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Militarizing Space: Starship Troopers, Same As It Ever Was

This week Vice President Pence announced that the Department of Defense is beginning a planning process to establish a sixth military branch, known as the Space Force. Pence's statement was a public reassurance that Trump's sudden announcement of the Space Force was not just another of the president's frequent sudden announcements that have no connection to reality. Pence claimed that this new Space Force military division will be in place by 2020, and while many in the media are reacting as if the militarization of space were a sudden departure from American policy, as with much of the Trump presidency, this policy shift is only a minor, more grotesque version of what our government has long routinely undertaken.

Links between the American space program and military have long been one-part open secret, and one-part open question. It has always been difficult to determine just how much of NASA's budget can properly be considered military spending. A few years ago while starting to work on a paper examining Margaret Mead and other anthropologists' work on a 1950s and 60s program designed to measure and shape US public attitudes about space (known as Project Man in Space), I had assumed I would find a basic critical analysis, akin to Gore Vidal's famous 1988 essay on "The National Security State," in which Vidal's analysis of mandatory and discretionary spending revealed that the American military's budget was far larger than the meek 37% appearing at first glance (when only considering the listed DoD budget), and once all military linked projects at agencies ranging from Department of Energy, Department of State, Veteran's Benefits, and foreign arms deal aid packages, and other defense related projects not included in the

Department of Defense budget, could be understood to make up not a minority of the federal budget but approaching 77% of the budget. And while I found many excellent contemporary and historical analysis of the links between NASA and military space projects, I could not find straight forward numbers stating how much of the money the US government spends on space goes to military linked projects.

Links connecting NASA and military projects have been close to the surface since NASA's origins. Section 305i of NASA's 1958 Charter clarified NASA's relationship to the Pentagon, in stating that: "The Administration shall be considered a defense agency of the United States for the purpose of chapter 17 of title 35 of the United States Code." While nothing is hidden about this, NASA's very public civilian space exploration projects create widespread perceptions that its mission remains essentially one of pure science and exploration.

Beginning in 1957, anthropologists, including Margaret Mead played a role in formulating the public disassociation of space exploration's direct links to the militarization of space, and the roots of this severance can be traced back to a program known as Project Man in Space, where Harold Laswell, Margaret Mead and Donald Michael's basic narratives championing pioneering elements of space exploration were developed, in part with funding from the Brookings Institution. This work studied and reported on public attitudes about space during the post-Sputnik era, and impacted policy narratives about the American space program.

A 1983 General Accounting Office report determined that about a quarter of NASA's spending then went to "support military programs." In a 1982 *New York Times* article, John Nobel Wilford reported that,

"In a letter on the report, W.H. Sheley Jr., director of the accounting office, said that, based in part on projections that almost half of the space shuttle flights will carry military payloads, more than \$1 billion of the requested \$3.5 billion for the shuttle in 1983 could be allocated as a military expenditure. Part of the agency's spending for aeronautics and space technology research could also be attributed to military goals, the report said.

By these calculations, Mr. Sheley said, \$1.1 billion of NASA's research and development budget of \$5.33 billion, or 20.5 percent, should be considered military-related. Another \$400 million, or 7.7 percent, was listed under civilian-military support. The space agency's total budget request for 1983 amounts to \$6.6 billion. The Pentagon's total direct spending on space activities is not known, but is thought to be equal to or greater than NASA's annual budget. NASA Disputes Calculations."

During the Reagan years, as governmental space exploration and private industry merged in new ways, there were increasing uses of NASA for military and intelligence activities. In the mid-1980s we learned that at least 1/3 of the space shuttle missions had classified top secret military or intelligence components—many of which ran through the secret National Reconnaissance Office. During the period following the explosion of the Challenger shuttle, the significance of these missions became apparent as the Pentagon claimed priority for missions once the shuttles were cleared to fly again following the lifting of the post-Challenger moratorium.

Government historian, and former policy staff member at CIA, the National Reconnaissance Office and in the office of the Secretary of the Air Force, Michael Cassutt, observed that the Space Shuttle was so linked to intelligence missions that the National Reconnaissance Office "requirements drove the shuttle design." During the 1980s and 90s, classified payloads became a regular feature of space shuttle missions.

Today, astronauts and NASA are not needed to advance the militarization of space to the next frontier: we have the Pentagon's secret space drone (known as the X-37B) that has circled the earth with minimal public interest, undertaking secret missions. Well before Trump did his publicity stunt announcing his comic book "Space Force," the Department of Defense built its own space program—benefitting directly from the advances developed by NASA, with a separate space budget comparable to NASA's; the militarized explorations of space today dwarf civilian explorations.

Under Obama, in 2016 Defense Secretary Ash Carter pushed for significant increases in the Pentagon's space budget, bluntly argued that in the past, "space was seen as a sanctuary. New and emerging threats make clear that that's not the case anymore and we must be prepared for the possibility of a conflict that extends in space." Carter also noted that China and Russia "have advanced directed-energy capabilities that could be used to track or blind satellites, disrupting key operations, and both have demonstrated the ability to perform complex maneuvers in space." Trump's move to establish a Space Force continues is little more than a continuation of the Obama administration's effort to militarize space.

While it is simple to separate (or launder) budgetary lines funding civilian space missions designed to orbit the earth or walk on the moon—there is no simple meaningful way to separate the scientific research needed to launch the Apollo astronauts to the moon, from the science needed to successfully build Intercontinental ballistic missiles designed to carry deadly nuclear payloads to our Soviet enemies. This is the nature of dual use

science; and while the particulars of our culture of science train us to categorically see these as separate enterprises, these developments feed knowledge into a conjoined body of knowledge. Military spy satellites, star wars technology, unknown military tests in space, space weaponry, many innovations now in the public domain—such as early GPS technology–was classified and limited to military applications. This is part of the dual use nature of militarized science in a capitalist market place.

It remains unknown what role our greatest contemporary malefactors of great wealth, Jeff Bezos and Elon Musk's, privately funded space programs will play in the development of this new Space Force. Given the ongoing trends of privatized R & D for military and space programs it is reasonable to assume there will be profits to be shared, even as these elites are acting in ways that appear as if they are preparing the way for their decedents to leave a depleted world behind.

What Trump's formation of an identified Space Force does is to make naked the truth that the American space project, within and outside of NASA, has always been part of a military project wrapped in the public gauze of utopian space travel fantasies. These fantasies helped channel public understanding of space exploration and its inherent links to the militarization of space; and even while we gained incredible, important, scientific knowledge and stunning photos from Hubble and other projects, these were also, at least in part, shinny objects that kept our attention from core military aspects of America's space project. Like most open secrets, little was hidden about this, but the cultural categories we constructed kept the depth of this obvious truth at bay as we entertained visions of utopian space exploration, of a world where developed nations would share satellite data with poor countries as acts of mutual aid, even while NASA's space race with the Soviet Union was a form of warfare. The Mercury and Apollo programs were civilian programs-with some military personnel and project links, the satellite programs, and other NASA linked projects had significant military links. These military features were frequently highlighted in congressional funding requests, while the public was sold Buck Rogers fantasies.

In very concrete terms Trump's step towards a Space Force simply connects the dots laid in place by the politer and more articulate administrations came before him as he moves us into a world where space more openly becomes a warfare platform. But we should expect a culture so deeply embedded in a political economy of warfare and militarization to try and do no less than to extend its militarized vision beyond our atmosphere reaching to militarize the universe.