

Towards a Mathematics Beyond Police and Prisons

The Just Mathematics Collective

The October 2020 issue of the *Notices of the American Mathematical Society* contained an open letter calling on the mathematics community to boycott collaborations with police and demanding, in particular, that we stop providing law enforcement with the mathematical technology they increasingly rely upon to terrorize Black and brown poor and working class people. The letter mentions the deeply racist feedback loops that predictive policing creates, and points out that predictive algorithms grant the police an unearned veneer of scientific legitimacy.

Alongside the open letter, the AMS published three other letters: one by Ingrid Daubechies, Ezra Miller, and Cynthia Rudin; another by Daniel Krashen, who was also given space to write a separate article expounding on his opinion; and the third by Sol Garfunkel. The arguments in these letters vary, but all oppose the boycott in spirit.

We, the Just Mathematics Collective (JMC), are a collective of mathematicians formed during the 2020 Black Lives Matter rebellion. Our goal is to shift the mathematics community towards justice via anti-racism, anti-militarism, and solidarity with the Global South. We acknowledge the role that mathematics plays in sustaining injustice, and the potential it has for creating a freer world built on mutual care and collaboration.

As such, the JMC wholeheartedly supports the boycott and the purpose of this statement is to respond to these three letters and to Daniel Krashen's article.¹

There are JMC members who helped co author the "boycott letter", but there is no containment in either direction. The boycott letter predates the JMC and the JMC takes specific political stances that are not articulated in the boycott letter, and not necessarily shared by the signatories of the boycott letter. As we will explain, we support the call for a boycott for reasons that go beyond the original letter's arguments.

While we agree with the claims made in the call for a boycott regarding the racist feedback loops inherent to predictive policing algorithms, our opposition to collaboration with police does not rely on problems with specific algorithms and instead rests on a more fundamental contention:

The role of the police in US society is to protect racial capitalism with coercion and violence. Thus, even if it was possible to create a predictive policing algorithm 100% free of racial bias, providing such an algorithm to the police would constitute an act of oppression.

Therefore, we will not rehash arguments summarized by the authors of the boycott letter about the specific effects of these algorithms.

We emphasise that our position is political, as is any position on the matter of collaboration with police, whether or not that is made explicit. The JMC arrived at our stance *not* by finding a mathematical error in the literature on predictive policing algorithms. Our position rests in the political tradition of *abolition* and an understanding of the historical and present role of the police in maintaining unjust and racist structures of political and economic power.

In his article, Krashen claims that “police patrolling will not simply end.” With these few short words, Krashen dismisses decades of political organizing and theorizing by workers, prisoners, and Black feminist thinkers who have dedicated their lives to building a world in which police patrolling *will indeed end*. No one expects this will happen “simply”, but a major obstruction to its happening at all is an unimaginative collective assumption that it is impossible.

All three of the letters (as well as Krashen’s article) are rife with such assumptions --- for instance, that the status quo of throwing people in cages as a means of addressing social problems is a necessary aspect of human society. Crucially, the authors do not explicitly acknowledge that *these are deeply political assumptions*, and instead obscure their political assumptions with claims to scientific objectivity.

Unlike those advancing these disingenuous arguments, the JMC freely admits our subjectivity --- what we state here are our political opinions and we do not pretend otherwise. We see a tendency in the mathematics community to characterise as “rationality” the practice of ignoring lived realities, historical facts, and moral and political questions; unlike some of our colleagues, we will not allude to our “objective analyses” and “logical insights” when making our arguments. Our stance derives from being humans observing actual social and material conditions; from seeing the impacts of prisons and police on our communities, friends, and family; and from engaging in the basic human practice of envisioning a more humane and just world.

To help frame what follows, we list below some historical facts and political opinions that undergird our position.

- **Historical fact:** The police in the US derive from slave patrols and private strike-breaking forces². There is a direct, well-documented throughline from these origins to the modern day quasi-military forces on our streets³, and a consistent pattern of collusion with white supremacist vigilantism, fascism, and the far-right⁴.

- **Political opinion:** The true purpose of policing is to preserve “social order”, racial capitalism, and patriarchy⁵. The many connections between the police and explicitly white supremacist groups and movements are no accident, but are in fact an inevitable consequence of the nature of police. *Therefore the racism, classism, ableism, sexism, transphobia, homophobia, and general inhumanity that is endemic to modern policing cannot be reformed away.*⁶
- **Historical fact:** Prisons were introduced as a reform, as a means of moving away from gratuitous and unpopular capital/corporal punishment⁷. In the US, prisons have evolved from the paternalism of the early penitentiary and the horrors of the convict leasing system into a massive industrial complex in which prisoners --- disproportionately Black and brown people --- are treated as raw material⁸.
- **Political opinion:** The US legal system is set up to criminalize non-whiteness and poverty, and to subjugate Black and brown communities through physical violence (via the police, immigration enforcement, and the military), and through the restriction of movement and other basic human rights (via prisons, detention centers, and militarized border zones). *In anything resembling its current form, it is incapable of delivering true justice or healing.*
- **Historical fact:** The US legal system has a long history of creating conditions in which sexual and other gender-based violence proliferates. This includes the rampant sexual violence in US prisons⁹ and immigration concentration camps¹⁰, as well as the long, ongoing¹¹ history¹² of forced sterilizations and other eugenics practices¹³. It also includes the system’s tendency to neither investigate¹⁴ nor prosecute¹⁵ intimate partner violence. Gender-based violence disproportionately affects women, children, and LGBTQIA+ people of color.
- **Political opinion:** White supremacy is deeply intertwined with patriarchy¹⁶. To those in power, gender-based violence is a desirable feature of the legal system and the misogynistic¹⁷ violence perpetrated in prisons is deeply connected to the misogynistic violence that exists more broadly in society¹⁸. The fact that all of this overwhelmingly affects communities of color is by design. *Abolishing the police and prisons is a fundamentally feminist objective, and patriarchy can not end without achieving it.*
- **Historical fact:** There is little evidence that policing and prisons have reduced social harms, or even that they have much of a reducing effect on the rate at which legally defined crimes are committed¹⁹. They have, however, sanctioned many physical and social harms and concentrated violence in specific locations from which there is no escape²⁰.
- **Political opinion:** Criminalization is a weapon used by the state to buttress its repressive power, and crime --- a legal construct²¹ controlled by the white supremacist state --- should not be confused with harm. *Neither policing nor*

prisons are compatible with an ethos of valuing human life over profits and property, and thus a commitment to humanity requires the abolition of both.

We emphasize that when we make a distinction between “historical fact” and “political opinion”, we are not assigning more worth to one over the other. Many truths are considered opinion and valued less than fact (or erased altogether) by those in power merely because they represent experiences of oppressed people. We will not buy into this devaluation. On the contrary, we often cherish our opinions more dearly than historical fact, since it is ultimately opinion --- informed by fact, experience, and feeling --- that we use to calibrate our moral compasses and political aspirations. The italicized sentences at the end of each opinion above demonstrate this calibration in action. What we call facts are simply statements represented in the academic historical record for long enough that even the most elitist academics --- those who dismiss the lived experiences of marginalized people when they do not appear in the pages of exalted journals --- would be forced to admit are true.

Guided by these truths, we now outline some of the assertions mentioned by Daubechies-Miller-Rudin and Krashen and respond point-by-point²².

- “To boycott all interaction between mathematics and police, without any stated demands or termination criteria, fails to recognize the positive potential of mathematics in contributing to whatever concept of law enforcement is envisioned by the movement” (Daubechies-Miller-Rudin)

JMC response: There is no one concerted “movement.” As in any time of political turmoil, there are many voices, expressing many needs and political desires simultaneously. There is, however, a powerful contingency of everyday people, organizers, workers, thinkers, prisoners, and of course those at the intersections of several of these categories, who envision the complete non-existence of police.

We ask the reader to imagine an extinct institution sufficiently heinous such that no engagement with it could possibly have a positive impact. For example, considering the origins of policing in slave patrols, imagine a proposal that scientists of the mid-nineteenth century outfit slave catchers with improved “technology” in an effort to make that practice somehow more humane. We hope the absurdity of this is clear, and we emphasize that such a proposal would have served a political purpose: putting an utterly unearned patina of humanity and legitimacy on the institution of chattel slavery.

- “When software developed from mathematical insights for use by law enforcement turns out to promote racist outcomes, it is irresponsible to launch a boycott, cutting short efforts to solve the problem.” (Daubechies-Miller-Rudin)

JMC response: The fundamental problem is not that the software merely *happens* to promote racist outcomes; the problem is policing itself. The purpose of a boycott is not to disengage from the problem, but to begin finally engaging with it. We support the call for a boycott precisely out of our sense of professional responsibility as mathematicians. We would instead suggest that it is irresponsible to assume certain answers to basic political questions and then restrict our role to technical tinkering within the framework of those (in fact highly contestable) answers.

- “Instead of refusing our expertise, why not offer our services with increased fervor...?...Withdrawal is not the solution.” (Daubechies-Miller-Rudin)

JMC response: The only sort of "withdrawal" proposed by the boycott is withdrawal from a position of complicity with a murderous institution. By boycotting, we engage with this issue on our own political terms. And we are committed to fighting for a future in which this quote ages *extraordinarily* badly.

- “...it is critical to realize who our allies are, and to come together in common cause and not pull apart. When we engage in personal attacks and in casting doubt on our colleagues...we risk the destruction of the atmosphere needed to move forward.” (Krashen, Response to the boycott)

JMC response: We are accountable to our friends, our families, our broader extra-mathematical communities, working class people, prisoners, and others deemed disposable by American empire and racial capitalism. The JMC would be honored to be considered allies and accomplices to all such people. So on this point, we agree: it is critical that we realize who our allies are. On the other hand, we have no allegiance to fellow academicians who profit from the brutalization of Black and brown people by selling their expertise to the police.

While the JMC has no issue with criticizing individuals when criticism is warranted, we are confused by this reaction to the call for boycott, as no individuals were explicitly targeted by the boycott letter. We recognize that an effective boycott can cause damage to finances and reputation, and to the mathematicians who are financially and intellectually invested in predictive policing, we say: we are not aware of any clause in the call for boycott that precludes your joining. We believe that everyone is capable of transformation and growth.

- “If mathematicians, scientists, and others don’t come together to help formulate algorithms about patrolling, we can do little to influence the potential bias the police can (and likely will) bring.” (Krashen)

JMC response: We reject this claim as false, and also reject it as an insult to decades of organizing and community care that have taken place outside of hallowed academic halls. Mathematicians and scientists can have a tremendous impact on policing by joining the fight for abolition, led courageously by non-scientists and non-mathematicians (at least not in the professional sense). It is in this spirit that the JMC considers participation in the boycott to be a meaningful scientific and political contribution. If mathematicians are intent on designing algorithms related to patrolling, we would call on them to create open access technology *for the people*, perhaps to help *them* maintain safety in their communities, including safety *from the police*.

- “This is the time to engage with our colleagues, who have developed and refined their expertise to think deeply about these problems, and who have developed a dialogue with various social institutions” (Krashen)

JMC response: We find offensive the implication that someone who has developed a predictive policing algorithm should be considered an expert on prisons and policing on that basis alone. It is in fact *far past* time to engage with the real experts on policing and prisons: prisoners and formerly incarcerated people, Black and brown organizers who are leading the fight for abolition, and the working class people whose daily lives are affected in concrete ways by these oppressive systems. Even within the extremely narrow realm of academia, mathematicians who design policing algorithms can not claim the title of expert. This mantle belongs instead to our colleagues in the social sciences and humanities who have spent years thinking about the societal harms caused by policing, prisons, and overcriminalization, as well as the reasons these oppressive systems were created in the first place.

Our sense of morality does not come from having earned an advanced degree or from being deemed expert in a discipline. It comes from being human, from having human experiences, and from learning from the experiences of others. We therefore can not afford to take seriously the proposal that we leave the question of how to engage with the police up to the very people who have the most personally invested in ensuring that the relationship between mathematics and law enforcement remains fundamentally unchanged. We hope the reader can acknowledge the irony of chastising boycott as *disengagement*, while also suggesting that any mathematician who is not already

working with the police should not play an *engaged* role in deciding whether these collaborations should even exist.

Most of all, we hope our community sees past the shallow arguments made in opposition to the boycott of police collaboration. We look forward to a new culture in the mathematics community, in which issues of ethics and politics are honestly considered at every point of interface between mathematics and the broader community in which it is embedded. Mathematics should be for the people! And so long as we continue to use our training to empower institutions which aim to oppress and brutalize, it can not be. We can collectively build the power to shape our community and move towards a more just and free mathematics. How will you help to claim and exercise that power?

In the spirit of Krashen's advice to engage with and learn from those with genuine expertise, we conclude this statement by honoring on-the-ground organizing that has inspired us and that is happening in the cities and states where Daubechies-Miller-Rudin (North Carolina), Krashen (Georgia until recently, and now New Jersey), and the AMS headquarters (Rhode Island) are located. We ask our mathematical community to support these freedom fighters in any way it can:

[Black Workers for Justice](#) (North Carolina)

[Southerners On New Ground](#) (with chapters in several southern states, including Georgia)

[Vietlead](#) (Philadelphia and South Jersey)

[Direct Action for Rights and Equality](#) (Providence, Rhode Island)

If these arguments resonated with you and you are interested in becoming involved with the JMC, you can reach out to us here:

justmathematicscollective@autistici.org.

Endnotes

1. The boycott has been criticised as an inappropriate tactic --- Daubechies-Miller-Rudin's letter cites the lack of "specific demands" or "termination criteria", but we find a boycott of the type advocated in the original letter to be tactically appropriate. It is true that sometimes boycotts ask people to withdraw their participation in some activity in an explicit way, until explicit conditions are met, at which point participation resumes. For example, customers of a business in a labour dispute with workers may withhold their business by, say, refusing to cross a picket line; in such cases, the boycotters have specific leverage and there are explicit "termination conditions". However, boycotts can also be used to express --- and foment --- community disapproval of some state of affairs even in cases where most participants do not have much direct leverage and where the notion of "termination conditions" makes no sense. In such cases, the idea is to build cultural norms against some unacceptable activity. *There can't be termination criteria for the mathematical boycott of police collaboration, because there are no conditions under which it will be acceptable to collaborate with an illegitimate institution.* Most of the boycott letter signatories are presumably at no risk of collaborating with police, but by signing, they have publicly expressed disapproval of an intolerable state of affairs and helped to prefigure a culture where oppressive uses of our expertise are less professionally acceptable. To that extent, the boycott is a useful political tactic.
2. See e.g. P. Reichel: <https://www.ncjrs.gov/App/Publications/abstract.aspx?ID=116023> and A. Vitale: <https://www.vice.com/en/article/7kpvn/end-of-policing-book-extract>
3. For a thorough account of this history and the current state of affairs, see Alexander, Michelle (2010). *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. New York: The New Press. ISBN 978-1-59558-103-7.
4. Recent infiltration of American police by white supremacist and far-right groups is well documented in news media; see e.g. <https://theintercept.com/2017/01/31/the-fbi-has-quietly-investigated-white-supremacist-infiltration-of-law-enforcement/> or <https://www.theguardian.com/us-news/2020/aug/27/white-supremacists-militias-infiltrate-us-police-report>. There is also considerable historical documentation of the relationship between formal policing and white supremacist vigilantism, and the process of replacement of racist vigilante violence by racist police violence during the 20th century (see e.g. Silvan Niedermeier's *The Colour of the Third Degree*).
5. See e.g. R. Wilson Gilmore's *Golden Gulag*, or for a shorter and online accessible read, G. Potter's *The History of Policing in the United States*
6. This article by M. Kaba makes this point in more detail: <https://www.nytimes.com/2020/06/12/opinion/sunday/floyd-abolish-defund-police.html>
7. This is again documented extensively. For example, Chapter 3 of A. Davis's *Are Prisons Obsolete?* contains a very useful account of the genesis of prisons.
8. See e.g. A. Davis, *Masked Racism: Reflections on the Prison-Industrial Complex*.
9. See <https://www.bjs.gov/index.cfm?ty=pbdetail&iid=4881> for a government study on sexual violence in prisons. Almost half of reported sexual assaults in prison are perpetrated by guards, see e.g. <https://www.propublica.org/article/guards-may-be-responsible-for-half-of-prison-sexual-assaults>. Sexual assaults are uniformly underreported (and it would stand to reason that this underreporting is even more dramatic when the perpetrator holds immense power over the victim, e.g. guards as perpetrators and inmates as victims), so undoubtedly these numbers should be higher.
10. For a general discussion on the widespread nature of sexual assaults in DHS concentration camps, see <https://theintercept.com/2018/04/11/immigration-detention-sexual-abuse-ice-dhs/> or <https://www.nytimes.com/2019/02/27/us/immigrant-children-sexual-abuse.html>
11. For an account of the current allegations against ICE concentration camps, see <https://projectsouth.org/wp-content/uploads/2020/09/OIG-ICDC-Complaint-1.pdf>
12. For a brief summary of the history of forced sterilization by US law and immigration enforcement, see <https://www.ourbodiesourselves.org/book-excerpts/health-article/forced-sterilization/>
13. For an in-depth discussion about the global history of the eugenics movement and its current successors---and the role that scientists play in defending and facilitating it---see A. Saini's book *Superior: The Return of Race Science*.

14. Less than 1% of rapes lead to felony convictions. See e.g. <https://www.rainn.org/statistics/criminal-justice-system>
15. There are hundreds of thousands of untested rape kits lying in storage in US police departments, some dating back decades. For a general discussion, see <https://www.theatlantic.com/magazine/archive/2019/08/an-epidemic-of-disbelief/592807/>
16. For an introduction to the notion of intersectionality, see K. Crenshaw's article *Mapping the Margins: Intersectionality, Identity Politics, and Violence Against Women of Color*, 43 Stanford Law Review 1241-99 (1991).
17. For the notion of misogyny that we have in mind here---the system which serves "to police and enforce" patriarchal norms---see e.g. K. Manne, *Down Girl: The Logic of Misogyny*.
18. See e.g. A. Davis' article *Public Imprisonment and Private Violence: Reflections on the Hidden Punishment of Women* in the edited volume *Frontline Feminism*, ed. M. Waller and J. Rycenga. See also K. Crenshaw's article *From Private Violence to Mass Incarceration: Thinking Intersectionally About Women, Race, and Social Control*, 59 UCLA Law Review 1418 (2012).
19. See e.g. <https://www.scientificamerican.com/article/do-prisons-make-us-safer/> or <https://eji.org/news/study-finds-increased-incarceration-does-not-reduce-crime/>. Consider also that data on crime rates sometimes ignore crime that takes place *within the prison system*. Arguments for policing and incarceration as means of ensuring "public safety" therefore sometimes take the implicit position that incarcerated people are not part of the "public", or not entitled to safety.
20. A recent grim summary: <https://newrepublic.com/article/153473/everyday-brutality-americas-prisons>
21. Consider that there are thousands of federal and state criminal statutes --- an accurate count is considered prohibitively difficult (<https://thehill.com/opinion/criminal-justice/473659-america-has-too-many-criminal-laws>). This alone places tremendous and arbitrary power in the hands of the criminal legal system, and gives lie to the claim that police and prisons are primarily a democratic mechanism for maintaining justice or safety.
22. While we believe Garfunkel's short letter was intended to further dismiss the boycott, it is not directly relevant to the boycott since its focus is Andrea Bertozzi's AWM lecture; the JMC celebrates the decision not to hold this lecture but will not address this here.