

# Epstein, Project Maven, and Some Reasons to Think About Where We Get Our Funding

By Timothy Bretl, Ludovic Righetti, and Raj Madhavan

Jeffrey Epstein was a convicted sex offender who died this past summer of an apparent suicide while incarcerated at the Metropolitan Correctional Center in New York City, after having been arrested for alleged sex trafficking of underaged girls [1]. These allegations involved hundreds of incidents with dozens of girls as young as 13 years of age and went back nearly two decades [2].

Epstein was also a wealthy financier, whose billionaire clients included the founder and chief executive officer (CEO) of L Brands (a conglomerate that includes Victoria's Secret and Bath and Body Works) and who was reported to have counted among his friends former U.S. President Bill Clinton, Harvard professor Alan Dershowitz, and actor Kevin Spacey [3].

And finally, Epstein was a philanthropist with a foundation that “[supported] innovation in science and education.” Among other institutions, his foundation was reported to have contributed roughly US\$9 million to Harvard University between 1998 and 2007—helping to initiate its Program for Evolutionary Dynamics [4]—and approximately US\$800,000 to the Massachusetts Institute of Technology (MIT) Media Lab between 2008 and 2018 [5], [6]. Epstein himself was reported to have given US\$1.2 million in personal, not institutional funds, to Joichi Ito, director of the MIT Media Lab, a fact that has since led to Ito's res-

The IEEE Robotics and Automation Research and Practice Ethics Committee (RARPEC) is intended as a platform to exchange ideas and discuss the impacts and practice of robotics and automation (R&A) technologies in research, development, and deployment that appear to pose ethical questions for humanity. With increased awareness and controversies surrounding R&A, RARPEC is publishing a series of opinion pieces that focus on separating hype from reality by providing an objective and balanced treatment of technological, ethical, legal, and societal perspectives. Fourth in the series, this column focuses on various funding sources for research and their implications. Please send your feedback and suggestions to the chair of the committee, Raj Madhavan, at [raj.madhavan@ieee.org](mailto:raj.madhavan@ieee.org). We look forward to your comments!

ignation [7]. Epstein was also reported to have worked as an intermediary to secure at least US\$7.5 million from other donors, including US\$2 million directly from Bill Gates for the MIT Media Lab during that time period, with both the lab and the institution allegedly taking steps to conceal Epstein's involvement from their own employees and the public [8]. Two members of the MIT Media Lab, Associate Prof. Ethan Zuckerman and Visiting Scholar J. Nathan Matias, subsequently resigned in protest over the lab's financial ties to Epstein [9]–[11].

Epstein's relationship with the MIT Media Lab also links him to our community. Among the faculty of the MIT Media Lab, from the year of the lab's founding in 1985 until his death in 2016, was Marvin Minsky, a pioneer in the field of artificial intelligence (AI). Minsky cofounded the AI Laboratory (then the “AI Project”) at MIT with John McCarthy in 1959, which later became the MIT Computer Science and Artificial Intelligence Laboratory (CSAIL). He secured funding for some of the earliest work on the development of robot arms, and his research on arti-

ficial neural networks, reinforcement learning, and dynamic programming is still referenced today [12]. Not only was Minsky tied to the Epstein case through his association with the MIT Media Lab; he was also identified by name in a deposition that was recently made public. This deposition alleged that a 17-year-old girl was directed by one of Epstein's associates to have sex with Minsky, then age 73, at a conference on Epstein's island of Little Saint James in 2001 [13].

CSAIL itself, which houses numerous faculty and students of robotics at MIT, was drawn fully into the controversy when Richard Stallman—a visiting scientist at CSAIL, the founder and president of the Free Software Foundation, the author of the famous GNU Manifesto, and a widely influential figure in the open source community—defended Minsky in a CSAIL-wide listserv email by saying that “we can imagine many scenarios, but the most plausible scenario is that [the allegedly trafficked 17-year-old girl] presented herself to [Minsky] as entirely willing” [14]. A strong public condemnation of this statement was leveled by MIT

alumnus Selam Gano, who worked as an undergraduate in the lab of robotics faculty member Alberto Rodriguez and subsequently took a position at the company XYZ Robotics [15]. This condemnation led to the resignation of Stallman from the Free Software Foundation's board of directors and from CSAAIL [16].

All of MIT's problems with the Epstein case began, it seems, with public concerns about the source of research funding. To most of us, it will seem self-evident that taking money from a convicted sex offender who is subsequently accused of large-scale sex trafficking is not a good idea. However, it may be harder for us to say exactly why we find this idea so troubling and to convince others. Indeed, according to the reports cited, Director Ito was perfectly willing to accept funds from Epstein and his foun-

dation—as was MIT itself, until the source became public—and was not dissuaded by Zuckerman's private correspondence in 2013 that a relationship with Epstein "could have negative consequences for the lab" [8]. Other members of the MIT Media Lab seem to agree with Ito. One student at the lab recently echoed the common refrain, "as long as we are doing well with this money, we shouldn't care," and, of course, it is only Zuckerman and Matias who have so far resigned in protest [9]. Lawrence Lessig, a professor at Harvard Law School, went so far as to say that Ito and the MIT Media Lab had an obligation to conceal the acceptance of money from Epstein—the sort of money "*every institution*" [italics in original] necessarily takes, according to Lessig—to avoid giving the appearance of endorsing Epstein's views or behavior [17].

At minimum, the Epstein story should remind us that how we fund our research matters in ways that go beyond "using the money to do good work." How extreme is this story, though? To what extent does it relate to most of our own activities? Is this story just an outlier, or is it an example of more pervasive problems with how our research is, or can be, funded? To help answer these questions, we will consider another example, from industry rather than academia.

### What About Taking Money From Those Who Carry Out Targeted Killing?

"Project Maven" was established by the U.S. Department of Defense (DoD) in a 26 April 2017 memorandum from the Deputy Secretary of Defense at the Pentagon [18]. Also known as the *Algorithmic Warfare Cross-Functional Team*, the

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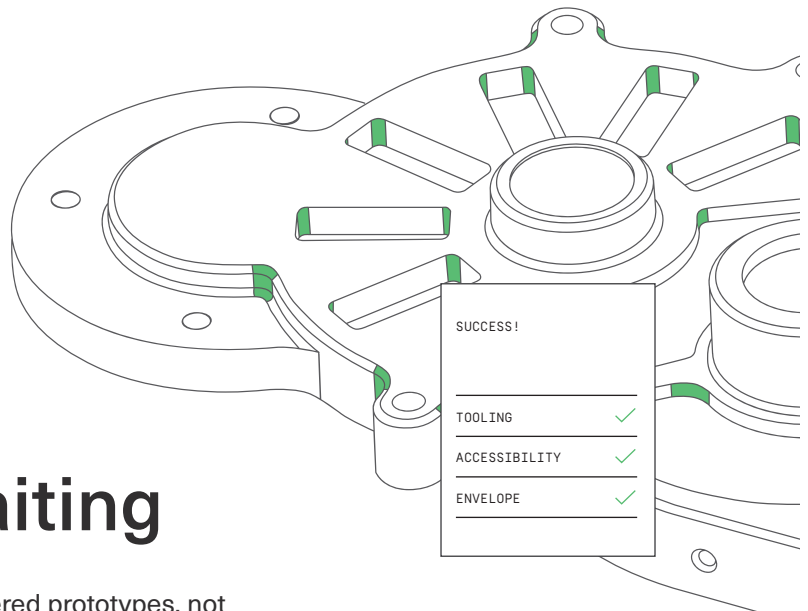


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stated goal of Project Maven is to “integrate artificial intelligence and machine learning” with DoD operations and, in particular, to “turn the enormous volume of data available to the DoD into actionable intelligence and insights at speed.” The first task of Project Maven, according to the memorandum, would involve the application of “computer vision algorithms for object detection, classification, and alerts” in support of counterterrorism operations with unmanned aerial systems, a common euphemism for the drone assassination program.

Drone strikes have been a mainstay of U.S. foreign policy for more than fifteen years, with the first targeted killing by a remotely piloted aerial vehicle reported to have occurred in Yemen in late 2002 [19]. Targeted killings were codified as an essential part of counterterrorism efforts in 2013, with the formal establishment of an assassination program or “drone war” that continues to extend throughout multiple countries in the Middle East [20]. It has long been established that drone strikes cause significant collateral damage and have negative impacts on whole communities in addition to those people actually being targeted [21], [22]. According to conservative reports by the Bureau of Investigative Journalism, there have been nearly 7,000 U.S. drone strikes to date, killing between 8,000 and 12,000 people; among these, between 700 and 1,800 were civilians and between 250 and 400 children [23]. These strikes continue unabated; they doubled two years ago [24], and, more recently, the U.S. government has even chosen to stop disclosing to the public its estimates, however flawed, of collateral civilian casualties [25].

Analysis of video taken from drone flights, involving both strikes and other surveillance, is a key step for the U.S. military in choosing targets for assassination [26]. Project Maven came to light after it was reported that Google had secretly partnered with the DoD to provide more efficient ways of completing this video analysis, drawn from the company’s expertise in big data, AI, computer vision, and machine learning [27]. Rejecting the company’s own absurd

claim that the technology provided to the U.S. military would be “for nonoffensive uses only” because it “flags images for human review,” several thousand Google employees signed a letter of protest asking their CEO, Sundar Pichai, to “cancel [the] project immediately,” arguing that it was inconsistent with company values and would “irreparably damage Google’s brand” [28]. Leaked emails subsequently showed that, contrary to public statements made by the company, the relatively small initial contract with Project Maven was meant to be the first step in a deal that could grow to US\$250 million per year [29]. Google quickly backed down and announced that the Project Maven contract would not be renewed [30], although the company refused to rule out similar future contracts and, more recently, was reported to have reneged even on the commitment to cease involvement with Project Maven [31]. It was, of course, exactly during this period that Google decided to remove the famous “don’t be evil” clause from its employee code of conduct [32].

This story, as well, is strongly linked to our own robotics community. Google has for years hired many of our students and faculty. They’ve acquired a number of well-known robotics companies, among them Boston Dynamics, a company with its own strong ties to the U.S. military [33]. Although Google later shut down or sold most of the companies it acquired, it has since initiated a new Robotics at Google effort with a focus on machine learning [34]. The director of Stanford University’s AI lab from 2013 to 2018, Fei-Fei Li, now chief scientist for AI at Google Cloud, was quoted in leaked emails as advising against mentioning “AI” when speaking about its Project Maven contract, referring to it as “red meat to the media,” and was allegedly complicit in publicly concealing Google’s involvement in this project [35]. A variety of other large companies, e.g., Microsoft and Amazon, the latter of which expressed “[unwavering] support of our law enforcement, defense, and intelligence community,” have been competing for the very same DoD contracts, including those related to Project Maven, and

have an equally strong presence in robotics [36].

What are the parallels between this story of accepting money to help further an extrajudicial assassination program that reportedly violates international law and the story of accepting money from an alleged sex trafficker? Both involved funding from dubious sources that were not disclosed—to either the public or most members of the institutions that accepted the funds—and were later covered up. Both prompted internal dissent and protest. Both resulted in scandals that may have damaged the reputation and, in some cases, the careers or business prospects of institutions and their members. Finally, both seemed to present enough separation between the source of funding and the researchers or employees who received funds—*my* work does not contribute to the sex trafficking industry, *my* work is not used directly for the purpose of targeted assassination—that it was possible, for some, to argue that we should ignore the source and focus only on “doing good work.”

Is this second story also an outlier? Does it relate any more directly to our own activities or to some of the things we think about when financing our own work? Does this get us any closer to clarity on when, and for what reasons, we should consider making the hard choice to refuse a source of funds? We will proceed to explore five possible reasons for making this choice.

### **Five Reasons to Think Carefully About Where Our Money Comes From**

The strong voices of protest within both MIT and Google show that many of our robotics colleagues do not think that it is enough to “do good” with our money. Instead, many of our colleagues believe that accepting money is an act that can have consequences in itself. Why?

### ***It Could Result in a Scandal***

Guilt by association is a flawed but real process; nobody wants to be associated with sex trafficking, and nobody wants to be associated with extrajudicial killing. If for no other reason, both stories

teach us that we may want to avoid bad money to avoid the almost inevitable scandal. Even if we conduct fundamental research or do our work with different intentions, it is nearly impossible for us to separate ourselves from the fallout when our work is associated with, or showcased by, those receiving strong societal disapproval.

### ***It Could Lead Us to Do Bad Things***

If we take bad money, we may end up doing bad things. At best, in both of the cases discussed here, institutional leaders became complicit in concealing troublesome sources of funding, both from their own members and from the public. At worst, some individuals may have committed criminal acts or may have contributed to ongoing violations of international law.

### ***It Could Harm Our Reputation***

Zuckerman and Matias at the MIT Media Lab were trying to do research with a positive impact on social justice and recognized that they would lose credibility, and be less able to do their work effectively, if they took money from Epstein. Li at Stanford was advocating for “AI that’s good for people” [37] at the same time that she was reportedly complicit in publicly concealing Google’s contract with Project Maven. Established scientists and engineers have a particular responsibility to lead by example, to show junior employees and researchers that it is possible to do work that is consistent with our principles.

### ***It Could Influence Us, for Better or Worse***

One reason that people and organizations give grants is to influence what we

do, who we work with, and what our conclusions are. Indeed, influence is an explicit aim even of a program like the U.S. National Science Foundation’s National Robotics Initiative, which is viewed by many—and we wholeheartedly agree—as having a largely positive impact on our community. A recent article in this magazine reflected on this impact, noting that “the NRI has begun to influence the robotics research community,” and specifically that “22% of NRI-funded collaborations (pairs of coauthors) are novel” and “NRI funding increases the chance of publishing in several nontraditional robotics fields” [38]. Why would corporations or military agencies like DARPA be any different from NSF? All of these agencies have agendas and want to change what we think about—in other words, to change our research priorities—for



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better or for worse. There is a long literature on the influence of corporate funding—or even of small gifts like the corporate swag we all receive at conferences—on medical and pharmaceutical research that we might consider in the context of our own field [39], [40].

### **It Could Legitimize Bad Actors**

Another reason that people and organizations give grants is to launder their own reputation. We all carry a certain authority and positive image associated with our scientific profession. We are called on to be experts, to be independent from special interests, and to work—often with significant public funding—for the betterment of society. When we accept money from an agency, we give our name to that agency, which it can then use to further its own agenda. The advertising of an agency's funded research projects, e.g., can play an important role in legitimizing that agency's broader activities. This process is certainly acceptable, even beneficial, when the goals of an agency are aligned with our own scientific pursuits and societal beliefs. However, we may want to think twice before legitimizing an agency whose goals are at odds with our own principles, e.g., a company with a poor record on workers' rights or with a history of environmental devastation, or an agency whose mission includes developing new technology to wage war.

### **The Start of a Broader Discussion**

We wrote this article to raise questions about the issues associated with research funding by considering two recent cases that were controversial, received significant media attention, and had a profound impact on the parties involved. We have, of course, only scratched the surface of this problem and have not addressed broader concerns about the manner in which robotics research is funded across the world and how this aligns (or not) with the mission of the IEEE Robotics and Automation Society. We hope that this article will help to start a broader discussion in our community. This discussion, though likely to be difficult and conten-

tious, is especially important as our field enters a time of significant growth, as our research and its consequences receive more scrutiny from the media and the public, and as most of us genuinely aim to see that our work has a positive impact on society.

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