.

"Huh—what do you think, Trina?"

Trina put her chin in the air, tilting back her heavy tiara of swarthy hair.

"I am not so sure yet. Thirty-five dollars and the water extra. I don't think we can afford it, Mac."

"Ah, pshaw!" growled the dentist, "sure we can."

"It isn't only that," said Trina, "but it'll cost so much to make the change."

"Ah, you talk's though we were paupers. Ain't we got five thousand dollars?"

Trina flushed on the instant, even to the lobes of her tiny pale ears, and put her lips together.

"Now, Mac, you know I don't want you should talk like that. That money's never, never to be touched."

"And you've been savun up a good deal, besides," went on McTeague, exasperated at Trina's persistent economies.

When McTeague signs a lease for the house anyway, Trina refuses to move and forces McTeague to pay the forfeited first month's rent himself rather than taking it from her well-guarded savings. This unwillingness to buy into a promising future investment and symbol of their marriage is indicative of an ever-increasing miserliness in Trina. In a slightly later moment that balances precisely between the comic and the chilling, Norris shows us Trina as she

bolted the door with shaking fingers, and emptied a heavy canvas sack upon the middle of her bed. Then she opened her trunk, and taking thence the brass match-box and chamois-skin bag added their contents to the pile. Next she laid herself upon the bed and gathered the gleaming heaps of gold pieces to her with both arms, burying her face in them with long sighs of unspeakable delight. . . . She lay on her bed, her eyes closed, her face buried in a pile of gold that she encircled with both her arms.

Trina's near-sexual obsession with her hoard of treasure leads to her descent into the most abject poverty and, finally, to her murder by McTeague.

With Trina dead, McTeague steals her money, flees with Marcus in hot pursuit, and begins his own obsessive quest for gold in the desert mines of Placer County. The two men end the novel in a scene of such stunningly creative brutality that I'm reluctant to spoil it for readers of this review. Suffice it to say that nothing like it has been written before or since—except perhaps for some of the greatest tragic extremities of the Greek drama.

If these were the only events in *McTeague*, we would have a novel that fits firmly into the traditional genre of literature that moralizes against wealth. But Norris is—perhaps despite himself—sometimes a more interesting thinker than that.

Just as Mac and Trina's discussion of buying a house suggests that Norris knows there is an appropriate kind of investment that is counterposed to Trina's inappropriate and obstinate miserliness, a few other moments in *McTeague* point to some more complicated ways to think about wealth and business.

When McTeague's friend Marcus becomes set against him and decides to destroy him, the first thing he does is to report McTeague for practicing dentistry without a license. Though he has practiced with some success for twelve years (this is a relative term; Norris's accounts of turn-of-thecentury dentistry are not for the faint-hearted), McTeague is told he must close his practice. In scenes reminiscent of a video from the Institute for Justice, we see McTeague and Trina fretting over how they will continue to earn an income, and McTeague insisting, "I ain't going to quit for just a piece of paper." It is not some sort of ahistorical libertarian misreading of Norris to find this vision of the destructiveness of licensure laws infuriating. How else could one be meant to respond to the image of a broken McTeague sitting in his perfectly tidy, completely empty dentist's office saying, "I got everything fixed and ready an' nobody comes, an nobody's ever going to come any more"?

And for those seeking some example of the bourgeois virtues in Norris's novel, we need look no further than the fragile romance between the dressmaker Miss Baker and the bookbinder Old Grannis. Though the two are so shy that they are scarcely able to exchange a word—and though they conduct their romance primarily by sitting close to the partition that divides their apartments so they can imagine being together—Grannis and Miss Baker eventually, after long lives of hard work and saving, find "a little Elysium of their own creating."

It would be madness to call *McTeague* a novel that praises wealth. Stroheim was right to call his filmed version *Greed*. But it would be irresponsible to ignore the ways in which Norris allows—even in this least subtle of novels—some subtlety into his consideration of the ways in which different people handle their wealth with different levels of responsibility and with different understandings of the meaning of money as a means of exchange, an object of desire, or a source of security.

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Technology: A Threat to Liberty?

LUCA GATTONI-CELLI

Joseph Kennedy told his boys John, Robert, and Edward not to write down anything they would not want to see on the front page of *The New York Times* the next morning. Even if *The Times* may be going out of style, Joe Kennedy's advice is not.

David Petraeus—director of the CIA and one of the most powerful men in the world—was recently undone by Gmail. Threatening e-screeds led the FBI from a Florida socialite to General David Petraeus' biographer. Its monitoring easily connected the biographer to the CIA director. And if he was vulnerable, we certainly are.

Our real concern is not with the technology itself, but how its novel uses might make us more vulnerable. Most people can't resist using cheap, powerful computing devices that channel nearly all the world's information. Can we count on those people to use these tools in the service of truth, justice, and freedom?

The Cloud

Life in The Cloud can be as whimsical and convenient as it sounds. After a long day of work, I tapped out ideas for this piece, including this sentence, on my phone to revise a Google document I created soon after *The Freeman*'s editor accepted my pitch via Facebook. Later I confirmed the topic on Facebook via SMS.

As more of our information and interactions migrate online, we are recording things we never recorded before. Minutiae previously confined to rolodexes, diaries, and midnight whispers are as accessible as pocket lint. Only, what if we could just as easily grab strangers' pocket lint?

My legal, personal identity resides online. Anyone who stole my laptop or smartphone would be able to fiddle with my finances or savage my reputation in minutes. A decent hacker with a free afternoon could do the same—without stealing either one. It's happened even to particularly techsavvy people, like *Wired* senior writer Matt Honan, who described how thoroughly—and quickly—his life was turned inside out in a recent *Wired* cover story (tinyurl. com/asc6n8m).

The government has easy access to anything we put online, often without need for a warrant. Law enforcement at all levels can track GPS-enabled devices with a surprising

> lack of drama. The NSA mainlines Internet and telecommunications traffic into colossal data centers for analysis and storage archiving (see tinyurl. com/7lpugye). Defense and intelligence agencies use highly classified "tag and track" systems to keep unbelievably close tabs on specific individuals to an incredible—almost supernatural degree. The same basic technologies that allow our smartphones to navigate unfamiliar cities and make video phone calls allow governments, particularly our own, to deploy drone aircraft that drop bombs on the other side of the world and patrol domestic skies with little oversight and unclear consequences. That scares a lot of people.



Fady Aziz/flickr.com

Technology: A Threat to Liberty?

The Silver Lining

Still, diligent students of economics and liberty must ask whether having our heads in The Cloud represents a significant departure from the past. Are we more vulnerable? Arguably not, in view of censorship and other civil liberty abuses during the Wilson, Lincoln, and Adams presidencies. The Defense and State departments have suffered massive leaks. Hosni Mubarak tried to kill the

D I G I T A L TECHNOLOGY

is radically democratizing information, making it more difficult to control. Abuses are easier to document. (Some major media firms are using iPhones and small drones to cover events.) The Internet does not even need an inch to throw a door wide open, only a few bytes.

Arab Spring resistance by shutting down Egypt's Internet, but that brought the movement vital popular attention. North Korea's leaders are virtually powerless to stop the influx of mobile phones linked to the outside world via satellite. Information asymmetries between governments and citizens will only increase. The NSA already has a tough time processing the oceans of data we all generate.

My alma mater has two mottos. One of them makes sense: *Sapientia ipsa Libertas*. Knowledge itself is liberty! Digital technology is radically democratizing information, making it more difficult to control. Abuses are easier to document. (Some major media firms are using iPhones

and small drones to cover events.) The Internet does not even need an inch to throw a door wide open, only a few bytes.

Once a concept—in a video, for example—goes viral, virtually no one can control public exposure or reaction to it. It takes on a life of its own. The case of Invisible Children's Kony 2012 campaign demonstrates that critiques sometimes go viral more intensely than the subject of those critiques. Buzzfeed contributor John Herrman (tinyurl.com/d26ee4o) called Twitter a "truth machine" to describe how the service handled falsehoods as Hurricane Sandy hit the United States. Good information tends to be shared online. Bad information tends to be discredited and discarded. This should make us optimistic about the viability and vitality of a truly free marketplace for ideas.

Technology exposes people to ideas (like libertarianism) that they might never have been exposed to otherwise. I owe more of my intellectual and ideological growth in the last five years to Facebook than any other means. If people encounter a new concept or fact, they may not care, but information is now more likely to reach those who find it compelling. This is crucial to the Hayekian theory of social change advanced by FEE, among others.

When an admirer asked Hayek whether he should enter politics, Hayek admonished, "Society's course will be changed only by a change in ideas. First you must reach the intellectuals, the teachers and writers, with reasoned argument. It will be their influence on society which will prevail, and the politicians will follow." If an idea is firmly held by a sufficient minority (pegged by researchers at the Rensselaer Polytechnic Institute at around 10% in a widely covered study, tinyurl.com/43kxjpu), it will become part of a group's culture. Then their society will be transformed.

Technology gives ordinary people unprecedented power. We should be optimistic that it will be a force for liberty and good in the long term.

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Competition and Free Thought: Friedman, Mill, and Educational Choice

NATHAN SMITH

Editor's Note: National School Choice Week is January 27 through February 2.

ohn Stuart Mill's ideas on education are not as well known as Milton Friedman's. But they may deserve to be. Mill and Friedman agreed that government should not run schools, but for different reasons. (At least each emphasized different things.) Friedman was mainly concerned with productivity improvements that arise through competition. Mill was more concerned with freedom of thought. Mill valued the diversity of opinion that comes from people pursuing their own intellectual journeys, and all compulsion in opinion was anathema to him. The consequences of State schooling in America suggest Friedman and Mill were both correct.

School Productivity

State schools are a productivity disaster. In principle, public schools should thrive in the Information Age. Schools are in the information business, tasked with inculcating knowledge, and the processing and distribution of information have been vastly accelerated by interconnected computing technologies. Moreover, schools should benefit from the Flynn effect—the pattern cognitive psychologists have observed in which aggregate IQ rises a little bit each generation.

And schools are getting more money, too. In real terms, school spending per pupil rose from \$2,835 in 1961–62 to \$10,694 in 2008–09, according to the National Center for Education Statistics—a 177 percent increase. Yet SAT scores for college-bound seniors are stagnant (tinyurl. com/74y2dm9). High school graduation rates seem to have hit a plateau (tinyurl.com/7bhxsqp), and high school graduates are less prepared for college than ever (tinyurl. com/acq82v4). Better raw material, more money, new technology—and yet no improvement.

The State education system is centrally planned and run by committees, so choice and competition are lost from the system. Stagnation is therefore inevitable. Where market forces prevail, productivity improvement is normal. Computers and cell phones are vastly better than they were



twenty years ago. Cars and planes less dramatically so, but they are safer, more fuel-efficient, and have new features. In the energy sector, hydraulic fracturing (fracking) has vastly increased the supply of fossil fuels, so that the United States may become a net energy exporter (tinyurl. com/bb8bwwk) within the next couple of decades. Less innovative sectors can still use technologies invented in other industries to raise productivity, e.g. by lowering their energy costs or improving their logistics—if competitive market forces are at work. But productive innovation is difficult and competition is the best school in which to learn it. State education plays hooky from that school, so it fails to learn.

Poor public schools are a major bottleneck holding back the entire U.S. economy. The recent increase in inequality has been driven not by capital but by labor income, as Saez and Piketty (2006) stress (tinyurl.com/ar4c4s8). This reflects sharply rising demand for certain kinds of skilled, educated workers, combined with little supply response. The public schools and universities are unable and/or unwilling to train the kinds of people the market wants. Eric Brynjolffson argues in his book *Race Against the Machine* that workers are unable to keep up with new technology. Brynjolffson illustrates his point with the chart shown below:



Figure 3.5: Wages have increased for those with the most education, while falling for those with the least. Source: Acemoglu and Autor analysis of the Current Population Survey for 1963-2008.

The fact that wages of high school graduates have fallen is a painful remark about how much the market values what the public schools produce. In spite of these high labor premiums, college completion rates among men have actually fallen (tinyurl.com/b7qha7f)! College is overregulated, oversubsidized, and there is too much power in the hands of accreditation agencies answerable to the Department of Education. But there is still far more competition and choice there than at the K–12 level. Thanks to competition, the U.S. university system is generally regarded as the best in the world, an important source of U.S. economic competitiveness (tinyurl.com/3xrthvb). Of course, the top universities—Harvard, Yale, Princeton, Stanford, etc.—are private. And the consensus in academia is that universities would be equipped to produce a lot more bright college graduates if the public schools provided more students with basic skills.

Milton Friedman wanted to make K–12 education more like the university system through vouchers. Under a voucher system, financing K–12 education would still be the government's job, but running K–12 education would be opened up to competition and largely privatized. Each student's family would get a certain dollar value's worth of vouchers, which could only be spent on education. "Government" schools would get their money by collecting the vouchers of students who chose to attend them and converting those to cash through the government. Direct financing of public schools through the government budget would be curtailed or eliminated. Meanwhile, vouchers could also be used to pay for private school tuition.

Today, the Friedman Foundation for Educational Choice seeks to "advance Milton and Rose Friedman's vision of school choice for all children." Voucher programs have been adopted in several countries, including free-market Chile and social-democratic Sweden. In the United States, there has been progress in overcoming legal challenges to school vouchers (especially *Zelman v. Simmons-Harris*), and voucher programs have been adopted in cities like Cleveland and Milwaukee and states like Indiana. Where tried, vouchers have improved educational outcomes (tinyurl.com/aacdrvm), just as economic theory says they should.

J. S. Mill on the State Curriculum Mill

There are underlying philosophical reasons to oppose State schooling as well. In the magnificent *On Liberty*, Mill is at his best when he defends freedom of thought. It forms the basis of his opposition to State-*run* schooling though he saw plenty of room for the State in supporting education. It's a crucial distinction. He took an unusually statist position for the time in calling for compulsory education:

Consider, for example, the case of education. Is it not almost a self-evident axiom, that the State should require and compel the education, up to a certain standard, of every human being who is born its citizen? Yet who is there that is not afraid to recognize and assert this truth? . . . While this is unanimously declared to be the father's duty, scarcely anybody, in this country, will bear to hear of obliging him to perform it. Instead of his being required to make any exertion or sacrifice for securing education to the child, it is left to his choice to accept it or not when it is provided gratis! It still remains unrecognized, that to bring a child into existence without a fair prospect of being able, not only to provide food for its body, but instruction and training for its mind, is a moral crime, both against the unfortunate offspring and against society; and that if the parent does not fulfill this obligation, the State ought to see it fulfilled, at the charge, as far as possible, of the parent.

Mill also thought that financing education was primarily the parent's responsibility (not the taxpayer's) and that the State should force parents to pay if necessary; he also believed the State should finance needy children's education.

Mill was very insistent, however, that the State must get out of the business of running schools:

Were the duty of enforcing universal education once admitted, there would be an end to the difficulties about what the State should teach, and how it should teach, which now convert the subject into a mere battle-field for sects and parties, causing the time and labor which should have been spent in educating, to be wasted in quarrelling about education. If the government would make up its mind to require for every child a good education, it might save itself the trouble of providing one. It might leave to parents to obtain the education where and how they pleased, and content itself with helping to pay the school fees of the poorer classes of children, and defraying the entire school expenses of those who have no one else to pay for them.

For Mill, a major reason not to have State-run schools is that it inevitably gives the government too big a role in deciding what children should be taught, and thus in shaping public opinion, culture, and belief. Critics of vouchers often make the exact opposite argument—namely, that public schools impose a welcome uniformity, which vouchers would disrupt. The Anti-Defamation League makes the following argument against vouchers (tinyurl.com/3smmh3q):

As our country becomes increasingly diverse, the public school system stands out as an institution that unifies Americans. Under voucher programs, our educational system—and our country—would become even more Balkanized than it already is.

But it is not good for Americans to be unified in their opinions except to the extent that their opinions are true. And the best path to truth is not to impose uniformity, but to let a free marketplace of ideas flourish. That is what Mill understood, and expressed as lucidly, fairly, and persuasively as anyone ever has.

I cannot do justice to Mill's erudition, or his unrivaled knowledge of intellectual history. Stripped to its barest essentials, Mill argues that we shouldn't suppress unpopular or minority views because they might, after all, be true. He also argues that even if the majority view is true, our understanding of it will remain poor and impotent if we don't hear the criticisms that can be made of it and how they are to be answered.

Even when something true comes to be universally believed, it's still important to keep its criticisms alive, even if artificially. Doing so allows for an appreciation of the truth as compared to the various alternatives, whether they're fallacies or simply empirically untrue. Hence Plato writing his philosophy in dialogues so that the views he rejected could get a hearing, and readers would see how truth differed from, and bested, all manner of false alternative opinions (or sometimes, why certain opinions were clearly false even if the truth were not known). Again, the scholastic philosophers of the Middle Ages liked to structure their writings in the form of objections and answers to the objections, so that truth could stand out by contrast with error.

Since error must get a hearing for truth to be properly understood, it is foolish to silence the real, live dissenter. On the contrary, we should thank him for giving us a chance to clarify the truth by answering him. Strikingly, Mill goes beyond demanding mere legal freedom of speech and holds that public opinion, too, ought not to impose conformity of views, but should give full respect to all manner of honest differences and disagreements.

It is from these premises that Mill raises "objections . . . not . . . to the enforcement of education by the State":

That the whole or any large part of the education of the people should be in State hands, I go as far as any one in deprecating. All that has been said of the importance of individuality of character, and diversity in opinions and modes of conduct, involves, as of the same unspeakable importance, diversity of education. A general State education is a mere contrivance for moulding people to be exactly like one another: and as the mould in which it casts them is that which pleases the predominant power in the government, whether this be a monarch, a priesthood, an aristocracy, or the majority of the existing generation, in proportion as it is efficient and successful, it establishes a despotism over the mind, leading by natural tendency to one over the body.

The one exception to this principle, paradoxically, underscores it:

When society in general is in so backward a state that it could not or would not provide for itself any proper institutions of education, unless the government undertook the task; then, indeed, the government may, as the less of two great evils, take upon itself the business of schools and universities, as it may that of joint-stock companies, when private enterprise, in a shape fitted for undertaking great works of industry does not exist in the country.

In other words, State-run education is only fit for savages—and only as a temporary measure.

Mill does not think, however, that the State needs to police children to make sure they have their butts in classroom seats for x number of hours per year. The State need not concern itself with inputs, but rather with whether adequate learning is taking place, as ascertained in public examinations. That is wise, indeed wonderfully prescient. It is a vision fit for the age of online education, when no school could compete with what the Internet has to offer to a disciplined and motivated student. Mill characterizes the content of the exams from the same objection to State control of opinion:

To prevent the State from exercising through these arrangements, an improper influence over opinion, the knowledge required for passing an examination . . . should, even in the higher class of examinations, be confined to facts and positive science exclusively. The examinations on religion, politics, or other disputed topics, should not turn on the truth or falsehood of opinions, but on the matter of fact that such and such an opinion is held, on such grounds, by such authors, or schools, or churches . . . All attempts by the State to bias the conclusions of its citizens on disputed subjects, are evil; but it may very properly offer to ascertain and certify that a person possesses the knowledge requisite to make his conclusions, on any given subject, worth attending to. A student of philosophy would be the better for being able to stand an examination both in Locke and in Kant, whichever of the two he takes up with, or even if with neither: and there is no reasonable objection to examining an atheist in the evidences of Christianity, provided he is not required to profess a belief in them.

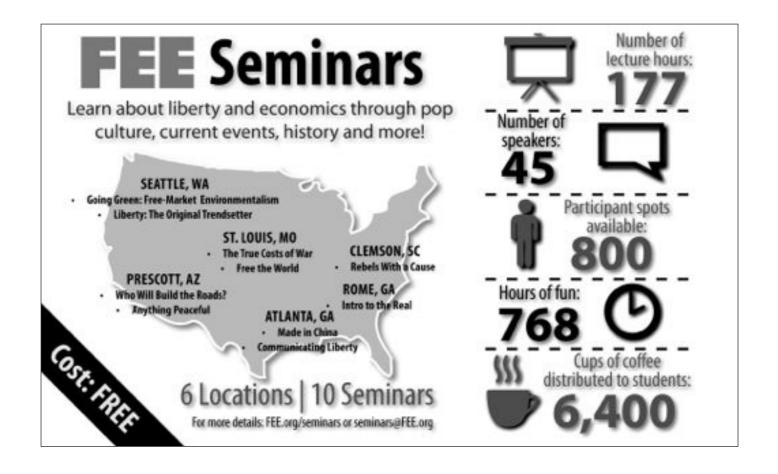
It is ironic that contemporary America prides itself on being a bastion of freedom of thought, yet it would hardly occur to the typical American to have such scruples about safeguarding the life of the mind from the shadow of State power.

Mill might have supported a system of standardized tests like that established in the No Child Left Behind Act. But with this difference: He would have left it to individuals to decide for themselves how to acquire the knowledge to pass those tests, with the government intervening only when learning failed to take place. Mill would also have opposed State financing for the education of non-poor children, but given how entrenched that has become, an easy step in Mill's direction might be to let students who

pass standardized tests leave school and receive the money that would have been spent on them, or most of it, in an educational savings account that could be partly spent on books and tutors, but mostly saved for college.

It's probably not the ideal solution, but it would liberate a lot of students from schools that mostly waste their time. The market—educational entrepreneurs—would find lots of ways to serve their learning needs better than central school boards ever will. The growing availability of such options, in turn, would create pressure to loosen the public schools' stranglehold on education. And it would engender a diversity of intellectual strengths so that we would have much to learn from each other throughout our lives.

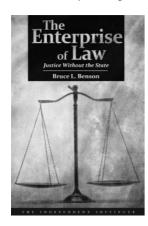
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The Enterprise of Law: Justice Without the State

by Bruce Benson Independent Institute • 2011 • 416 pages • \$19.50

Reviewed by George Leef



Nearly everyone agrees that a few core government functions—foremost among them the provision of law and justice—can't be performed in a free market. A handful of rogue thinkers, however, questions this conventional wisdom.

Foremost among them is Florida State University economics professor Bruce Benson, who has been studying

the issue for decades. His *The Enterprise of Law*, first published in 1990, has been republished and updated, with the intervening years only making it more essential.

"[P]eople's disgust with many public legal institutions is greater today than it was in 1990," Benson reminds us. The government produces many bad laws and does a poor job of enforcing the good ones. So why assume that law and justice—broadly covering personal and property protection, dispute resolution, trials, and punishment—can only be provided by the State? In fact, Benson's research shows, the government's system of law and justice is excessively costly, ineffective, and often quite unjust.

Benson begins with a history of the development of law and law enforcement that will surprise most readers.

"Our modern reliance on government to make law and establish order is not the historical norm," Benson writes. "Public police forces were not imposed on the people until the middle of the nineteenth century in the United States and Great Britain, for instance, and then only in the face of

considerable citizen resistance."

Private parties used to enforce mostly customary law that had arisen in the community over time and proved to be valuable—not laws decreed by the monarch. Benson points to the Law Merchant, which was the set of rules that emerged over time to regulate dealings between traders. Often, those traders were in different countries and could not look to either commercial statutes (because they didn't exist) or to government courts (because judges could not be trusted to understand the dispute and adjudicate it fairly). So merchants established, in spontaneous-order fashion, their own system, which functioned well for centuries.

Why, then, did the State come to dominate in law and justice? It was for the same reason that governments usually take over anything: a) they like control, and b) special interests stood to benefit from the takeover. Customary law and justice mechanisms did not fail; these were squelched by rulers intent on maximizing their power and wealth. Following the Norman Conquest, traditional Anglo-Saxon law based on restitution to victims was replaced by courts run by the Crown. Why? Primarily because the Crown collected fines that would go into the government monopoly's coffers.

The old system of tort was swept away in favor of a criminal law system not because the people wanted it, but because the aristocracy did. Benson's chapter on the changes in the English legal system from the time of the Norman Conquest to the 18th century is at once fascinating and depressing, as we see how today's appalling system of criminal justice—frequently itself the source of further injustice—was cemented into place.

Applying public choice theory, Benson proceeds to show why our current legal system is focused far more on satisfying potent special interest groups than on providing the populace with optimal laws and enforcement. Laws criminalizing drug use, gambling, and other victimless crimes exist, he argues, because interest groups demand them; passing such laws imposes little cost on those interest groups, but huge costs on the rest of society. Moreover, the enforcers themselves constitute strong interest groups. The police, for example, push for a wider mission and bigger budgets. Not surprisingly, the numerous police, bureaucrats, and special agents who make their living off the war on drugs are among the most vigorous proponents of continuing it.

Among the serious harms we suffer as a result of the rise of authoritarian law is the fact that police and courts have become largely unaccountable to the public they are supposed to serve. Police regularly violate the rights of individuals during investigations and arrests, but it is very difficult for those who are injured to do anything about it. Occasionally, officers found to have violated the rights of people are suspended or terminated and evidence seized illegally will be excluded at trial, but neither does much to deter misconduct. Apropos of the exclusionary rule that prevents the use of illegally seized evidence during trial, Benson offers this observation: "From the point of view of government officials, an exclusionary rule is inexpensive. It does not cost tax dollars to release guilty felons.... Citizen outrage over the government's failure to convict and imprison criminals is directed at the courts and 'their' rules of evidence."

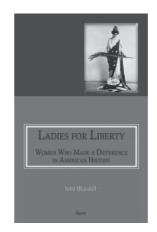
Government laws and law enforcement are terribly inefficient. People are turning more toward private security and dispute resolution, despite the availability of "free" services in justice and law. Unfortunately, consumer preferences have little impact on existing institutions, which subsist on money extracted by taxation. Thus, the emergent law Benson so carefully describes probably won't enjoy a renaissance any time soon.

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Ladies for Liberty: Women Who Made a Difference in American History

by John Blundell Algora Publishing • 2011 • 218 pages • \$22.95

Reviewed by Wendy McElroy



Ladies for Liberty is a book on a mission. In it, author and economist John Blundell seeks to combat "the myth that women want, and benefit from, big government" and, instead, pays homage to the "millions of American women" who recognize the "serious costs" associated with an intrusive State. Blundell does so by presenting twenty-two exquisitely drawn portraits of

American women who fought for their autonomy against any cultural or political forces that dared try and take it. (A sample chapter describing the work of the abolitionist Grimké sisters was published in the June 2012 *Freeman*, tinyurl.com/d3zzo98.)

Beginning with the American Revolution, Blundell moves quickly through to our current time with a well-balanced assortment of writers, businesswomen, philanthropists, and political activists. Many are neither libertarian nor classical liberal figures, but all expanded freedom in various ways: combatting slavery, securing the vote, fighting against oppressive government, and demanding the right to be an entrepreneur. For example, Madam C. J. Walker rose from being the first free-born child of ex-slaves to become a businesswoman and philanthropist whom a Louisiana newspaper labeled the "World's Richest Negress." Blundell writes, "When she became a millionaire shortly before World War I, she was the first woman ever to reach such a milestone on

her own initiative and without inheritance or the use of force, according to *The Guinness Book of Records*."

What makes the book so readable is Blundell's deftness at making the personalities come alive, complete with intellectual and historical context. Part of the vividness of the vignettes comes from Blundell's evident respect for ideas; his book *Waging the War of Ideas* (2007) presents concepts as living things that ebb and flow through the people who create history. Part of it comes from his respect for and understanding of women, which is clear in the nuanced portrayals; his book *Margaret Thatcher: A Portrait of the Iron Lady* (2008) is widely viewed as the definitive biography on the former prime minister. *Ladies for Liberty* brings both together in an engaging, informative read.

Each portrait reads like a short story. The openings are compelling. The chapter on Elizabeth Cady Stanton, for example, opens with her brother's death and her father's grief-stricken utterance, "Oh my daughter, I wish you were a boy!" Stanton assured him, "I will try to be all my brother was." In short, Blundell introduces us to Stanton through a character-defining moment in her life.

Blundell's closes nicely wrap up the significance of each woman's life. The chapter on Sojourner Truth ends, "Sojourner was a giant, physically, mentally and as an orator. She worked as hard for the freedom of her people as was humanly possible to do. She had an astonishing purpose and an unshakeable core belief in liberty. That slavery ended is in part thanks to Sojourner Truth."

In between, the women's stories are woven into a broad backdrop of historical and intellectual influences. Precisely enough background is presented to inform the portrait without interrupting it. Delightful and obscure details do make the reader pause, however. Regarding Harriet Beecher Stowe's novel *Uncle Tom's Cabin*, Blundell notes, "It came out on March 20, 1852, as a book of more

than 500 pages and would be the best-selling novel of its time. Overall, only *The Bible* sold more copies in the nineteenth century."

It is in his selection of women that Blundell and I somewhat part company. Blundell himself states one of my reservations when he writes, "Critics argue that Abigail Adams was simply the great woman behind a great man or that... her achievements were the result of an accident of birth and/or marriage and therefore she does not deserve a place in the same pantheon as those women who fought alone for liberty." I do not dismiss Adams but I think other women have a better claim on being one of Blundell's *Ladies*. In the final analysis, however, I may be saying simply that I would have written a different book, which can be said of almost every book.

Ladies for Liberty is a splendid introduction to the contributions of American women to freedom. It is also a benevolent and charming read that reflects Blundell's candid admission that the portraits are "unabashed and uncritical (mostly)." His Ladies deserve nothing less.

* * *

In order of presentation, the featured women are: Mercy Otis Warren, Martha Washington, Abigail Adams, the Grimké sisters, Sojourner Truth, Elizabeth Cady Stanton, Harriet Tubman, Harriet Beecher Stowe, Bina West Miller, Madam C. J. Walker, Laura Ingalls Wilder, Rose Wilder Lane, Isabel Paterson, Lila Acheson Wallace, Vivien Kellems, Taylor Caldwell, Clare Boothe Luce, Ayn Rand, Rose Director Friedman, Jane Jacobs, and Dorian Fisher.

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How We Found Ourselves

JEFFREY A.TUCKER

It must have been about five years ago when I picked up my first GPS device to use in my car. I got the idea after seeing this in operation in a friend's car. It was a luxury item for the rich. After a few years, it was available to the rest of us.

At the time, some people thought of this as a fancy map and nothing more. For me, it was different. I suspected that this device would change my life, and I was right.

You see, I am one of those people who has a seriously deficient sense of direction. In other words, I feel lost most of the time. It's been this way since I was very young. My parents would take me camping. As soon as I walked out of eyesight of the tent, I was lost and they had to come find me.

As I grew older, this problem never improved. In school, I could never find classrooms or even the buildings. I had

to follow people who I knew were in the same class. I would leave stores and turn the opposite way from how I walked in. As a driver, it took me years to get to know streets. I would wander for hours looking for my car in parking lots. I would come to new cities and have an overwhelming sense of spatial disorientation.

I adapted over the years with certain habits, which really amount to staying put. If I'm where I am supposed to be, I stay there until I have to be somewhere else, and then I depend on taxis or the kindness of strangers to help me find my way. I never wander far from where I'm supposed to be. I'm generally just happy to not be turning in circles, as in some film noir classic, and experiencing that strange sense that I'm a goner, as in *The Blair Witch Project*.

Then one day I held in my hand a small device that changed everything. Indeed, the change was so dramatic that it took me six months or so even to believe what had happened. I would never be lost again. I could actually leave my hotel and find it again. I could drive in cities where I had never been. I experienced what it must be like to be suddenly granted sight after a lifetime of blindness.



Even now, I'm still correcting my habits in light of the new realization that I cannot be lost. I can always find my way.

The other day I was digging around in my glove box and pulled out my old friend, my TomTom 500. I laughed. It seemed like an antique! Now my GPS navigator is on my smartphone as part of the core technology. It talks to me, has an active screen, tells me where I am whether driving

or walking, and gives me alternative routes. And this navigation is built into many apps, so that I can find a restaurant, grocery store, or movie theater anywhere I happen to be, whether in my neighborhood or somewhere on the other side of the planet.

Not only that: standalone GPS units are still on the market, and they look better than ever. TomTom is

still going strong, but it has competitors that offer more amazing features.

Do you remember the hysteria about how the iPhone changed its mapping solution? Outrage followed. A few weeks later, everyone decided, "Hmm, this is pretty good after all." Well, this new mapping solution had its origin in my own TomTom antique that is now seriously with the times.

It's astonishing if you think about it. No one born less than ten years ago will ever have to experience the sense

THE PURSUIT OF HAPPINESS

of anxiety and fear that comes with spatial disorientation (unless, of course, he forgets his device). This fear had shaped my life and my pattern of living in ways that I had not entirely realized until it was fixed by technology made available through the private sector. No one in the future will have that same life handicap.

Another human problem is solved. It should be added to the list of problems solved: widespread malnutrition, common infant death, diseases like scurvy and polio, ignorance of essential facts of life, the inability to communicate with people outside your immediate community, the inability to travel without terrible danger, freezing in winter, and so on. There are millions of problems that vex humanity but people in the private commercial sector are mostly solving them one by one, whenever they are allowed to.

Now, those of you who know about GPS are immediately objecting: The core technology was a government innovation and it is still maintained by government. But look more closely. The idea behind GPS was an innovation of several scientists working for universities, not government. Government saw its usefulness for espionage and nationalized it, keeping it under extreme secrecy for decades and not letting any commercial companies develop it.

It was one of the few achievements of the Reagan administration that it finally loosened up in 1983 and gave GPS to the commons. No one cared at the time. The truth is that this event was huge and important. It was just the beginning. Whereas Reagan's solution kept the best digital real estate for the military, Clinton went even further and unleashed the whole of the energy to the commercial sector. That's when the innovation and glory began.

In other words, GPS is like the Internet generally: that is, something that was of little or no benefit to humanity until the government permitted the private sector to go in, energize it, and make it wonderful. And it has changed life for millions, not only for spatial idiots like me but everyone. In the future, and probably in the present, it will seem utterly bizarre to anyone that people would not know where they are or how to get where they want to go.

For most of 2.6 million years, people had no idea where they were on the globe. The Bible tells us that the children of Israel wandered aimlessly in the desert for fully 40 years. Then about 500 years ago, we had some sense that there were distant oceans and land, and we developed better means to represent these features of the world in 2-D (which we call a map).

Mapmakers became more precise in the 20th century. Now here we are, holding a device in our hands, something

There are MILLIONS of problems that vex humanity but people in the private commercial sector are mostly solving them one by one, whenever they are allowed to.

available to the masses that not only pinpoints our whereabouts with absolute certainty, but tells us where everything we want is as well.

In all my reading, I can't recall anyone drawing attention to this dramatic change in the social order and in our sense of the possible. We have found ourselves. We know where we are—after millions of years of struggle. It's all happened for each of us only in the last five years.

I recall no big announcement that said: Humanity is hereby saved from being lost! No. Not even the official TomTom website includes a word about the history of the company or its technology. As is typical in the private sector, one finds a striking humility. Entrepreneurs rarely congratulate themselves on the past, but rather constantly look to the future.

Who or what granted unto us this astonishing knowledge of time and place? If you answer that question correctly, you have a sense of what will drive future progress. It was only once government relinquished its monopoly that the commercial marketplace was able to swing into action, make the dream real, and improve the lives of millions of human souls just like me.

Excuse me while I check in using my FourSquare app, which knows where I am and where I want to be. I need all the help I can get. **FEE**

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