

## Re: Large Space Colonies and Large Disasters

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William Mook wrote:

>>*There are a lot of germs that rapidly become nonviable outside their  
>>niche.*

>

>

> *So, we don't need to worry about those being transported outside their  
> niche for that reason.*

<sigh>

you do if you can fly from any country on the globe to any other country in less than a day, Bill. When you arrive at your destination the bugs you are carrying are still viable. Some of them will be able to adapt to their new environment.

Unlike in the past, when it took days or weeks to travel that distance. Most (not all) of the bugs you carried around would have died off long before you arrived.

>>*Reduce the time between someone getting infected and that  
>>person's contact with people from around the world, the easier it is*

>

> *for*

>

>>*some of those people to get infected themselves. And so on.*

>

>

> *You're making some sort of statement about human vectors and their  
> efficiency as their mobility increases. The statement you make here is  
> so nebulous its hard to pin you down about just what you're saying.*

no, it's pretty self-explanatory Bill. You're just an idiot is all.

>>*Reduced travel time is one of the easiest ways for germs and viruses*

>

> *to*

>

>>spread to other areas outside their normal reservoir.

>

>

> This assumes among other things that people are vectors, that these  
> vectors are effective after being transported, that they are able to  
> travel, that the number of people they can infect is somehow increased  
> by their travels, and so forth.

exactly. All of which are highly likely.

> While we certainly don't want to spread disease when we can help it, it  
> is by no means certain that those who can afford to buy or rent private  
> aircraft would spread disease any more efficiently than those who can  
> buy airline tickets today.

?!?

First you claimed that the ability to travel around the world in minutes would have no effect on the spread of infectious diseases, that the incidence rate would be the same as it is now with birds, water, airplanes and boats making parts of the globe reachable in days or weeks.

Then when that was demonstrated to be bullshit, you backpedaled and tried to claim that \*airplane\* flight in a matter of hours does nothing yadda yadda.

And now you're retreating once again into some sort of quibbling about \*ownership\* of aircraft as opposed to buying a ticket.

If you're trying to confuse me to sidetrack me, Bill, it won't work.

You're full of shit.

>>Over the last fifty years we've seen a massive increase in  
>>species-jumping bugs.

>

>

> Ha! You are confusing increasing knowledge about species-jumping bugs  
> and rates of disease as it occurs in the world.

uh no, we are seeing increased evidence that antimicrobial resistance and "parasite" infections are crossing species. We are seeing that because of a combination of clinical data, case control studies, and laboratory research.

Creutzfeld-Jakob began as scrapie in farm animals and jumped to humans (never thought that Mad Cow disease was sexually transmitted, didja <g>). Bird Flu is jumping from the traditional animal reservoir to humans. And so on, and...

> *This isn't surprising*  
> *given your confused statements above.*

here's a hint for you, Bill: the phrase "rates of disease" has no inherent meaning in science. It's just a BS artist slinging together some impressive-sounding words that he doesn't understand.

>>*To give a fairly trivial example, there are*  
>>*multidrug-resistant Salmonella serotypes who get their resistance*  
>  
> *from*  
>  
>>*plasmids (freefloating circular strands of DNA that attach to the*  
>  
> *cell*  
>  
>>*wall of the bug and block the drugs' inhibitory capability). We are*  
>>*starting to see those plasmids shift to other Salmonella serotypes,*  
>  
> *and*  
>  
>>*in some cases to totally unrelated bugs.*  
>  
>  
> *So? The process you describe has nothing to do with rates of disease,*  
> *which is what we're talking about.*

um, yes it does. Real, real simple concept: if the plasmid confers resistance on another species of bug, then there are \*two\* pathogens circulating around in the human body that will not respond to antibiotic treatment. Then the human takes antibiotics for something unrelated. Say last week's hot date or grandma's turkey loaf. But the antibiotics kill off the human's natural flora (beneficial bacteria that use us as a host organism and do things for us). After the normal flora die off, selective pressure ensures that the resistant pathogens can colonize the host human. That human gets sick.

But if the plasmid-mediated resistance was not present (IOW, if one pathogen hadn't transferred its antimicrobial resistance traits to another pathogen), then there would have been little or no selective pressure favoring the resistant bugs (because they would not have been resistant in the first place, and would have been killed by the abx). Therefore the human would not have gotten sick, or would have at worst gotten a mild case.

Result: more infection. Driving up the incidence of infection, which is a \*rate\*.

Got it?

- > *Your description have even less to*
- > *do with the impact of long–distant transport of humans and their*
- > *impact on rates of disease. It would really help if you'd stay focused*
- > *on the subject at hand and not confuse the issue with irrelevant*
- > *processes having nothing to little to do with what we're talking about.*

Bill, I gave you a very clear example of how a bug can transfer from one vector to another. Sorry you didn't figure out what I said, but I can't say I'm surprised.

- >>*So not only can plasmid–mediated resistance make clinical treatment*
- >>*ineffective, but it can also confer equal resistance to other*
- >
- > *pathogens*
- >
- >>*as well. Nasty stuff.*
- >
- >
- > *There are lots of nasty diseases out there. That doesn't make them*
- > *candidates for large–scale outbreaks.*

actually, it does. The more virulent the pathogen and the more drugs it is resistant to, the greater the chance that it will survive to affect large numbers of people.

- > *We're talking about rates of*
- > *disease and the impact of long–range travel by humans on those disease*
- > *rates. You have yet to accurately state the problem, let alone prove*
- > *anything about what I've said.*

At this point I would suggest you read up on SARS. Pay special attention to the reason why there were concurrent outbreaks in Hong Kong and Toronto. And you might want to refresh your recollection of the definition of "vector" while you're at it.

- >>>*The black death or black plague in 14th century Europe was not due*
- >
- > *to*
- >
- >>>*broad availability of personal air transport. Clearly, 14th*
- >
- > *century*
- >
- >>>*Europe did not have personal air transport. Plainly, the black*
- >
- > *death*
- >
- >>>*was caused by fleas transported by rats which lived in close*
- >
- > *proximity*
- >

>>>to humans.

>>

>>Plainly, our Bill hasn't read his history:

>

>

> Obviously Terrell not having properly framed the question I am

> answering about the impact of long-distance travel by humans on disease

> rates in his mind finds no other recourse than to make abusive

> statements about me personally. Tsk tsk.

Uh no, you *\*really\** need to read up on your subject matter.

The Black Plague began in China in the early 1330s. It spread to Europe in 1347, seventeen years after its origin. And it took five years for the plague to spread throughout Europe.

Today, if we had air travel but no epidemiology or disease control, then the spread of the plague from China to all over Europe would take *\*weeks\**, not decades.

Do you see the difference, Bill? It's real, real simple.

>> *\*Second, the plague was transmitted by rats \*who had hitched a lift*

>

> *in*

>

>> *ships\**.

>

>

> *Yes. That's right.*

>

>

>

>> *That was the mechanism that allowed Yersinia to spread so*

>> *rapidly and so far.*

>

>

> *No, it wasn't the boats, it was the conditions that the affected*

> *populations lived in that caused it to spread.*

no Bill, the plague spread because *\*the vectors traveled\**. Without that facet of the case, plague would have been a local outbreak that would have affected a very small geographical region (say, one city in China), then burned itself out for awhile. Lethal as hell for those in the area, but not a mass outbreak like you're talking about.

But the Chinese had a thriving trade going on (funny how history repeats itself, although the way humans totally ignore the lessons of history, I sometimes wonder why history even makes the effort). So infected people traveled and *\*that\** spread the infection beyond their immediate environment. The people thus infected in turn passed the infection on,

and so on.

- > *Read the materials*
- > *cited above. Only a handful of ships landed in European ports with*
- > *vectors for this disease.*

enough.

- > *Plainly, ships came back from Asia to Europe before then, ships came*
- > *back from Asia to Europe after then. Obviously, it was only this*
- > *period where disease rates skyrocketed.*

IIRC because it took that long for the plague to spread from rural China to the major ports. It's not a linear trendline, Bill.

- > *The disease spread in 1330 because the conditions were right to sustain*
- > *the disease.*

well, if you mean "the disease started occurring in humans again after six hundred years' hiatus", then that's true.

- > *Population levels, cleanliness, living conditions, all*
- > *were right to spread the disease. All had to be right. Transport of*
- > *the same vectors before and after did not cause similar outbreaks*
- > *because the conditions were not right to sustain an outbreak of the*
- > *disease.*

ah, got it. You are using the terms "outbreak" and "epidemic" as synonyms. They aren't.

The plague *did* see outbreaks before it reached Europe in 1347. But those outbreaks were limited to small-but-growing pockets within China *until* the infected area expanded to include major transit centers (i.e. ports).

- > *If you had any understanding of the rates of disease and the factors*
- > *that contribute to changing those rates, you'd see that the boats*
- > *travels had little to do with outbreak.*

<vbg>

I am a contractor for the CDC, Bill. I work in the epidemiology section for foodborne diseases. Our section just sent three of our MDs to help with the tsunami aftermath: one to Thailand, one to Indonesia, one to Sri Lanka. We are the lead brach at CDC for on-the-scene infection control.

Every single day we track, research, and manage outbreaks of infectious disease. Every outbreak of food poisoning that you hear about in the media, my unit is working directly with the local health officials (and when requested we send people onsite) to traceback the contaminated food, type the pathogen, figure out the vector(s) involved, test it for

antimicrobial susceptibility, and help control the outbreak.

Our branch chief is a world-renowned epi who is quoted in the major newspapers several times a year and has been on 60 Minutes, 20/20, CNN and many other TV shows. He literally wrote the chapter on Salmonella that is taught in many medical schools and public health programs.

Every year we host a meeting for epidemiologists around the world to discuss outbreaks, pathogens, abx resistance, and a host of related subjects.

I am currently babysitting one of the foremost experts on epidemiology in the world while he is in town. He spends literally half his time traveling to Third World countries to help them set up surveillance systems to track foodborne pathogens and do lab testing on them. John is a very good friend of mine, and he has been a goldmine of information about foodborne pathogens.

I am not personally an epi and I don't claim to be an expert, but...I am surrounded by them literally every working day, and I listen to them and learn an awful lot from them.

I think I do indeed know a little bit about the subject, Bill.

How 'bout you?

>>*If the rats had not been transported from port to*  
>>*port to port, then the Plague would have affected a very small area*  
>  
> *of*  
>  
>>*Europe and burned itself out fairly quickly.*  
>  
>  
> *Not true.*

<sigh>

yes, it is, Bill. That's exactly what happened in China before infected rats jumped ship to Europe.

>>*\* Third, there are two distinct types of plague with two distinct*  
>>*vectors and two distinct pathologies: bubonic and pneumonic. Bubonic*  
>>*plague is transmitted by infected fleas.*  
>  
>  
> *You are engaging in a typical disinformation tactic. Please recall I*  
> *was responding to an earlier comment made about Bubonic Plague – there*  
> *was absolutely no reason for me to go into pneumonic plague.*

no, you were making a sweeping generalization about "the plague" being transmitted by rats via their fleas. \*One\* type of plague (bubonic) is transmitted that way, but there is no \*the\* plague. There are several types with many pathologies and many vectors.

>>one infected human can start a "chain reaction" pyramid of infection  
>>before his symptoms become obvious), and it has a higher mortality  
>  
> rate  
>  
>>(90%).  
>  
>  
> Ah, see you have illustrated precisely your ignorance related to  
> disease rates and other factors. Pneumonic plague was not the great  
> killer in the Black Death – Bubonic Plague was, despite the lethality  
> of the pneumonic plague – because the conditions weren't right for the  
> pneumonic plague to be the greater of the two, despite its greater  
> lethality under the right conditions! :)

funny how you tell me I'm "ignorant" and then just repeat back what I said...

> There are lots of ways diseases can be transmitted – but that's not  
> what we're talking about. We're talking about the conditions that must  
> be met for diseases to become widespread as in the case of the Black  
> Death.

sounds like "ways diseases can be transmitted" to me...

> This confusion on your part with understanding the minutia

I think you mean "minutiae"

> of  
> disease processes but not having a clear connection in your mind with  
> the conditions for an outbreak is a continuing problem with our  
> discussion.

again, Bill: there is a very large difference between an outbreak and an epidemic. All "outbreak" means is that several people come down with the same disease because of a common pattern of behaviour: they traveled to the same place, or they ate the same food, or they were in the same location where they were exposed to some sort of pathogen, something.

When thirty people eat undercooked turkey at a family holiday gathering and they all get food poisoning, that's an \*outbreak\*. They get diarrhea and vomit for a few days, they get better, they don't spread the disease unless someone gets their hands dirty cleaning up after them. That's an outbreak.

An *\*epidemic\** is when a disease spreads at a very high and increasing rate over a rapidly increasing geographic area. As in the plague, or SARS until it was quarantined.

Two totally different concepts here, Bill.

> *If you weren't so damned impolite I might even take it on  
> myself to educate you – but I doubt it would be greeted warmly by you  
> in any case.*

Bill, unless you've done postdoc work in epidemiology, I kinda doubt you'd have anything to bring to the discussion, y'know? And frankly, it's doesn't sound too likely that you even accurately remember much of your freshman biology.

>>>*Hemorrhagic fever and plague occur today when people due to severe  
>>>poverty are forced to live with rodents on a regular basis. Air  
>>>transport in all cases is notably absent.*

>>

>>*give you partial credit: \*some\* hemorrhagic fever is acquired from  
>>rodents. Lassa fever and hantavirus are two examples. Other*

>

> *hemorrhagic*

>

>>*(just means "accompanied by bleeding") fevers are transmitted by*

>

> *ticks*

>

>>*(encephalitis), bats (Hendra, transmitted through infected horses*

>

> *bitten*

>

>>*by the bats), mosquitos (Rift Valley fever), etc.*

>

>

> *Again, these details have nothing to do with the conditions for major*

> *outbreaks, which is what we were discussing.*

um yes, it has everything to do with what we are discussing. You stated "Hemorrhagic fever and plague occur today when people due to severe poverty are forced to live with rodents on a regular basis." That is true for certain forms of hemmorhagic fever, but by no means all. Other forms are not transmitted by rats at all.

Do you understand how what you said was mistaken?

>>>*Obviously, in a world where air transport is commonplace, such  
>>>conditions that support outbreaks of these two types of disease*

>

> *would*

>

>>>*not be present.*

>>

>>*erm, we \*are\* in a world where air transport is commonplace,*

>

>

> *that's right.*

>

>

>>*and the*

>>*conditions for outbreaks of these types of diseases \*are\* present.*

>

>

> *that's not right – which is my point! :)*

and your point is totally invalid, sorry.

>>> *Clearly the exterior of a ballistic aircraft would be*

>>>*rendered vector free during re-entry.*

>>

>>*unless the vehicle happens to pass through foamate just before or*

>

> *just*

>

>>*after landing, and then the ground crew gets infected by touching the*

>

>

>>*surface, or...*

>

>

> *there are lots of ways diseases can be spread – but lacking in all of*

> *your discussion is the rate of diseases being spread and the conditions*

> *under which these rates are high enough to cause an outbreak. WHICH IS*

> *WHAT I'M TALKING ABOUT.*

And you are talking out your ass about a subject you simply do not understand. And when people very patiently explain to you precisely where you are being mistaken, you utterly fail to learn anything from them.

Typical Mook. I'll say this for you, you used to use "its clear that..." all the time, and at some point after enough badgering you finally accepted that you were making a simple grammatical error, so you just shortened it to "clearly".

Same stink, different shit <g>

>>> *Plainly the interior of a*

>>>*ballistic aircraft could be rendered equally free of vectors*

>

> *through*

>

>>>*automated inspection processe.*

>>  
>>*LOL have you smelled the interior of a 737 lately?*  
>  
>  
> *An Airbus actually. It was rather smelly.*  
>  
> *Now, here you've again illustrated your ignorance precisely and proven my point.*  
>  
> *You are implying here that smells communicate disease at rates high enough to cause an outbreak – this is clearly not the case.*

no, I was being facetious.

> *I have no doubt that all manner of disease causing organisms live throughout any large aircraft operated today. Despite that, the existence of those organisms in those aircraft do not materially impact the rate of disease and certainly do not increase the rates of disease to the point where outbreaks are possible.*

Sure they do. The humans onboard the aircraft can transmit pathogens to not only their fellow passengers, but also to direct contacts once they deplane. Those people then infect other people in many different areas, and so on...

>>> *The occupants of such aircraft would obviously be able to pay for transport and would certainly not be living in close proximity to rat feces on a regular basis.*  
>>  
>>*but the street urchins that descend upon arriving passengers at every*  
>  
>  
>>*single Third World airport \*do\*.*  
>  
>  
> *Do what? Harbor resevoirs of disease? So? This has little to no impact on outbreaks of disease. Which is my point.*

>>*Gawd, you're naive Bill :(*  
>  
>  
> *Not Naive Terrel, knowledgeable.*

ROTFLMAO.

First, you spelled my name wrong. You could clearly see that just by looking at the sig file or at the "sent by" on the meswsages you reply to.

No Bill, you're a bullshit artist, same as always. You have no clue what you are talking about, yet you act like an expert on every damn thing.

sci.space.policy: Re: Large Space Colonies and Large Disasters

There a word for people like you, Bill. That word is "phony".

There are other, less polite terms as well.

--

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"Every gardener knows nature's random cruelty"

-Paul Simon RE: George Harrison