

“Human Beings Are Headed Into The Cosmos”

Hurray! Human explorers are going to Mars! Humans are going to live on the moon! **Human beings are headed into the cosmos!**

Yes, yes, in a better world, government would have no role in these developments. The private sector would be doing it, and doing it better and more efficiently, and of course without coercing the taxpayer or anyone else. But the idea that, in this imperfect world in which we live, it would be preferable for the human race not to embark on this adventure, or to delay it for decades, just because of an aversion to government projects, is breathtakingly narrow. Glenn Reynolds, advocate of space exploration though he is, **can't work up any enthusiasm**: he says a lot of money will be wasted. Of course it will! This is a government agency we're talking about here. But it's the only game in town, Glenn. **Andrew Sullivan** calls it “fiscal recklessness” and speaks on behalf of the future generations who will have to pay for it. He too is absolutely right – and heartbreakingly wrong.

Future generations will not look back on this moment with condemnation. They will not say “there was the beginning of our poverty and our bankruptcy”, for, in fact, they will be rich and solvent despite this. *And they will be colonising the cosmos.* That such a wonderful thing was initially achieved through such inefficient and morally questionable means will be a mere footnote in their history, as ironic, and also as irrelevant, from their point of view, as the fact that it was achieved by people who still spanked their children.

Update: **Lileks** gets it right.

Thu, 01/15/2004 - 12:51 | [digg](#) | [del.icio.us](#) | [permalink](#)

Proponents of private sector ...

Proponents of private sector development should welcome this as an opportunity to have NASA relieved of the 'distraction' of commercial satellite launches.

by **Kevin** on Thu, 01/15/2004 - 19:45 | [reply](#)

Public monopoly

But it's the only game in town, Glenn

Well, yes, but won't Nasa's going to Mars help to *keep* Nasa the only game in town? Private initiatives like the Xprize will lose out on publicity because of Nasa. Without publicity and sponsorship they will find it harder (literally) to get off the ground. When space tourism or whatever gets going it will do so profitably and therefore there'll be far more launches per year. There will be no hiatus, like after Apollo. That will mean less hard-won knowledge will be lost. Plus there'll be many different companies involved which means more creativity and fewer blind alleys. Progress from tourism to interplanetary mining could actually turn out to be quite rapid.

So let's hope we're not inadvertently *delaying* the colonisation of the cosmos. Of course, if we do get to Mars, whoever pays the bill, I'll be glued to the telly just like everybody else!

by **Tom Robinson** on Thu, 01/15/2004 - 20:51 | [reply](#)

Make money on Mars!

Bookies are giving out **very good odds** for those of you who are only slightly optimistic about our chances of reaching the moon or mars. Great way to save for your pension!

Henry Sturman

by **Henry Sturman** on Fri, 01/16/2004 - 19:03 | [reply](#)

Re: Make Money on Mars!

Here's an even better way:

Space Bonds!

by **David Deutsch** on Fri, 01/16/2004 - 21:49 | [reply](#)

Wrong

It's not "morally questionable". It's morally wrong. That's something that **The World** is usually unafraid to recognize and take seriously.

I'm enthusiastic about human beings exploring and colonizing the cosmos, but not so much as to violate important principles.

Our commitment to free speech isn't tested by having to defend speech that we agree with, but speech that we find horribly wrong. Likewise, our commitment to limited government is tested by having to oppose government projects whose consequences we expect to like. **The World** has failed this test.

It's ironic that this post comes immediately after one in which **The World** correctly denounces enforced treatment of spurious diseases by saying: 'This breach of human rights is casually justified as being "for their own good".' It seems to me that **The World** is guilty of

the same thing here against those who would prefer to pursue their

own goals rather than ours.

Also, I think Tom Robinson is right that a government space program could inhibit progress rather than accelerate it, and that there are already good private alternatives to government-run space programs.

The government has a role. It can clarify property-rights and liability issues. It can remove obstructive regulations that make it difficult for willing people to pursue dangerous projects. It should pursue space-based projects with justified security-related benefits. Otherwise, it should stay out of the way.

Gil

by **Gil** on Sun, 01/18/2004 - 22:27 | [reply](#)

i declare gil an anti-gubmit fanatic

version 1: the war on terror is an increase in gubmint. QED

version 2:

but we aren't committed to smaller government in the sense of opposing all expansions of government of any sort for any reason. for example we liked the war in Iraq. we like this too.

on the road to smaller government, we know sometimes it will wind, not slowly decline with no increases ever. that's how it should be (sometimes it **needs** to wind, and this should be supported, b/c certain things need to get done, and the government is sometimes in best position to do them). blindly opposing everything good or bad is not our policy, just yours.

PS i don't get how gubmint program is supposed to stop private one. is it that ppl will say "nah, we don't need you fools, we got NASA"? if so, won't that only happen if NASA is doing a r0xx0r job ... ie if the private guys are being out-competed? (by a government agency no less! oh the same and humiliation!) if not that, is it that NASA spends part of budget on assassins? or what?

-- Elliot Temple

<http://www.curi.us/>

by **Elliot Temple** on Mon, 01/19/2004 - 09:20 | [reply](#)

why not NASA?

Because something funded by taxation requires 257 layers of bureacracy; \$100 of investment in a project gives a return of \$2.50, whereas in a privately-funded initiative, \$100 of investment gives a return of \$30 (hey, I checked these figures, they're absolutely accurate ;))

Because people spending their own money on what they want are more likely to demand and receive good service than people

spending other people's money on something that yet another set

of people want.

Because government-funded projects get all muddled up with appearances and the necessity of being re-elected rather than with solving the actual problems.

Emma

<http://rationalparents.blogspot.com/>

by a reader on Mon, 01/19/2004 - 12:13 | [reply](#)

Re: Wrong

Gil says:

It's ironic that this post comes immediately after one in which **The World** correctly denounces enforced treatment of spurious diseases by saying: 'This breach of human rights is casually justified as being "for their own good".' It seems to me that **The World** is guilty of the same thing here against those who would prefer to pursue their own goals rather than ours.

It seems to me that that analogy only holds on the basis of some assumptions which I, for one, doubt are true.

One is that the overall burden of taxation (including inflation and other economic effects of government) on the American people will be higher as a result of this project than it would have been otherwise. But I would expect that the total level of taxation is, and will be for the foreseeable future, determined almost independently of the final destination of the diverted resources. In short, the government takes whatever it can get away with, and it spends it on whatever it judges best. Though the totals are linked by the inexorable laws of arithmetic, and though popular forms of expenditure do have a slight tendency to make taxation in general more politically acceptable than unpopular ones, there is no mechanism within government that links particular spending with particular taxation. Indeed, there can't be: money is fungible. Comparing, as you do, the Mars project with the invention of a new metaphorical disease and the consequent violations of children's rights, it might likewise be argued that children who behave defiantly were going to be punished anyway, so the invention of the new disease and new forms of punishment has caused no net harm. Well, I doubt that that is factually true, but if it were true then surely it would indeed diminish the force of **The World's** objection to such practices. But either way, my point here is that your "guilty" verdict against **The World** depends on your making a certain (counter)factual assumption about what would otherwise have happened to the resources now destined for the Mars project. If you accept that that assumption is in any way questionable, you must accept that it is at least as questionable that the Mars project is immoral.

A second assumption is, in effect, that the Mars project is not

economically viable: that it will not in the long run make a sufficient return on the investment. I am sure it will, and I think you are too, Gil. But implicitly you are assuming it will not, by characterising the government's action as being "against those who would prefer to pursue their own goals rather than ours". For though, admittedly, any scheme funded by taxation will in some vague (because of fungibility) sense force opponents of the project to contribute to it, one could equally well say that a refusal to go to Mars would be forcing Mars-oriented taxpayers to divert their precious Mars funds to the purchase of canes for schools, or whatever other function of government strikes you as the most foul. And if the Mars project is, in fact, profitable while the canes project is, in fact, destructive of resources, then the latter interpretation is more accurate.

I also don't accept that the Mars project will tend to divert private funds away from space by being more exciting. There are plenty of exciting things to do in space, and if anything, each of them draws more attention to the others by making us into a more spaceward-looking culture.

So in summary, I think that "morally questionable" was a fair way of characterising the means by which the human race will now begin its historic move outwards into the cosmos. The move itself, and President Bush's decision to initiate it under government auspices, is not wrong, but right.

This is not a case of 'the end justifying the means'. Government is not the means by which we are going to Mars. The means is human creativity. Government is the obstacle. But under existing political circumstances, the choice facing the President was whether it was to become a relatively minor obstacle, causing inefficiency (and being morally questionable), or an obstacle that would remain insuperable for decades or perhaps centuries. Which would be very wrong.

by [David Deutsch](#) on Mon, 01/19/2004 - 12:15 | [reply](#)

It seems to me that we have g...

It seems to me that we have governments to do those things that markets don't do well but which some large subset of us can agree are good and which we'd like to see happen. I think that opening up space is one of those things, for reasons that I've outlined in my article "[The Economics of Interface Transportation](#)". For those who don't want to follow the link, my argument is essentially that because the launch vehicle market is highly inelastic, evolutionary developments of current vehicles won't take us into an elastic region, and getting to such a region will require more investment that private companies can raise, we're dependent on governments if we want to develop space using our current technological approaches.

(Actually, the purpose of that article wasn't to support government space programmes but rather to set up an argument for alternative

private approaches to space development in a third article in the

series which I haven't yet found time to write.)

- **Rich**

by **Rich** on Mon, 01/19/2004 - 19:49 | [reply](#)

Belated hurrah

This argument of David's

In short, the government takes whatever it can get away with, and it spends it on whatever it judges best.

together with this one

There are plenty of exciting things to do in space, and if anything, each of them draws more attention to the others

..have persuaded me to join in the 'hurrahs' for Mars.

So, hurrah!

Setting NASA the Mars goal will probably (and crucially) help to dissolve the regulatory opposition (that Gil rightly mentions) to private individuals wanting to do space stuff. I still think that, initially, private sponsorship will be reduced as the general public's gaze is fixed on NASA. But the eventual net effect of the first will be to encourage a space-faring culture. It will establish a moral *imprimatur* in the eyes of some politicians and offer a proof of principle to everybody else.

Perhaps Congress might consider funding some prizes to encourage the private individuals to join the race. How about \$1 billion to the first private team to live on the moon for a month, and \$3 billion for the team that makes it to Mars and back? These are tiny sums next to NASA's budget. We might even end up with a repeat of the Human Genome Project, where Craig Venter pipped at the post the government-funded academic teams. (Congress should place the funds in independent trusts. This would avoid a repeat of some shameful history when the (English) Board of Longitude quibbled for a decade over rewarding John Harrison for his marine clock.)

Encouraging a space-faring culture might be an antidote to socialism, for two reasons. Firstly, if NASA succeeds, it will raise the psychological stakes for anti-Americanists around the world. Secondly, inhabiting distant reaches of the solar system is a great way to evade taxes. Perhaps it is a universal law that the only way to avert cultural stagnation is to start new colonies in distant places. We did this in New England and Hong Kong, and may perhaps do so in cyberspace. Such considerations should be set against the the morally-questionable funding of NASA.

Of course, as **The World** conceded straight away, the morally-questionable funding is going to be dreadfully inefficient. (By curious coincidence, the colonists of New England and Botany Bay were themselves morally-questionable in the eyes of those who

stayed behind. Need only risk-takers and **eccentrics** apply?)

For the colonization of the cosmos to gather real momentum, apart from **eccentric** heroic participants, we'll need some superb innovations. History has shown that these *always come* from individual inventors and entrepreneurs. First off, we'll need launch systems that keep most of the power generation on the earth's surface. Then there's the hazard of sudden blasts of ionising radiation from sun activity. Then there's an awful lot of biotech to be done to (a) combat space fatigue, and (b) recycle food and atmosphere. The list goes on. We'll need to do a lot of GM (especially if we want to create some of Freeman Dyson's **warm-blooded plants** or similar such exotic delights). And we may even find that Mars isn't the best place to start and that the Kuiper Belt would be preferable...

by **Tom Robinson** on Mon, 01/19/2004 - 20:26 | [reply](#)

Still Wrong

David,

I don't think your arguments salvage the moral ambiguity you seek. The fact is that the missions will be financed by money taken from people who have earned it, often without consent. That this theft is a small part of a larger regime of theft making it difficult to trace a particular project to particular victimizations does not change its character. It's still wrong to steal the funding for these projects. Yes, canceling one mission will probably not force a tax reduction; but it's a start. And cancelling many such projects will result in less of a tax burden (as you seem to recognize with "almost independently", and "the inexorable laws of arithmetic"). Moral people should be calling for such cancellations.

And it's not true that my point *depends* on what would otherwise be done with the resources. I'm not responsible for what other harms the government does with the loot, and the threat of such harms does not justify this harm. If the question is "Would you prefer that the money be spent on space missions to being spent on school canes?" then my answer is "Yes, I do." But if the question is: "Should the government use taxes to fund non-security-related space missions?" then my answer is "No, it shouldn't." These are different questions, with different answers.

It's also wrong to propose that my point depends on the second assumption that the Mars mission is not economically viable. It would be wrong for me to invest your money (even with a greater monetary return than you would have) against your will, wouldn't it? The person who should control your resources and your life is you. Not me. And not your neighbors.

And while it's impossible to be sure how this will affect private contributions and investments in private space development, it seems very plausible to me that many will conclude that they're already paying for such development with their taxes and be less inclined to contribute any more to similar and, perhaps, redundant

projects.

Gil

by **Gil** on Tue, 01/20/2004 - 03:22 | [reply](#)

thanks for listening

gil continues on with his unstated, unargued premise that lowering taxes is always good. ho hum.

-- Elliot Temple

<http://www.curi.us/>

by **Elliot Temple** on Tue, 01/20/2004 - 03:41 | [reply](#)

Listening To What?

Elliot,

I'm reluctant to claim that anything is "always" good, but it seems to me that lowering taxes is as likely to be good as Taking Children Seriously, and for similar reasons. It's respecting the autonomy of other people that their status as human beings demands. Even if we're confident that we know better than they do what's good for them. If we cannot convince other people that our project is worthy and that it is a common preference for them to go along with us, then it's probably wrong for us to override their preferences and coerce them into complying.

I think the burden should be on those who think that a government program (whether it's space development, art promotion, schooling, health care, etc.) justifies the taking of people's property to, well, justify it.

Can you?

Gil

by **Gil** on Tue, 01/20/2004 - 05:01 | [reply](#)

listening to *me*! duh

ok lets say u had the option for this to happen:

1,000 best things US govt does disbanded.

half of freed money returned as tax cuts

other half wasted

would that be good or bad, do you think?

if your only compunction is losing security related programs, you can try the same question except 1,000 best programs not related to security.

-- Elliot Temple

<http://www.curi.us/>

by **Elliot Temple** on Tue, 01/20/2004 - 15:48 | [reply](#)

Returning Taxes

Elliot,

If "security" is understood to cover all of the law creation and enforcement functions that I think are proper for the government to do, then yes, your second scenario would be good.

I think that every single one of the 1,000 "best" things that the government does that are abuses of force is bad. I think that every dollar returned to those who earned it is good. Dollars mean choices. I prefer the sphere of choices of individuals be large and that of leaders speaking for the collective be constrained to those areas where force is appropriate.

I don't understand the point of your stipulation that half of the funding for those programs be wasted, but it might be less than the current proportion of waste.

Gil

by **Gil** on Tue, 01/20/2004 - 16:55 | [reply](#)

Clarification

After all of these comments I just wanted to put my position in perspective.

I don't think the space program is anywhere close to the worst thing the government does and I'm not going to lose sleep over these new missions. I think of it as being in a similar category as first-class mail delivery. I think it's a good and useful thing, but I think it would be better handled by the private sector.

I agree with the sentiments of this post and am also very enthusiastic about the continued exploration and development of space. My only reason for commenting was that I think that the funding is not merely "morally questionable" but is actually morally wrong. It's far from the worst thing that could happen, but that doesn't make its moral status ambiguous. I think it's important to be clear about this if we want things to evolve in a direction of improvement (as I am optimistic they will).

I strongly disagree with Rich's opinion that "we have governments to do those things that markets don't do well but which some large subset of us can agree are good and which we'd like to see happen." I think this is the point of view that I'd like to see challenged whenever it's brought up as an uncontroversial truth. If a large enough subset of us think something is worthy, then we should have no problem doing it voluntarily. The only advantage of using the government is to coerce those who disagree with the majority to pay for things anyway. This is almost always wrong, and I'm confident it's wrong with respect to the space program.

Gil

Security

So, then, why don't people voluntarily organise national security?

Actually, I think that true space development is one of the few things that a government might be better at than the market, at least until we have launch vehicles that are several orders of magnitude cheaper than **Ariane**. Furthermore, I see no evidence whatsoever that corporations would invest the tens of billions required in such a high-risk and long-term project when there are much less risky ways to make money in the space industry (such as, for example, winning a larger share of a static or slowly expanding market by having a better success rate as measured using various metrics).

(For those who will doubtless cite the various contenders for the **X Prize**, I can only say that even winning the prize is incredibly far short of producing a cheap method of accessing space. Instead, it's rather like producing a privately developed version of the **X-15**.)

- **Rich**, who wonders if he now has to hand in his Anarchocapitalism membership card...

by **Rich** on Tue, 01/20/2004 - 18:04 | [reply](#)

RE: Security

Rich,

I'm fairly confident that enough people recognize the value of national security that they would adequately fund it voluntarily even understanding the free-rider problem. However, the risks of my being wrong about this are so great, that I support a gradual, rather than immediate, movement in this direction to avoid any gap in security.

The space program is just not that kind of thing.

You are clearly passionate about space development. I am too. Some people are passionate about opera, others about renewable energy research, etc. Being a goal worthy of passion, even by a sizable majority, is just not sufficient IMNSHO to justify stealing the funds. If it takes longer than we'd like to see the progress we hope for, that's too bad.

Gil

by **Gil** on Tue, 01/20/2004 - 19:06 | [reply](#)

Mars tax

Gil,

A person's salary is mostly the creation of his productive labour. But

the government also had a hand in its creation, since without a government there'd be no peace and people wouldn't be able to do their jobs. This means that tax isn't exactly like theft. If enough people could be persuaded that taxes should be cut drastically then politicians would probably do so. But, however desirable, cutting taxes might be like cutting the noise level in a restaurant. You need 95% co-operation, otherwise people will soon resume shouting in order to be heard. Logically then, over time, as David said, governments will grab all the taxes they can.

If that's true then the President is very limited in what cuts he could make. If, having read Elliot's comment, he decided to cancel 1000 projects and perhaps merge a few departments then very likely the total budget of other departments would quickly rise to restore the burden.

His primary budgetary choices, then, concern which departments should get more money. He thinks NASA should get more money so we can go to Mars.

The World also thinks it's a good thing to go to Mars. We all agree. Probably, the technical developments needed to start actually colonizing the cosmos will come from private individuals. However the precedents and the general interest in space which NASA's missions will bring about are likely to inspire more individuals to join that creative effort. (BTW, Rich, I think the Xprize will act in this direction too, regardless of the vital need for cheaper launch technology you rightly mention). Also, the missions may help prevent powerful bureaucrats from hampering progress in space with environmental regulation or whatever. Hey, the new politics would be a refreshing change from inward-looking ritual discussions about healthcare and unemployment.

I think we've exonerated Bush. Should government employees, tax collectors, or NASA workers choose differently, like quitting their jobs? I don't think morality over the source of funding comes into this issue directly.

But what about *indirectly*? There are the two consequentialist arguments I gave above. Encouraging a move out into the solar system might well have tax implications that favour liberty within the not-so-distant future. (One minor point I omitted is that we may see spin-offs for the missile defense shield.)

by [Tom Robinson](#) on Tue, 01/20/2004 - 22:12 | [reply](#)

Human Beings Are Headed Into The Cosmos

Hurray! Human explorers are going to Mars! Humans are going to live on the moon! Human beings are headed into the cosmos!

I doodled around reading posts and responses on this blog (*not gonna respond as "a reader," not gonna happen*), and immediately signed up!

Timothy Lang

by [Timothy Lang](#) on Sun, 02/01/2004 - 00:32 | [reply](#)

immediately signed up!

Welcome!

by **Editor** on Sun, 02/01/2004 - 01:22 | [reply](#)

Commercial Satellites

Proponents of private sector development should welcome this as an opportunity to have NASA relieved of the 'distraction' of commercial satellite launches.

I think you are behind the times. Commercial enterprises have taken this on long ago. Lots of folks are lighting the fuses under rockets these days.

Timothy Lang

by **Timothy Lang** on Sun, 02/01/2004 - 01:50 | [reply](#)