No Justice, No Robots: Taking a hard look at Roboticist-Police Collaborations

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ABSTRACT

Collaborations with law enforcement institutions impose risks, both for the general public and for the field of Robotics. We take a hard look at ethical justifications and risk by collaboration with law enforcement agencies in the U.S. and outline considerations for researchers on what to examine before entering in a collaboration. Using Trust frameworks from AI Ethics, we argue that collaborations with law enforcement present not only risks of technology misuse, but also risks of legitimizing bad actors.

1 INTRODUCTION

Two trends of modern American society appear to be on a collision course. First, outbreaks of widespread police violence in American cities have drawn increased scrutiny of America's policing system. Second, police are increasingly acquiring robots as a direct consequence of the simultaneous (1) militarization of police forces and (2) recent advances in robotics.

Robots and other military devices are available to U.S. police under the U.S. Department of Defense (DoD) 1033 Program, with little justification. For example, Doraville GA (population 8,500), received a $750k "Mine Resistant Vehicle", and Keene NH (population 23,000), received military equipment after citing their annual pumpkin festival as a possible target for terrorism. Over $7 billion of equipment has been distributed to over 8,000 law enforcement agencies, with 700 robots alone migrating from Pentagon to police as of 2016 [19]. Police militarization has drawn widespread scrutiny after increased public awareness of (1) the racial violence regularly perpetrated by police, and (2) the racist, violent origins of policing.

The inclusion of robots in equipment transfers is especially concerning, as roboethicists have argued it could exacerbate rates of police violence [30]. These police militarization trends are now being exacerbated through the creation of robots designed explicitly for the police, and through direct collaboration between roboticists and police departments [4, 5, 7, 21, 31, 34, 37, 38, 51]. If American roboticists continue to collaborate with the police, this will be disastrous both to the American people and to the field of robotics, regardless of the technology involved. Our argument in this work is not focused on the "Deadly Design Problems" of designing explicitly violent robots for the police [2, 3]; we instead argue that any collaboration between roboticists and police cannot be justified.

Our argument focuses on the trust required for collaboration. Trust is a useful framework not only for reasoning about robots and human-robot interactions, but also for engaging in practical moral deliberations about the *practice* of Robotics and HRI. Danks [15], for example, defines *appropriately grounded trust* as: "The willingness of a trustor to make themselves vulnerable based on justified beliefs that the trustee has suitable dispositions." This definition implies *distrust due to lack of appropriate positive grounding*, which we define as: "An unwillingness of a trustor to make themselves vulnerable based on a lack of justified beliefs that the trustee has suitable dispositions." And, it implies *appropriately grounded distrust*, which we define as: "An unwillingness of a trustor to make themselves vulnerable based on justified beliefs that the trustee has unsuitable dispositions." Using these three concepts, we argue that roboticists should have appropriately grounded distrust for American police, or, at minimum, distrust due to lack of appropriate positive grounding, whereas any collaboration entered into on rational grounds should be one with appropriately grounded trust if it is to satisfy accepted ethical standards of *minimal risk*, and, as such, that police and policing do not have the dispositions necessary to justify the risks imposed by collaboration. To advance this argument, we begin by identifying the sources of vulnerability to the HRI and Robotics communities that are presented by collaborations with police, which undermine trust at multiple levels (interpersonal, organizational, and institutional). Next, we articulate the unsuitable dispositions that should render roboticists unwilling to make themselves vulnerable to those risks, and the sources of evidence that serve as justifications for those dispositions. Finally, we argue why these risks fail to outweigh any potential benefits.

2 VULNERABILITY

When researchers choose to collaborate with someone else, whether another researcher, an industry partner, or a police department, they make themselves vulnerable in multiple ways. The most obvious risk is that their research outcomes or technology will be misused. Misuse in this context describes the use of robot technology in an improper way or for the wrong purpose, for socially detrimental purposes the researchers did not envision or intend. In our experience, this is the primary risk that comes to mind for both roboticists and the general public, in part because it is the main risk we teach students to guard against, and in part due to the science fiction portrayal of robots in popular culture.

The dominant narrative around police robots thus focuses on how robots could (and in some cases, do and will) increase the unjust use of force and surveillance, the risks of robots physically and psychologically distancing police officers from the direct outcome of robot use, and the disproportionate impacts of police robots on communities already oppressed by the police. However, while technology misuse might be the most salient risk to researchers, risks are also imposed by the very act of collaboration.

In recent work, Bretl et al. [8] discuss other categories of risk imposed by collaboration, relating to the nature of the collaborator rather than the topic of collaboration. These include the risk for scandal and reputational harm, negative influence on researchers, and, critically, legitimization of bad actors. As a key example, Bretl et al. [8] analyze the funding relationship between Massachusetts

Institute of Technology (MIT) and alleged pedophile and child trafficker Jeffrey Epstein. As they point out, regardless of the nature of the technology Epstein funded, the collaboration between MIT and Epstein clearly had negative consequences: not only did the collaboration harm the reputations of MIT, but the collaboration was used by Epstein as a way to launder his reputation and demonstrate his legitimacy. Collaborations with the Police may similarly risk laundering their reputations and manufacturing their legitimacy.

As an example, one of our institutions recently highlighted an alumnus' police training technology. In doing so, the university implicitly suggested that the police are a solution to societal problems; that public funds should be spent on training technology; and that the police using those technologies should be supported as worthy collaborators. Moreover, because the university itself was highlighted in reporting of the police technology, the technology was given a false veneer of scientific credibility and authority.

We further argue that the public's view of such collaborations should be particularly concerning to roboticists due to our field's existing demographic challenges. Many members of the very demographic groups the field of robotics is hoping to encourage to join our field have been historically oppressed by the police, and as such may be justifiably reticent to join a lab, major, department, or school, that is collaborating with their oppressors. Inherently flawed technologies like facial recognition are systematically deployed in low-income and minority neighborhoods while avoiding white neighborhoods [40], leading directly to discrepancies in benefits, employment, and policing [52], and thus justifiably increasing mistrust among those communities towards those creating and deploying those technologies [52, 54]. This may in turn feed into a cycle of systemic racism as fewer students of color choose to go into robotics, leading to decreased sharing of their perspectives within our field and thus increased risk of roboticists building technologies that serve as tools of oppression.

The above discussion delineates three key categories of risk: (1) Risk of technology misuse (due to unsuitable dispositions *related* to the technology), (2) Risk of actor legitimization (due to unsuitable dispositions *unrelated* to the technology), and (3) Risk of underrepresentation (due to roboticists' explicit or implicit support for those unsuitable dispositions leading people from populations oppressed by the police choosing not to enter our field). Each of these categories of risk can be presented by different types of risk-presenting actors, each of whom demands a different type of trust. We refer to three risk-presenting actors: The individual researcher, the organization, and the institutions, which respectively require interpersonal, organizational, and institutional trust. These categories of risk and categories of risk-presenting actorstogether define a risk-assessment context, as we will now describe.

When researcher R chooses to engage with agent A in collaboration surrounding a technology, R must trust that A will not misuse the technology. This required interpersonal trust between R and A. R also must trust that they will not be helping A to launder a deservedly bad reputation or discouraging students from joining R's field. Collaboration between researcher R and agent A thus requires justification of dispositions necessary for R to have appropriately grounded interpersonal trust in A.

In collaborating with agent A, researcher R also makes themselves vulnerable to A's *organization*: R must trust that others in A's organization will not be willing and able to misuse the technology. R also must trust that A is not a well-meaning agent working within a bad organization whose reputation R would be helping to launder, and association with whom would discourage students from joining R's field. Collaboration between researcher R and agent A thus also requires justification of dispositions necessary for R to have appropriately grounded organizational trust in A's organization.

Finally, researcher R is also making themselves vulnerable to the *institution* of which agent A's organization is a part. R must trust that other agents within that institution will not be able to misuse the technology, but more importantly must trust that A's organization is not a well-meaning organization within an inherently bad institution whose reputation R would be helping to launder, and association with whom would prevent students from joining R's field. Collaboration between researcher R and agent A thus also requires justification of dispositions necessary for R to have appropriately grounded institutional trust in A's institution.

We now have a framework for analyzing the different types of risks that might be posed by developing robots for, or otherwise collaborating with, the police. Our selected definition of trust makes clear, however, that trustworthiness depends not only on the mere existence of risks, but rather also on the interaction between those risks and the dispositions of the trustee.

3 DISPOSITIONS

To understand the role of dispositions in our risk calculus, consider a simple example. Rita is a roboticist who has developed a robot for delivering goods in hospital contexts. She is considering working with Anton, who works at St. Osmund's hospital. This robot may present a number of theoretical risks of technology misuse. The robot could, hypothetically, be used to push patients down stairwells. However, Rita can safely dismiss this risk due to analysis of dispositions: it is likely not justifiable to suspect that Anton desires to push patients down stairwells; it is likely not justifiable to suspect that there are other hospital administrators who would have access to the robot who would have such a desire; and it is likely not justifiable to suspect that the system of American hospital care was designed and continues to operate for the purposes of pushing patients down stairwells. Thus, Rita is likely well justified in making herself vulnerable to this source of risk.

While this analysis may allow Rita to establish that the levels of trust needed to collaborate with Anton are well grounded *with respect to the risk of technology misuse*, Rita may yet have concerns about actor legitimization. Consider, e.g., the fact that some doctors have refused to treat patients from LGBT communities [11, 29, 57, 58]. This presents additional sources of risk. If Anton is a doctor of this sort, then Rita's decision to collaborate with him could launder his reputation, thus facilitating his ability to harm vulnerable communities. This same risk may be present even if Anton would never discriminate in this way, e.g. if St. Osmund's allows or encourages its other employees to do so. And this risk may be present even if St. Osmund's would never allow such discrimination, e.g. if St. Osmund's is a type of private hospital that has historically been used to enable this type of discrimination. If this is the case, then even though Rita's technology is socially beneficial, and even though Anton and St. Osmund's are both unlikely

to misuse her technology and overall well-meaning, Rita may yet need to decide not to collaborate, if it is justifiable to suspect that her collaboration would be used to bolster the reputation of a fundamentally discriminatory type of institution that simply should not exist, and if this collaboration would be likely to discourage LGBT students and scholars from joining her laboratory or university.

Now suppose Rita is considering developing a bomb disposal robot in conjunction with police lieutenant Anton, who works for the St. Osmund Police Department. The intended use of this technology (defusing bombs) is likely to be viewed as positive. But what risks does the collaboration present? First, Rita should consider risks of technology misuse. Does Rita suspect, for example, that Anton could be prone to misusing the robot, by strapping explosives to it and using it to bomb the home of a mentally ill resident, as the police in Bangor, Maine did in June of 2018 [44], or to tear-gas peaceful protesters, as police across the country have already been doing without the help of robots? Does Rita suspect that while Anton would never do such a thing, others in his department might? And does Rita suspect that her technology could be misused in this way if acquired by other departments, due to the role of American Policing as an institution of oppression? Second, Rita should consider risks of legitimization. Does Anton have a history of brutality? Does his department? Does the institution of American Policing have its origins in, and continue to actively facilitate, perpetrate, and justify such violence? If any of Rita's answers are "yes", would she be legitimizing a bad actor, and would her collaboration discourage students and scholars from underrepresented communities from joining her laboratory and university?

4 JUSTIFICATION

Roboticists' collaborators *should* earn appropriately grounded trust, and *must* avoid appropriately grounded distrust. Within this framework, decisive argument against collaboration would require justification for the belief that collaborators have unsuitable dispositions that present untenable sources of risk. Evidence of unsuitable dispositions might take the form of individualized or systemic sources of risk, grounded in individual and institutional dispositions.

4.1 Individualized Sources of Risk Grounded in Likeliness of Technology Misuse

Individualized sources of risk are closely related to the risks of technology misuse or concerns over dual-use technology that have been substantially explored in the robot ethics community and the broader technology ethics literature.

Justification for unsuitable police dispositions can be found in the specific ways that police already misuse robotic technology, such as strapping explosives to robots in order to kill suspects [44, 47], or using robots to destroy property [36], and could also include patterns of police violence with or without the aid of technology, such as the 500 videotaped incidents between May 30th and June 15th 2020 collected by criminal defense lawyer T. Greg Doucette [41], or the prevalence of white supremacist, neo-Nazis [28, 49], and other racist ideologies within U.S. police forces [18, 22, 26]. Similarly, justification for unsuitable dispositions can be found in data[1] collected by organizations such as Campaign Zero, which in the case of the LAPD, as a single example, provides substantial evidence of racially biased violent tendencies grounded in statistics regarding use of force, use of force against communities of color, racial biases in arrest rates, evidence of overpolicing of misdemeanors, and inattention to crimes against people of color.

4.2 Systemic Sources of Risk Grounded in Origins and Incentivization of Policing

As we have argued, simply justifying the dispositions of particular individuals or organizations is insufficient. Unless the dispositions of the *institutions* those individuals and organizations are part of can also be justified, it will be impossible to minimize risks of reputation laundering and risks of association. While individuals and group dispositions are grounded in individual and group goals and motivations, so too are institutional dispositions grounded in institutional goals and motivations. And, we argue, the fundamental mission and motivation of American policing is unjustifiable.

4.2.1 Past Policing: Origins of American policing. As Alex Vitale [55] shows, even outside the confines of America, formal policing is a relatively recent phenomena, with what is regarded as the first modern police force in metropolitan London founded less than 200 years ago, in part as a means of exerting political control over and suppressing working-class citizens protesting the loss of jobs due to industrialization (a parallel to concerns over automation that should not be lost on the HRI community) [43].

These anti-labor origins directly informed the origins of police forces in the Northeastern US, where police forces were formed to deal with unrest amongst exploited working class immigrants [33], for exerting control over religious minorities [20], while working *with* local petty criminals. Corruption, extortion, brutality, and killing of unarmed working-class civilians served as central elements not only of of Northeastern American policing [55] but also of the US-trained police forces set up in Central America [32]. Meanwhile, Vitale highlights how Policing in other US areas originated in similar oppression on both class- and, critically, race-based grounds [55]. In the American Southwest, American policing originated from the creation of the Texas Rangers, a group created to protect the interests of white colonists through the violent oppression, massacre, and segregation of local Native and Mexican residents [13], a mission that continued long after Texas' annexation [45]. Similarly, in the American South, Policing grew out of Slave Patrols organized to hunt down runaway slaves, prevent slave revolts, and prevent fraternization amongst Blacks [24, 56]. Post-abolition, these police forces shifted to focus on forcing Blacks into sharecropping and prisons where they could be enslaved [6], often in coordination with the KKK [46].

The institutional dispositions of these groups, as evident from their missions and tactics, were morally indefensible. As such, collaboration with these groups would not only come with high risks of technology misuse, but would directly lead to unavoidable risks of reputation laundering. While several decades have passed since the

[1] Roboticists should be hesitant to rely on statistical evidence, which is often unavailable due to lack of accountability measures or police oversight (e.g., in LA, only 1% of use of force complaints and 0% of discrimination complaints are found in civilians' favor).

events described above, the institutional dispositions of American Police, and the associated risks, have not changed.

4.2.2 Current Policing: Incentivization and Systemic Impact of Modern American Policing. As detailed by Michelle Alexander, the oppressive roots of American policing interact with the incentivization of modern policing to create a cycle of systemic racism that condemns many Black Americans to a permanent racial undercaste [1].

The incentivization and use of modern American police to incarcerate and enslave large portions of America's communities of racial minorities presents vulnerability not only to high risks of technology misuse but also to unavoidable risks of reputation laundering. Roboethicists have in fact argued that police robots, especially when paired with racist predictive policing algorithms, may reinforce social inequality, accelerate mass incarceration, and worsen ties with communities [27]. And the mere act of collaboration on such technologies may suggest to the public either that the police and police' use of these technologies are legitimate solutions to societal problems – or, at minimum, that the collaborating scientists believe this to be the case. This serves to cast a false veneer of scientific legitimacy over these technologies and institutions. And, at the same time, this serves to cast a shadow of complicity over academia for the communities hurt by these technologies: collaborating with those responsible for incarcerating and enslaving members of communities underrepresented in Robotics is unlikely to encourage members of those communities to join our field.

What is more, Alexander's account emphasizes the role of the police within America's larger carceral and caste systems, which involve multiple institutions, including the elements of the criminal justice that systematically discriminate against black defendants and extract profits from the incarcerated through legalized slavery. This means that collaboration with the police also means trusting the dispositions of the justices in charge of sentencing those rounded up by the police, the dispositions of those running prisons into which many incarcerated are placed, and the institutional dispositions of the prison-industrial complex as a whole. There are obvious reasons to doubt these dispositions [16], including the statistical bias of the criminal justice system against black defendants [23, 48], and this is especially true for for-profit prisons given their perverse incentives [14], the statistical influence of for-profit prisons on sentencing decisions [17], and reports of judges sending children to for-profit prisons in exchange for bribes [42].

4.2.3 Policing Future: Reform and Abolition. The dispositional risks of policing are unlikely to be reduced through reform. As discussed by [55], reform initiatives like community policing are ultimately ineffective, as they typically (1) divert *more* money towards policing (and thus, away from the government programs that actually prevent crime, such as affordable housing, income supports, and community health initiatives), (2) ingratiate the police into *more* elements of society [50], opening new opportunities for corruption, discrimination, and abuse [25] without yielding any demonstrable improvements, and (3) can *exacerbate* existing problems with overpolicing [35]. Our argument suggests that while some robotics projects currently requiring collaborations with police may be viewed as socially beneficial from a hypothetical "view from nowhere" [39], their risk becomes apparent when situated within the broader context of institution-driven risks and vulnerabilities.

Researchers hoping to perform research in domains currently requiring police collaboration should advocate for police and prison abolition [12][2], or, at minimum, dramatic defunding of existing policing organizations so that those collaborations can instead be pursued with alternative organizations (e.g., social workers) that do not come with the baggage of deep-seated histories and current participation in systems of racial oppression.

5 CONCLUSIONS AND RECOMMENDATIONS

The evidenced dispositions of American policing organizations, their constituent officers, and the American institution of Policing, justifies a default stance of appropriately grounded distrust toward these officers, police organizations, and institution. We have further argued that the significant risks imposed by collaboration far outweigh their minor benefits. It is also worth pointing out that those made vulnerable to the risks imposed by researchers' collaborations with the police are unlikely to consent to those risks. We thus suggest that researchers who wish to work in domains that currently require police collaboration push for replacement of the police with new social systems, while in parallel pursuing (if socially justifiable) collaborations with alternative organizations such as mental health professionals, social workers, and non-police emergency first responders. Similarly, we encourage roboticists working on topics that do not require collaboration with the police but who are concerned their technologies could be misused if acquired by police, to pursue similar advocacy, and to advocate for laws formally restricting police use of robotics (going beyond the informal guidelines proposed by other roboethicists [10, 53]).

When authors submit to ethics boards (and when ethics boards review proposed work) involving collaborations with law enforcement agencies, we encourage both authors and reviewers *at minimum* consider critically assessing (1) the origins of the agency with whom the researchers are collaborating, (2) whether there is documented evidence (e.g. from websites such as Mapping Police Violence (https://mappingpoliceviolence.org/), the Police Scorecard (https://policescorecard.org/), or the Use of Force Project (http://useofforceproject.org/)) of violence or racism observed in collaborating department over the past ten years, (3) whether project teams include researchers qualified to attest to the strength of the above documentation, especially scholars from Black, LatinX, and Indigenous communities, and scholars from fields like sociology that have a deep understanding of the role of systemic racism in policing and the criminal justice system, and (4) evidence of approval of and participatory design in coordination with members of the communities in which the designed technologies would be used. While this evidence will not address all of the risks discussed in this paper, they may be a helpful first step.

Finally, while collaboration with police may present new use cases for interactive robots, especially given the increased militarization of the police, we suggest that researchers should carefully strive to reject not only the urge to view the racist institution of policing as a blanket solution to society's problems, but also to reject technochauvinism [9], i.e., to reject the urge to view technology (especially those technologies we have expertise in developing) as a blanket solution to society's problems.

[2]Resources for learning about Abolition can be found at http://criticalresistance.org.

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The public discussions and news stories following this campaign have been instrumental in articulating the positions laid out in this article. Accordingly, this article articulates a position that is aligned in spirit yet substantially different from that articulated in the public letter, and thus this article does not necessarily reflect the positions of those who signed that petition, or their institutions.

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