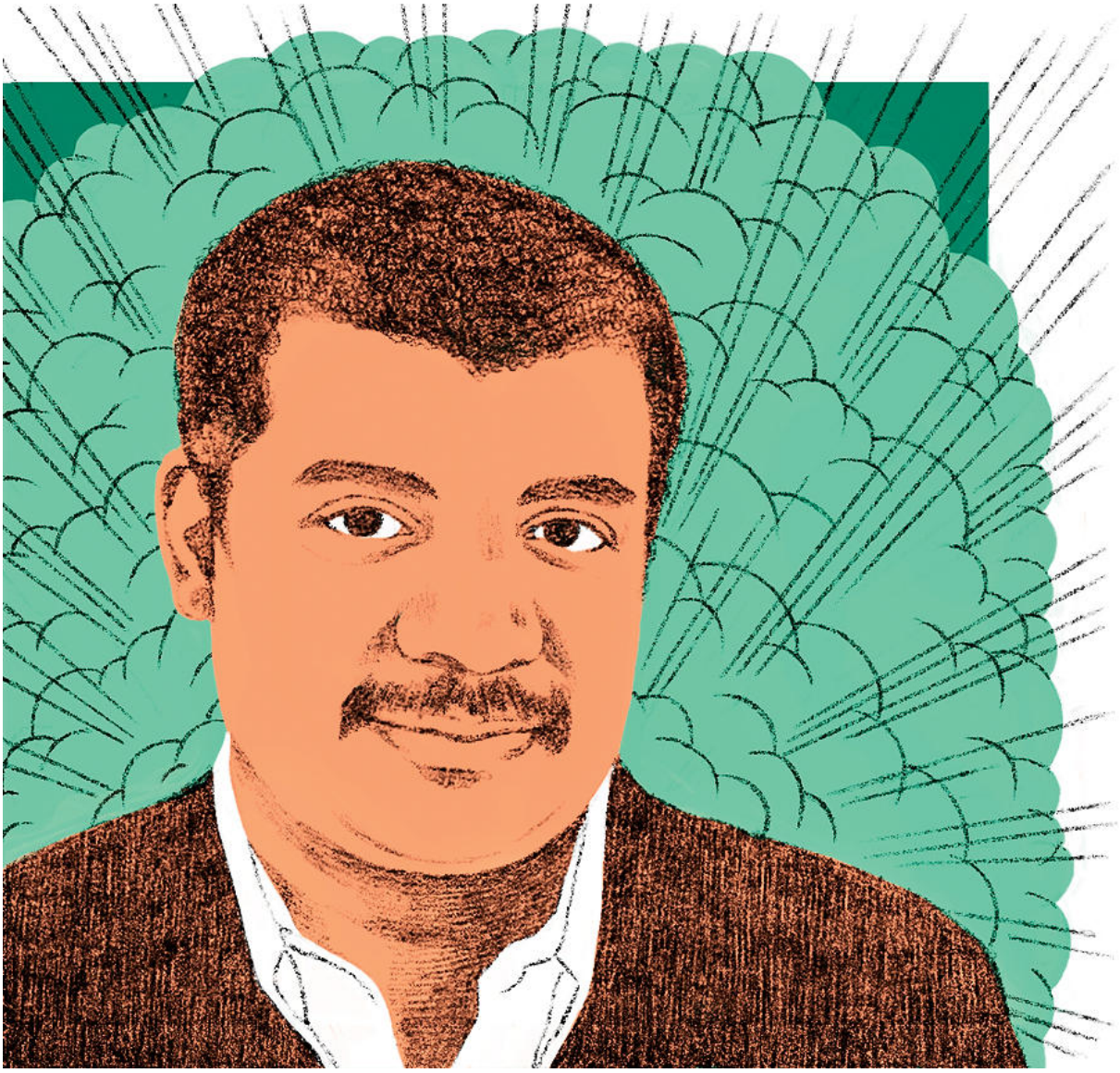
Books

Star Wars: Astrophysics and the Military

Neil deGrasse Tyson ’92GSAS, the astrophysicist and host of television’s *Cosmos*, discusses his new book, *Accessory to War: The Unspoken Alliance between Astrophysics and the Military*, cowritten with Avis Lang.

By
Bill Retherford '14JRN
|
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Claire Merchlinsky

You make the case that science and the military are uneasy business partners. How is space linked to war?

We have shared interests. One of the earliest, best examples is Galileo, who perfected the telescope in 1609. We think of him as an astrophysicist calmly looking up at the night sky. We don’t think of him as empowering the Venetian military. But Galileo helped the military before he observed the sun, moon, and stars. Have a look, he said. You can see a ship ten times farther away than you otherwise could. You can identify whether the flag is friend or foe. The military commissioned him to make a slew of telescopes.

It’s a two-way street. We look over the picket fence at the military, and they do the same. We both gain at the end of the day.

How do scientists feel about contributing even indirectly to war?

I can say that most of us would not work on a project that had direct application to war. But a side of us says: wait a minute. If war invented something I can use, then I’m going to use it. Because I can do better science with it.

And if I publish research in a peer-reviewed, publicly accessible journal, the military can take whatever it wants. We can’t control it. It’s public domain at that point. So that’s why we’re curiously complicit.

Would science receive less funding if not for the potential military applications?

Yes. That’s true, no matter the science. That has always been true. We’d still get funding, but the really big funding goes to the military. For example, we now have a very good understanding of the origin of the moon. This is relatively modern knowledge, gleaned from data brought back from our visits to the moon. But why did we go to the moon? Oh, we went because we wanted to beat the Russians. We had a military motivation to go into space. Do you know how many scientists went to the moon? Take a guess.

I think we had one, didn’t we?

One person (Harrison Schmitt). He was on Apollo 17, which was the last NASA mission to the moon. So clearly going to the moon wasn’t about science. It was about other things. But we got science done on it.

How does President Trump’s proposed “Space Force” tie into all this?

Just because it came out of Trump’s mouth does not mean it’s a crazy idea. There’s already a space force, controlled by the Air Force, called the Air Force Space Command. Its mandate is to prepare for conflict in space and cyberspace. Maybe some generals are completely happy with that, and I don’t need to second-guess what they judge to be the most efficient way to run their operation. But if you did spawn the Space Force from the Air Force, I’d throw in a couple of things. I’d throw in asteroid defense — I mean, why not? — and maybe do something about the debris that’s in orbit. That poses a hazard, a security risk. So I would boost their

portfolio in sensible ways.

Regarding our national investment in science, are we keeping up with other countries, especially China?

The answer is no in almost every way, except for the total amount of money we're spending on the military. Our annual military budget is greater than the sum of those of all the rest of the developed nations in the world. There was a day when your military strength was measured by how many soldiers you had, how many fighter jets you had, how many naval vessels you had. But if someone's going to attack us via cyberwarfare, or someone's going to render us blind by taking out our GPS satellites, you need a different kind of army. You need an army that knows computers. You need an army that knows how to use a joystick. You need a geek army. You need people who are science-literate.

The nature of conflict is changing. And you are going to need access to that kind of intellectual capital to engage the future of warfare.

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