

A large audience is seated in a conference hall, facing a stage. The stage is lit with blue and purple lights, and a large screen displays a presentation. The audience is diverse in age and appearance, and many are looking towards the stage. The hall has a high ceiling with exposed metal beams and lighting rigs.

Designing for Community Health and Safe Spaces:

The History of the JS Confs and Fighting Harassment to Maintain Healthy Open Source Communities

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Thank you to the Ford Foundation and Sloan Foundation for support for this project. With a special thanks to Myles Borins for fielding many questions and conversations during the research of this report.

This report presents findings from research conducted from January 2019 to August 2020 on community health, toxicity and harassment mitigation, codes of conduct across open source projects, and the Javascript meetups and conferences. This grant includes the creation of a grant report, a write up and training materials designed to be useful to the Javascript community and a website to house that material. This report and research were supported by the Ford Foundation and the Sloan Foundation under the Critical Digital Infrastructure Research fund.

Executive Summary

This report explores a key component in sustaining critical, digital infrastructure, which is community health and harassment mitigation within open source communities. It focuses on the history and structure of the JS Confs, a specific community of Javascript Conferences, and related events. Conference organizers from this community are known for creating industry standards on diversity and inclusion and incorporating feminist practices in their codes of conduct, and implementation resources developed by individual conference organizers. This report draws on on-site research and qualitative interviews with global 41 participants of the JS Confs, across Mexico, India, Colombia, Hungary, Germany, the United States, Korea, Japan, and other locations.

Javascript is the world's most popular programming language. Perhaps unsurprisingly, this status brings with it numerous reports of harassment and toxicity. A subset of Javascript conferences are creating strides, however, in building diverse and non-toxic communities. Diverse and non-toxic communities create more safe, stronger and sustainable open source communities. Building a community and maintaining a community requires care, in the same way that the maintenance of code requires care and time. Looking at this subset of Javascript conferences can teach other open source communities best practices for facilitating, creating, and maintaining safer and stronger communities. The specific focus on the JS Confs and 'family events' stems from the reported diversity and inclusion efforts and success of these spaces within the technology community. It's widely reported that technology, and open source¹ programming languages² and communities³ are often toxic⁴ and hostile spaces⁵ to marginalized groups⁶, such as the LGBTQIA community, women, non gender binary folx, and people of color. This toxicity is noted by the community in StackOverflow questions⁷, in⁸ blog⁹ posts¹⁰, and in the creation of more inclusive¹¹ and safer¹² spaces¹³.

1. <https://www.zdnet.com/article/linux-developer-who-took-on-linus-torvalds-over-abuse-quits-toxic-kernel-community/>

2. <https://arxiv.org/pdf/1806.07659.pdf>

3. <https://www.bbc.com/news/technology-52779899>

4. https://www.vice.com/en_us/article/4xangm/wikipedia-editor-says-sites-toxic-community-has-him-contemplating-suicide

5. https://www.vice.com/en_us/article/j5ymy4/facebooks-open-source-community-is-reckoning-with-toxicity-and-harassment

6. <https://www.wired.com/2017/06/diversity-open-source-even-worse-tech-overall/>

7. <https://opensource.stackexchange.com/questions/8076/how-do-i-handle-aggressive-or-toxic-project-maintainers>

8. <https://modelviewculture.com/pieces/leaving-toxic-open-source-communities>

9. <https://boxofcables.dev/toxicity-in-linux-and-open-source/>

10. <https://www.infoworld.com/article/3570483/open-source-has-a-people-problem.html>

11. <https://www.meetup.com/blackdevelopers/>

12. <https://queerjs.com/>

13. <https://wealljs.org/>

The JS Confs report having diverse speakers, codes of conduct, safe spaces, quiet spaces, scholarships for diverse attendees¹⁴ and diverse organizers¹⁵. This project analyzes the JS Confs event design, event structures, processes, choices, and organizational structures to document and share these 'designed' choices. Design, in this case, refers to intentionality; because choices of how to curate speakers, implement a code of conduct, select organizers and MCs, decorate a space, and select talks have ripple effects of creating diverse communities. Intentional choices reinforce community norms, and then help build and sustain a diverse and non toxic community.

This report draws on on-site research and qualitative interviews with global 41 participants of the JS Confs, across Mexico, India, Colombia, Hungary, Germany, the United States, Korea, Japan, and other locations. Taking a grounded theory approach, using digital ethnography methods in your participant-observation, and recruiting interviewees through chain sampling.

The results found that there is extreme knowledge loss even in this 'family' of related events as core organizers are not regularly sharing their discovered best practices. Most of these best practices are not written down or stored even internally for individual meetups or conferences. I also uncovered the feminist theory and support that was utilized in the creation of codes of conduct and conference organization within the oldest JS Confs such as JS Conf EU, and additionally, the utilizing of the Geek Feminism Wiki code of conduct as being the basis for nearly all JS Conf events and related meet ups across the globe. This report sourced recommendations, best practices, and guides for implementation as well as is generating documentation and history of this unique community.

One CoC is used at a global scale: Majority of code of conducts for the JS Conf events come one code of conduct, the Geek Feminism Wiki. Similar to the sentiment that it's a small number of people creating open source code that has a widespread, global impact¹⁶. This can be applied to the impact the Geek Feminism Wiki has had in open source events and meetups.

14. <https://blog.usejournal.com/learnings-from-my-first-international-conference-jsconf-asia-2019-d917aea5cab3>

15. This observation pulls from research and observations conducted by the author throughout this report, as well as observed general sentiment from the front end developer and design Javascript community. Observations conducted across interviews and discussions on Twitter, Slack, and blog posts.

16. <https://www.fordfoundation.org/media/2976/roads-and-bridges-the-unseen-labor-behind-our-digital-infrastructure.pdf>

The Butterfly Effect: JS Confs institutionalize a specific structure that creates mentorship, community health, and diversity. A few conferences/meetups and a handful of organizers are responsible for inspiring and creating these conferences, and best practices, but these organizers also function as mentors. For example, JS Conf US has specific rules for a conference to use any JS Conf branding- which is that each conference must have a code of conduct, a mentor from another JS Conf must mentor the new conference, and the organizers who wish to start a new JS Conf must have attended a previous JS Conf before. In a talk at JS Conf US 2018, Juan Pablo Buritica, one of the co-founders of BogotaJS and JS Conf Colombia, called this 'butterfly js.' He described the rationale behind starting community focused events as "a bridge between NYC and Colombia, which led to the creation of a huge tech community in Latin America. It begins with the flap of a wing. The first conference I ever organized was in 2011, called Bogota Conf. It was born from the idea of having meetups. When I was in New York, I was exposed to the local community, which is amazing... I wanted to share and bring that back to Colombia¹⁷." JS Conf India, Japan and Korea organizers reflected this sentiment. They had all attended JS Confs and wanted to bring the style of conference back to their home countries. A few conferences and meetups are inspiring new conferences and meetups on a global level.

Key insights found:

Knowledge loss: Communities don't often share their best practices, their guidelines for how to respond to harassment or plan events with other friends, collaborators or other community organizers. Knowledge is getting lost that could help communities better respond to harassment as it arises.

Norm setting: Feminist values at a global scale. JS Conf EU helped kick start the JsConf conferences. One of the JS Conf EU's cofounder's wife is a feminist academic. The building of the tone, structure, theme, and existence of this conference came from a feminist place, and this tone and structure is now replicated across many meet ups globally.

17. From JS Conf US's 2018 talk, The Butterfly.js Effect - Juan Pablo Buritica & Julian David Duque, <https://www.youtube.com/watch?v=3Ya3Cm7xmwY>

Implementation is a problem: Having a code of conduct doesn't mean an organization knows how to implement that code of conduct or respond to harassment. This lack of training and know-how can lead to dangerous situations, especially if a meet up or community has to create responses to harassment on the spot when harassment occurs.

Lack of formal training: Most of these meetups and conferences don't have formal training in implementing codes of conduct, planning events, or organizing, so they use their best judgement. This leads to problems in consistency in response to harassment, or a lack of clarity amongst community members as to what are the appropriate responses to harassment, and when.

Methodology

This research report was conducted through on-site research and 45 hours of interviews. This project documents the adoption and adaptation of codes of conduct in the JavaScript community and the community organizers' systems for mitigation with a specific focus on the JS Conf conferences, related meetups and the extended family of the JS Confs. This decentralized network is a specific community of meetups inside of the Javascript community. I conducted qualitative interviews with 41 participants and researchers across organizations like the Wikimedia Foundation, TC39, the OpenJS Foundation, Ember JS, JS Conf EU, JS Conf Korea, JS Conf Japan, JS Conf Budapest, JS Conf Mexico, JS Conf India, Queer JS, Global Diversity CFP Day, Scotland JS, Brooklyn JS, Jersey Script, Waffle JS, Nordic JS, the Contributor's Covenant, Mozilla, This Dot, JS Conf Colombia/Bogota JS, Berlin JS, WeAllJS, Cause a Scene, the Maintainers, and anonymous interviews from hardware hacker space maintainers, and core organizers of a private, technology focused Slack channel for marginalized groups in technology with a heavy focus on Javascript. Additionally, two workshops were held in January and February 2020 with open source contributors, community organizers, technology researchers and technology educators to further ground the findings, receive recommendations for responding to toxicity in communities, and test recommendation findings and implementation suggestions.

Research work was conducted through grounded theory, and used chain referral sampling to find people to interview. Additional research was conducted by an ethnographic dive into online communities (through Slack channels, blog posts, Twitter, and community Wikis) as well as research into pre-existing implementation and code of conduct trainings. I also attended and observed events like React Day Berlin, Berlin JS, Nordic JS, Queens JS, Brooklyn JS, and Jersey Script. This research looked at materials created by Global Diversity CFP Day (developed by Kim Craydon and Peter Aitken), Mozilla, and Frameshift Consulting (developed by Valerie Aurora).

The resulting report is a narrative history of the creation of codes of conduct (CoC) used throughout open source, namely JavaScript, communities. It collects and connects best practices, tips and tricks currently used throughout open source communities that focus on respect, inclusion and equity.

Interviews

For the interviews, I contacted people contributing to different kinds of projects related to open digital infrastructure, Javascript, codes of conduct, and the JS Confs. The interviewees contributed to these projects through a variety of roles and tasks. Most of the time, I contacted interviewees directly through event pages for conference and event meet ups as most interviewees were core organizers. However, in a few instances, I was referred to new interviewees by a former interviewee. I also attended different communities' events to observe the event for research, and to connect with interviewees.

The structure of my interview questions were scenario based, heuristic-based, and structurally focused on the event and harassment responses. The questions were designed as ways to uncover dates, planning, structure of events and the organizing teams, and implementations. Scenario questions were given to see how organizers would respond to a specific form of harassment. General questions included demographic and historical information about the event such as when was the event formed, why did the organizers decide to start the event, what were the steps to forming the meet up, how are core organizers found, what are the onboarding steps and materials for organizers, how was the code of conduct made, what materials (if any) have they read or referenced in forming the event and the code of conduct, have there been harassment related actions, and how would the meet up or conference respond to varying forms of harassment (scenario based).

The demographic of my interviewees was fairly diverse. Out of 41 participants, 1 participant was non gender binary, 27 were women, and 15 were people of color.

Referenced Materials and Research

This following section exists partially as a repository for others to glean information from, as well as documentation for materials and pre-existing research referenced during this grant. This section of the grant report will be shared in a website under research, training and materials.

Codes of conduct that were referenced throughout research in this project include the following sections, which I have divided up based on 'provenance' and or origin. A lot of the listed codes of conduct are based on previous, existing codes of conduct. Effectively, this building and iterating on codes of conduct, can be thought analogously to a sourdough 'starter' or kombucha 'mother': how one origin or original code of conduct can germinate and create multiple various new codes of conduct. The following codes of conduct are organized by this germination/mother analogy. Generally, a norm within JS Confs codes of conduct is to list what other codes of conduct inspired or helped create them, it's been easy to track how a few codes of conduct have inspired newer codes of conduct.

Geek Feminism Wiki

The Geek Feminism Wiki [Code of Conduct](#) is the origin or mother, which inspired the following:

[Js Conf EU Code of Conduct](#)

[Js Conf Korea Code of Conduct](#)

[Js Conf Japan Code of Conduct](#)

[Js Conf India Code of Conduct](#)

[Js Conf Mexico Code of Conduct](#)

[Js Conf Code of Conduct](#)¹⁸ (a general code of conduct used by different meetups and conferences)

[BogotaJS Code of Conduct](#)

[Nordic JS Code of Conduct](#)

18. This code of conduct is used by JS Conf Colombia, Brooklyn JS, Manhattan JS, and Queens JS.

JS Conf and the Ada Initiative:

[Js Conf \(the first JS Conf\) Code of Conduct](#) is the origin or mother, which pulls from research from the Ada Initiative and inspired the following:

[React Day Berlin](#)

[Berlin Code of Conduct](#)

[A Variation of a JS Conf Code of Conduct](#)

It's important to note in this section that the Ada Initiative was an initiative started by the founders of the Geek Feminism Wiki, and that the original JS Conf code of conduct, which was created in 2012, technically is referencing the Geek Feminism Wiki code of conduct and its language, even if it explicitly does not state that and or the creators do not realize that.

The Contributor's Covenant:

[The Contributor's Covenant](#) is the origin or mother which inspired the following:

[WeAllJS Code of Conduct](#)

The following codes of conduct reference many other inspirations such the [Ubuntu Code of Conduct](#), Mozilla's [View Source Conference Code of Conduct](#), and the [Rust Language Code of Conduct](#), Stumptown Syndicate's [Citizen Code of Conduct](#), the [LGBTQ in Technology Code of Conduct](#) and the [WisCon code of conduct](#).

[Mozilla's Participation Guidelines](#)

Lastly, I have included the deliberations and conversations from [Tc39 Code of Conduct Deliberations](#) as listed on GitHub.

During the interviews, interviewees mentioned various tools and trainings related to codes of conduct and codes of conduct implementation that they had read or referenced. Additionally materials were found by me during research within this grant:

- [Beacon](#), a tool created by the founder of the Contributor's Covenant, Coraline Ada Ehmke for online harassment reporting.
- [BIPoCIT's Guide and Learnings](#) from Creating a BIPOC only space at JS Conf EU
- [Wikimedia Foundation Wiki Page](#) for holding hackathons and events
- [Mozilla's Code of Conduct Assessment Tool](#)
- Valerie Aurora's implementation trainings:
 - <https://frameshiftconsulting.com/code-of-conduct-training/>
 - <https://files.frameshiftconsulting.com/codeofconducttraining.pdf>
 - <https://frameshiftconsulting.com/2018/12/10/free-code-of-conduct-enforcement-book-available-now/>
- [DLF Bystander training](#)
- [This Dot's Accountability Ladder](#)
- Geek Feminism Wiki's guides and resources
 - [Anti harassment resources for conferences](#)
 - [Non-sexist language resources](#)

Private training videos created by Global Diversity CFP Day for their volunteers

Findings

Key Insights

In 2017, I had a hypothesis garnered from attending dispersed, and distributed, but related Javascript meetups across the United States. This hypothesis was in wondering if there was something in the design, and structure of these events, that create diversity, inclusion, and but fun spaces within the Javascript programming language. Javascript is the world's most popular programming language, but generally, technology spaces tend to be overwhelmingly white and male. These meetups had women, and POC core organizers, with a diversity of talks and speakers. These meetups were a part of the "JS Conf Family¹⁹," with four meetups in New York City named "Boro JS" which includes Manhattan JS, Queens JS, Brooklyn JS and Jersey Script, with a meet in San Francisco named Waffle JS, a meetup in Portland, Or named Doughnut JS, and a somewhat related, but not quite, meetup in Seattle named Seattle JS²⁰.

What was in the DNA of these events that could be gleaned and understood, what made these events less toxic, seemingly safer, and more diverse? Could these learnings then perhaps be applied to other open source spaces? It's important to highlight that no space is perfect, and that toxicity is still present even in this community, something that some participants vocalized that while JS Confs are doing well, there's always room for improvement. A deeper issue, which is stressed later in this report, is that some organizers may lack the tools and learnings to improve.

One CoC is used at a global scale: Majority of code of conducts for the JS Conf events come one code of conduct, the Geek Feminism Wiki. Similar to the sentiment that it's a small number of people creating open source code that has a widespread, global impact²³. This can be applied to the impact the Geek Feminism Wiki has had in open source events and meetups.

The Butterfly Effect: JS Confs institutionalize a specific structure that creates mentorship, community health, and diversity. A few conferences/meetups and a handful of

19. The JS Conf 'family' has been described to me by different JS Conf organizers like Jan Lehnardt, JS Conf attendees like Myles Borin, and NordicJS founder, Jonny Strömberg. The JS Conf family includes JS Conf spin off conferences, javascript meetups that use the JS Conf code of conduct (and are run by people who have attended and speak at JS Confs), and javascript conferences, like NordicJS, that also use the JS Conf code of conduct but are 'friends' with the other conferences (such as speaking and attending JS Confs and knowing the organizers).

20. This meetups uses a variation of the JS Conf event codes of conduct, and features overlap

23. <https://www.fordfoundation.org/media/2976/roads-and-bridges-the-unseen-labor-behind-our-digital-infrastructure.pdf>

organizers are responsible for inspiring and creating these conferences, and best practices, but these organizers also function as mentors. For example, JS Conf US has specific rules for a conference to use any JS Conf branding- which is that each conference must have a code of conduct, a mentor from another JS Conf must mentor the new conference, and the organizers who wish to start a new JS Conf must have attended a previous JS Conf before. In a talk at JS Conf US 2018, Juan Pablo Buritica, one of the co-founders of BogotaJS and JS Conf Colombia, called this 'butterfly js.' He described the rationale behind starting community focused events as "a bridge between NYC and Colombia, which led to the creation of a huge tech community in Latin America. It begins with the flap of a wing. The first conference I ever organized was in 2011, called Bogota Conf. It was born from the idea of having meetups. When I was in New York, I was exposed to the local community, which is amazing... I wanted to share and bring that back to Colombia¹² ." JS Conf India, Japan and Korea organizers reflected this sentiment. They had all attended JS Confs and wanted to bring the style of conference back to their home countries. A few conferences and meetups are inspiring new conferences and meetups on a global level.

Knowledge loss: Communities don't often share their best practices, their guidelines for how to respond to harassment or plan events with other friends, collaborators or other community organizers. This kind of community health best practices or toxic behavior mitigation knowledge is getting lost.

Norm setting: Feminist values at a global scale. JS Conf EU helped kick start the JsConf conferences. One of the JS Conf EU's cofounder's wife is a feminist academic. Her input was integral in building the tone, structure, theme, and existence of this conference. The best practices of JS Conf EU has come from a feminist research based practice, and this tone and structure is now replicated across many meet ups globally.

Lack of formal training: There are certain mechanisms and implicit practices at play that pass along knowledge and or a basic structure for creating a CoC, however there are few available resources documenting CoC implementation. Most of these meetups and conferences don't have formal training in implementing codes of conduct, planning events, or organizing, so they use their best judgement. This leads to problems in consistency in response to harassment, or a lack of clarity amongst community members as to what are the appropriate responses to harassment, and when or how to mitigate harassment.

12. From JS Conf US's 2018 talk, The Butterfly.js Effect - Juan Pablo Buritica & Julian David Duque, <https://www.youtube.com/watch?v=3Ya3Cm7xmWY>

Implementation is a problem: Having a code of conduct doesn't mean an organization knows how to implement that code of conduct or respond to harassment. This lack of training and know-how can lead to dangerous situations, especially if a meet up or community has to create responses to harassment on the spot when harassment occurs.

In the next few paragraphs, I am going to unpack the structures of the JS Confs, the history of the JS Confs, and best practices gathered from the field. Additionally, I looked at challenges facing the community, which includes knowledge loss within communities, a lack of documented best practices, and a lack of easily accessible tools and research in responding to harassment. There is a specific process for spinning up a JS Conf conference, there were historic choices that were made in creating these conferences that affect how they have grown, and there's a specific history of one code of conduct that needs to be shared.

The Infrastructure of JS Confs and Meetups

Much like open source projects, physical community events and meetups are run and sustained by a handful of individuals. It's a few very dedicated people that have been really helpful in turning the JS Confs into decentralized and iterating events. With organizers, such as Jed Schmidt inviting Jasmine Greenway to join Brooklyn JS as a core organizer, or Juan Pablo Buritica of JS Conf Colombia recruiting more women to join the organizing team, or the organizers of JS Conf EU and CSS Conf EU hiring POC organizers to create a POC only space called BIPoCit. Some key founders and core organizers are providing community support infrastructure; they were willing to put in a lot of work to help these events reitaring, and running events. Infrastructure here references event planning, creating and managing digital community spaces (like a Slack or Twitter account), and building or creating harassment reporting for live events and digital spaces. There's an intense level of caring that goes into these events to help them scale beyond one or two locations.

Built with Feminist Values from the Beginning

In February 2019, I interviewed Jan Lehnardt, one of the co-founders of JS Conf EU. JS Conf Eu is one of the most well attended, and one of the oldest JS Confs. JS Conf EU originally started as a bet, if JS Conf US went well, Lehnardt told the organizers he'd start one in Europe, and here we are almost eight years later. Lehnardt described some of the best practices of JS Conf EU, which are listed below, which included using the Geek Feminism Wiki code of conduct as the basis of JS Conf EU's code of conduct. But as I was finishing up the interview, Lehnardt shared one key anecdote, "one of the ingredients I forgot in the beginning is that my partner is a feminist activist so I was personally bringing some things from her that we could be doing better and she helped us with a lot of

things as well. Behind the scenes, just talking through stuff, talking through incidents, all that kind of stuff. On the flip side we as an organization that was rather visible and rather big that we record our roles better. That we set out and did the things that were at the time considered a little bit more advanced or more advanced than what the status quo was that was a very big signal and it had a big effect on the community..." From the very beginning, even structurally, JS Conf EU was built with feminist values, however, this information has never been documented until.

One CoC Replicated Across the World

What I found was that one code of conduct is used at a global scale. The majority of code of conducts for the JS Conf events come one code of conduct, the Geek Feminism Wiki code of conduct. This is because the Geek Feminism Wiki code of conduct was used by one of the first JS Confs, JS Conf US (referenced as the Ada Initiative, a non profit affiliated with the Geek Feminism Wiki) and JS Conf EU (citing the Geek Feminism Wiki). Since then, as new JS Confs come into existence, they rely on pre-existing JS Conf infrastructure, and iterate on their structures, like the codes of conduct. With the JS Confs choosing to iterate off of the Geek Feminism Wiki code of conduct, we see the iteration of a 'sourdough' code of conduct, of an original 'strain' of a code of conduct that provides a basis and can be iterated and changed. With the JS Confs using the Geek Feminism Wiki code of conduct as the basis of their code of conduct, feminist values are iterated at a global scale. However, it still needs to be measured if other aspects of feminism and intersectional feminism have inspired the structures of these events.

For this report, I analyzed various codes of conduct such as The Geek Feminism Wiki Code of Conduct, JS Conf EU Code of Conduct, JS Conf Korea Code of Conduct, JS Conf Japan Code of Conduct, JS Conf India Code of Conduct, JS Conf Mexico Code of Conduct, JS Conf Code of Conduct, BogotaJS Code of Conduct, Nordic JS Code of Conduct, JS Conf (the first JS Conf) Code of Conduct, React Day Berlin, Berlin Code of Conduct, A Variation of a JS Conf Code of Conduct, Contributors Covenant, Ruby on Rails Code of Conduct and the Python Community Code of Conduct. Generally, codes of conduct follow a similar structure, of what not to do, of what could happen if rules are broken, etc. At the bottom of the page, if it's for an event, is usually a blurb on how to report. Lastly, some events will list the 'origin' of their codes of conduct, hence the sourdough reference. What we also see is how codes of conduct can iterate and expand or contract from the original code of conduct. If we compare JS Conf EU's to the Geek Feminism, at first it

seems like there are slightly less protections but as one scrolls down, the JS Conf EU has added some more descriptors to their code of conduct. They have changed the structure of their code of conduct, by adding definitions of inclusive language like sexism, racism, etc, at the bottom. However, like the Geek Feminism Guide, it outlines how to report, what will happen when reporting, and a breakdown of who will respond. There is a focus on infrastructural support and governance.

[JS Conf Japan](#)'s code of conduct is a bit more pared back than JS Conf's EU and removes definitions of inclusive language. [JS Conf Mexico](#)'s CoC is laid out differently than JS Conf EU's but is almost nearly identical in content. [JS Conf Budapest](#) is similar- again, nearly identical in language but laid out in a different way. This is for good reason, to be an official part of the JS Conf family, cities and organizers have to have a code of conduct. They are appointed a mentor from another JS Conf conference to help them set up their own conference, but they are required to have a code of conduct. Sometimes, it's easier for these affiliates to just use JS Conf EU's code of conduct and adapt it slightly for their communities. JS Conf Korea built their code of conduct on the JS Conf EU code of conduct, but changed sections to "add more context and edited it to fit Korean culture. In the list of criteria, we added hometown, education background, and seniority level, as these are commonly used in Korea to cast judgement on people," Suzin You, an organizer focusing on harassment for JS Conf Korea, explained over email.

According to the two original writers of the Geek Feminism Wiki, Valerie Aurora and Mary Gardiner²³, they see elements from that code of conduct in major codes of conduct everywhere, even if those don't directly reference or cite their code of conduct. They wrote their code of conduct by listening to grievances from fellow women and marginalized groups in tech. The Geek Feminism Wiki code of conduct seemed to help give structure and put into words codes of conduct bylines we now find commonplace.

What Does Having a Code of Conduct 'Mean'?

Who gets to work on non-profit work and open source work around the world does matter, but so does who gets to be in charge of events and select/curate conferences. Kim Crayton, community and equity expert who has worked with Global CFP Day, pointed out in an interview that having a code of conduct does not necessarily make an event safe. It's generally just a first step. What I've noticed is that a fair amount of interviewees have not necessarily planned how to respond to specific cases of harassment even once having a code of conduct.

²³ Valeria Aurora shared this anecdote over a Zoom interview in March 2020.

Why Do We Need CoCs? A Brief History of Harassment at Tech Events

According to interviews with four different participants, there were two pushes for codes of conduct to be used by meetups and conferences, one push in 2010, and one in 2014. These two time periods line up historically with different harassment events unfolding, with sexualized presentations²⁴, the sexual assault of noted developer Noirin Plunkett at Apache Con in 2010²⁵, and Penny Arcade's 'joke' comic about rape and dickwolves which resulted in the comic's creators mocking those that criticized the comic, and selling Dickwolves shirts at PAX (Penny Arcade Expo) in 2010²⁶. In an anonymous interview for this research project, one interviewee mentioned inappropriate drinking, misogynistic behavior and general toxic environments that would not be allowed now at tech conferences. Technology communities²⁷ and conferences have a documented history of creating inappropriate and unsafe spaces²⁸ that routinely harm marginalized groups. This interviewee recollected a talk titled " CouchDB: Perform Like a PrOn Star²⁹" from Golden Gate Ruby in 2009. This talk generated criticism with the reported inclusion of porn in the talks' slides. Some members of the community spoke out against this, like programmer Sarah Mei. However, initially, different men in the field supported it, including the founder of Ruby on Rails. Eventually, other community members began speaking out feeling unwelcome in the Ruby community and one conference organizer apologized via his blog³⁰.

Other events occurred as well, with Donglegate in 2013, and Gamergate starting 2013 and continuing popularity until 2016 which restarted the push towards having codes of conduct. Donglegate³¹ refers to an event that unfolded at PyCon in 2013 and across Twitter, where a female attendee heard two male attendees discuss technical terms like 'dongle' and 'forking' but in sexually suggested ways. The female attendee tweeted about it, since it violated PyCon's code of conduct. The female attendee then blogged about other inappropriate actions she had observed at PyCon. Her tweets went viral, which led to the firing of one of the men she had mentioned, but she herself was also fired. Many people online came to her defense, but the female attendee faced harassment online throughout this entire ordeal.

24. A list of sexualized presentations from conferences is documented from 2001 to 2012 by Geek Feminism Wiki: https://geekfeminism.wikia.org/wiki/Sexually_objectifying_presentation

25. https://geekfeminism.wikia.org/wiki/Noirin_Shirley_ApacheCon_incident

25. <https://www.wired.com/2013/09/penny-arcade-expo-dickwolves/>

27. <https://geekfeminism.wikia.org/wiki/FLOSS>

28. https://geekfeminism.wikia.org/wiki/Timeline_of_incidents

29. While I disagree with the title of this blog post, it is documenting the talk <http://www.sarahmei.com/blog/2009/04/25/why-rails-is-still-a-ghetto/comment-page-1/>

30. <http://blog.hasmanythrough.com/2009/4/29/not-the-post>

31. <https://www.motherjones.com/politics/2013/03/pycon-2013-sexism-dongle-richards/>

Donglegate was primarily focused on the sexist culture that proliferated at technology conferences, and then harassment attendees would face before and after reporting. Gamergate is similar but different in that it was a much wider cultural event.

There is no easy way to summarize Gamergate which was in part, a widespread harassment campaign to push women and marginalized groups out of video games, and in part, a series of directed and specific harassment campaign against a handful of women in videos, specifically Zoe Quinn³² who faced online harassment from an ex-partner, which resulted in the widespread harassment campaign of Gamergate. Quinn's ex partner published an over 9,000 word diatribe about the video games designer, highlighting common misogynistic themes³³ that had already been widespread in games- that pushes for diversity would ruin games or that adding female characters would make a game unsellable³⁴. There was an idea that were persistent in the games subculture that a 'real gamer³⁵' are white, male and cis³⁶. Critics, writers, and creators started to push back against that false idea with pieces citing how there are 'no gamers³⁷' but rather, everyone is a gamer. Others started to create more equitable spaces in gaming³⁸. This pushback to toxic misogynistic gaming culture is also what fueled the fury of Gamergate which led to offline and online harassment of victims, including bomb threats at conferences³⁹. I present these examples to help illustrate the kind of toxic and dangerous environments that have been plaguing technology and technology adjacent (like gaming) communities. These are not isolated events but rather examples of the kind of harassment and toxicity that women and marginalized groups face.

Choices are Intentional

It's important to acknowledge that similar to the maintenance of software projects, often events and meetups are planned by unpaid volunteers. JS Confs generally do not pay volunteers or organizers, with the expectation of the BIPOCet⁴⁰ volunteers

32. <https://www.nytimes.com/interactive/2019/08/15/opinion/what-is-gamergate.html>

33. <https://www.vox.com/culture/2017/9/19/16301682/gamergate-alt-right-zoe-quinn-crash-override-interview>

34. https://www.gamasutra.com/view/news/188775/You_cant_have_a_female_character_in_games.php

35. This article, while presented to be satirical, actually highlights the harmful and misconceptions of what a 'real gamer' by framing a theoretical girlfriend as not 'a real gamer' because she plays the games on this list: <https://www.complex.com/pop-culture/2012/10/10-signs-your-girlfriend-is-a-fake-gamer/the-jargon-juggle>

36. Even still now, women in gaming face toxicity and questions about their credibility. "Every single woman I've ever met who works in video games has encountered some level of scepticism at some point over her gamer "credentials", or has been mistaken for a PR person at some company or press event" from an op-ed written for Keza MacDonald for Kotaku UK in 2017.

37. https://www.gamasutra.com/view/news/224400/Gamers_dont_have_to_be_your_audience_Gamers_are_over.php

38. <http://codeliberation.org/>

39. <https://www.theverge.com/2014/10/14/6978809/utah-state-university-receives-shooting-threat-for-anita-sarkeesian-visit>

40. JS Conf EU created a safe, private space for BIPOC attendees and hired BIPOC volunteers/organizers to create and design the space.

with JS Conf EU. Events grown out of open source communities function similar to open source programming projects, which is volunteer based. Nadia Eghbal explains this in her “Road and Bridges” report, that “Digital infrastructure projects, on the other hand, are conceived of and built from the bottom up. It is akin to a group of citizens getting together and deciding they want to build a bridge or create their own sewage system. There is no authoritative body whose formal permission is required to create new digital infrastructure⁴¹.”

Much like writing a programming library, which starts out with an intention, it's designed and intentional, and so are events. A code of conduct is an intentional structure and a framework, and including it helps define and build out what a meet up and a community wants, needs, and their values. It is important to think of this as a highly intentional, designed space. Kat Marchán, founder of WeAllJS, explains how they rewrote the WeAllJS code of conduct to also outline the punitive responses and structures to breaking the code of conduct to clear up any confusion for participants in their Slack channel. Marchán explained in an interview, “WeAllJS turned into, “What do we want people to do and not do in general as far as behaving with each other?” That doesn't work in a punitive code of conduct. It doesn't work when the perspective on a code of conduct is, “This is what gets you in trouble.” The solution to that was to, if you look at the WeAllJS Code of Conduct, the very top, the very beginning, the moment you open that thing, it tells you what the enforcement process is. That's something that I think has made a world of difference, because it tells people exactly what to expect whenever there's a code of conduct violation. The results were stellar. There's a couple thousand people. There's more than a thousand people in WeAllJS. There's a couple hundred regularly active users, and it's not a closed community. It includes men, it includes women, includes cis people, it includes trans people, it includes black folks. We have not had to permaban a single person in the two plus years of existence. Ever. We have never permabanned⁴² anyone⁴³.”

It's important to highlight even when centering marginalized groups, there can still be pushback. The BIPoC space at JS Conf EU received pushback, harassment, and microaggressions from white attendees, who did not understand why a safe space should exist for BIPOC attendees. Both JS Conf EU and CSS Conf EU⁴ reaffirmed their

41. From Eghbal's report “Road and Bridges: The Unseen Labor Behind Our Digital Infrastructure,” page 43. <https://www.ford-foundation.org/media/2976/roads-and-bridges-the-unseen-labor-behind-our-digital-infrastructure.pdf>

42. Permanently banned

43. This interview was conducted in January 2019.

44. https://twitter.com/CSSconfEU/status/1135506301952372737?ref_src=twsrc^tfwtwcamp^tweeterembedltwterm^1135537597206286337/twgr^&ref_url=https%3A%2F%2Fcdn.embedly.com%2Fwidgets%2Fmedia.html%3Ftype%3Dtext%2Fhtmlkey%3Da19fcc184b9711e1b4764040c3dc5c07schema%3Dtwitterurl%3Dhttps3A%2F%2Ftwitter.com%2Fannthuriu%2Fstatus%2F1135537597206286337image%3Dhttps3A%2F%2Fi.embed.ly%2F1%2Fimage3Furl3Dhttps253A252F252Fpbs.twimg.com252Fprofile_images252F1122359854868221952252F4TULGwDN_400x400.png26key3Da19fcc184b9711e1b4764040c3dc5c07

commitment to the space in spite of the pushback (this pushback should be read as marginalization and abuse that BIPOC community members face). A screenshot of JS Conf EU/CSS Conf EU's statement below:



Intentionality in Design: Observing Nordic.Design and NordicJS

Nordic Design and Nordic JS are examples of the intentionality of design, from conceiving of what the space will look like, making it accessible for attendees, and creating a diverse and interesting line up across gender, and race, as well as diversity of talk subject. Fun and safety are a part of the design, as is documented in the next three photos of the space, volunteers and MCs. The structure seemed similar to descriptions of other JS Confs, though NordicJS is in the JS Conf Family, it's not officially a JS Conf conference. For example, the MCs of NordicJS were dressed up in sequins and silly costumes, which is similar to JS Conf EU.

The conference offered the food offers vegan and non vegan options, and the code of conduct is heavily pushed through multiple emails before the conference as well as an email to speakers about us following the code of conduct. Everything felt extremely cosy, with colored lights and soft chairs, games and free popcorn.

It had a decidedly cute and friendly vibe with approachable speakers and friendly attendees. Even with a sauna that attendees could access, and a hot tub, the conference felt like a professional but laid-back affair. Nordic.design and NordicJS are a three day conference, with Nordic.design on day 1, and NordicJS across the other two days. NordicJS has more speakers, and still more male speakers than women but it still feels diverse in terms of speakers and attendees. However codes of conduct were not announced before any talks, just once in the beginning, and I could not see any paper copies of the code of conduct. Codes of conduct were sent out over a few emails leading up to the event.

After interviewing one volunteer, both MCs, and one of the co-founders and main organizers, I was curious if harassment had unfolded. The volunteers are not generally trained to respond to harassment but instead report harassment to the core organizing team. Generally, most organizers shared if harassment had occurred but no one was self-reporting harassment to me. NordicJS had not encountered any harassment offline or online. After the conference, I scanned Twitter⁴⁵, and attendees seemed to enjoy the conference. No one is vocalizing any kind of issue, or highlighting any kinds of issues. While Twitter isn't perfect, if something had gone wrong, there would be a small ripple or at least a tiny mention of it online under the conference hashtag.



A photo of the Nordic.design and Nordic JS conference in October 2019, Stockholm. Image used with permission from NordicJS's facebook album

45. https://twitter.com/search?q=%23nordicdesignconf&src=typeahead_click&f=live



A photo of the Nordic.design and NordicJS MCs. (From L to R, Olga Stern plays ukulele with Unn Swanström). Image used with permission from NordicJs's facebook album.



A photo of Nordic.design and NordicJS volunteers in their costumes, reflecting the 'harbor' theme of the conference. Image used with permission from NordicJs's facebook album.

Their volunteers wear uniforms, somewhat a costume related to the theme which was harbor and had a specific Wes Anderson vibe. The costumes make it incredibly easy to spot official volunteers to report things like harassment. At the beginning of each day is an announcement about the code of conduct and it's also sent in various emails to attendees leading up to the event. Much like how interviewees reported attending other JS Confs, NordicJS was extremely fun, and silly, but still safe, with its code of conduct.

The organizers viewed this as a major design component to add fun to the theme. But, it's a great and clever way to very clearly show who attendees who are volunteers versus regular conference attendees. At the conference, it was very easy to visually spot volunteers and organizers within crowds and throngs of people. Jonny Strömberg, one of the co-founder, mentioned being inspired by The Conference⁴⁶ aesthetically and organizationally, however that conference does not have a code of conduct listed online.

Implementation Struggles

Some of the biggest issues facing communities are knowledge loss, and a lack of training. Best practices or trainings that conferences do have tend to be isolated to those core organizers, or created on the fly and not documented. In some cases, core organizers don't necessarily have training materials for new volunteers or any kind of onboarding in relation to harassment. A lot primarily use their best judgement. Having a code of conduct doesn't mean a conference knows how to implement the code of conduct, which can lead to dangerous situations, especially if a meet up or community doesn't know how to respond to harassment when it occurs. Most of these meetups and conferences also lack formal training in implementing a code of conduct, planning events, or organizing, so they use their best judgement. This leads to problems in consistency in response to harassment, or a lack of clarity amongst community members as to what are the appropriate responses to harassment, and when. Some organizers, like Suzin You of JS Conf Korea, sought out training and materials. You found Aurora's ebook "through JSConf EU's CoC attributions section. They credited Valerie Aurora's work and I browsed their website!" You prepared for JS Conf Korea by educating themselves on harassment and codes of conduct by "extensively consulted Valerie Aurora and Mary Gardiner's "How to Respond to Code of Conduct Reports"⁴⁷" for [Js Conf Korea's] policy. Since I had no experience here, our policy follows this book as is. I found this to be such a valuable reference for a beginner like me!"

46. A technology and design conference held in Malmö, Sweden <https://2020.theconference.se/>

47. <https://frameshiftconsulting.com/code-of-conduct-book/>

You was one of the few organizers who sought out extensive training on codes of conduct, and reporting, before holding their event. However even with mentors from the JS Conf, most organizers aren't taught how to implement. Each meetup has their own way of conducting and implementing a code of conduct. Generally, people enforce the code of conduct as they would like to see it enforced, and are using their own internal metrics to enforce. But this enforcement or determining metric is not written out, though it should be. Jenn Schiffer, of Jersey Script, part of the Boro JS meetups (located in the New York surrounding area, says "I always have backup plans and to think constantly, probably a little bit too much, actually a little bit bit too much about what would I do in this situation?" Jenn works as the Director of Community at Glitch and has more of a background in community health and harassment, so her plans are most likely well thought out from a diversity, equity and inclusion standpoint. But other organizers don't have her background. Best practices are getting lost because they aren't shared at a more global and community level. Some like JS Conf Australia have people like Karolina Szcur, a designer that is well known for diversity and inclusion research, or people like Kim Crayton working with Scotland JS and Global Diversity CFP day. These organizers have a track record of creating internal structures towards combating harassment and creating safer spaces. But what they are working on doesn't necessarily scale globally because all of the individual meetups and conferences aren't regularly sharing their best practices. To start your own JS Conf conference, there is a specific structure- it's having a code of conduct (so this is how each new iteration uses the same COC, they are just borrowing it), you have to have attended a JS conf before, and you need a JS conf mentor. But there isn't an updated starter kit on growing your own community, or focusing on community health. The mentor can help with that, and the organizers can reach out to other organizers, but it isn't necessarily required.

Trainings are important. Organizers and events need a structure to function, and to know how to combat and respond to harassment. Schiffer gave an anecdote about trainings; she mentioned something that had happened to her dad. Her dad working around needed to be trained to handle an employee who had been fired engaged in misconduct. Schiffer said, " And so the training has to go beyond just figuring what do we do when someone does this? It's like what do we do when someone does this and then what do we do when they do something in response to that?" This kind of confusion of wanting to respond to harassment but not knowing how and when is something I have seen personally reflected in my career studying harassment and working with open source groups. In conversations with local volunteers for the Wikimedia NYC meetup, this kind of confusion was something echoed in a few meetings.

Best Practices

These best practices are gleaned from interviews, research, and findings provided by interviews with Global Diversity CFP Day, JS Conf EU, Kim Crayton and Valerie Aurora. Even when there has been pushbacks to codes of conduct, for example an interviewee Jory Burson recounted with TC39's adoption of a code of conduct, it seems like marginalized groups feel more welcome and supported at meetings with codes of conduct, and meetings with codes of conduct tend to have more diverse turn outs. A code of conduct is necessary but how is one implemented?

Kim Crayton suggests “[the organizers] need to really think about what the event is, what the community is, what’s the end goal? Then you work backwards...we need to stop acting as if we are building widgets, creating widgets. We are building the knowledge and information. We are a knowledge economy.” People need this knowledge which is guidance, direct materials and trainings.

Global Diversity CFP Day⁴⁸ has created a PDF, a ten minute video⁴⁹ and a fifty three minute video for organizers and trainings with clear guidelines such as clearly displaying the code of conduct, including attaching the code of conduct to emails or printing it out. Their videos emphasize “the CoC is not there to mediate any disagreements between equals but is there precisely to protect the most vulnerable. Please make sure if you have any incidents you need to handle by putting the safety of the most vulnerable first.” They also suggest having two volunteers take reports, a similar suggestion Valerie Aurora. Having at least two volunteers allows for one volunteer to intake a report, and go somewhere quiet to receive the report or talk to the reportee, and allow the other volunteer to be visible to attendees. Volunteers should also pick a room to intake reports, and this room should not be obvious to attendees, so reportees have privacy. Volunteers should also prepare multiple channels for reporting, such as if an incident occurs with another attendee, that should be reported to a volunteer or organizer, but if an incident occurs with a volunteer that should be reported to the event organizer, and if the incident involves an organizer, then a report should be made to the Global CoC team. They also suggest providing a google form, Twitter, or a phone number so attendees can report anonymously. Additionally, this should be announced at the beginning of the event. They suggest taking a proactive approach, with team members being vigilant, and that they will not tolerate transgressions or bullying to help stymie harassment. The training video emphasizes that volunteers should not wait for a report, but if they

48. an event Craydon has worked with founder Peter Aitken on creating materials

49. This video was shared with me for the purposes of this report.

see harassment, they should respond immediately. When intaking a report, they suggest making the person feel like they are believed, and to actively listen. There is always a team member of Global Diversity CFP Day on standby during workshops. Volunteers are encouraged to report incidents from events to the Global Diversity CFP Day core global CoC team. Much of the suggestions created by Global Diversity CFP Day are similar to trainings and suggestions made by Valerie Aurora.

From Mozilla's internal trainings on Ladders of Consequences, Valerie Aurora's presentation on Code of Conduct trainings, and This Dot's Accountability Ladder, organizers need to create a plan for how to respond to varying levels of harassment. This Dot's ladder⁵⁰ defines four different levels of harassment, consequences for offenses and potentials for rehabilitation. Level 1 is verbal offenses with suggestions of consequences of warnings and rehabilitation involving literature on how to be an ally. Level 2 is repeated offenses from level 1 within a year or repeated requests for dates, not respecting personal boundaries or displaying sexualized images. Consequences are banning the offenders for three months from events, and providing rehabilitation with a quiz on how to be an ally, and educational training materials that the event would provide. Level 3 is physical offenses and sexual harassment, or level 2 offenses conducted repeatedly within the year. Consequences are not allowing the attendee to come to an event from six to twelve months depending upon the severity of the incident. Rehabilitation involves the harasser needing to take ownership over the event, and engage in restorative justice by asking the event committee and victim what needs to be done to make things right.

The harasser then needs to report back on progress. Level 4 is criminal conduct, which can include sexual, physical or violent threats, stalking, harassing photography or video, or injecting malware into someone's devices. Consequences include potentially involving law enforcement and potentially banning the harasser for life. Rehabilitation may not be possible here, but the event committee and organizers should decide if rehabilitation is possible.

To summarize:

- Announce the code of conduct and make it accessible to attendees via paper copies, attached to tickets, sent out over email or all of the above
- Organizers should create two or more specific volunteers to intake harassment reports

50. <https://github.com/thisdot/accountability-ladder>

- Create multiple ways for attendees to report in person, over text message or potentially online so reporters can remain anonymous
- Find a private room to intake harassment reports to create a safe and private space
- Make sure to listen to the reporter and make them feel believed
- Actively make the space feel safe by emphasizing that bullying or harassment will be dealt with
- Create a plan like a ladder of consequences for how to respond to different kinds of harassment and these responses should all be agreed upon by the core organizers
- Set a time limit for responding to reports.
- Decide how to archive reports so they can be accessed later for recurring incidents

As Crayton has said, "if you prioritize the needs of the most vulnerable in whatever community you have, everybody else will be taken care of." By designing for the most marginalized and most vulnerable, organizers can make supportive and safe communities.

Recommendations

From this conducting this research, I have created a variety of recommendations that are divided amongst different user groups in the open source space: community members (such as individual attendees and participants who attend talks, and events), community events (focusing on conferences, and organizers), non-profit funders, smaller institutions (such as small, for profit companies that create key open source infrastructure) and larger institutions (such as larger, for profit companies that support open source initiatives like GitHub, Google, RedHat, and others). The recommendations are to create best practices with resources, support and host resources and trainings that are easier to find online, and conferences and institutions like funders and technology companies creating an emphasis on community health and harassment related talks so that knowledge is continually shared and dispersed throughout the community.

“Google Search Failures”: Creating and Hosting Resources that are Easier to Find

However, identical roadblocks face community participants and community events aiming to learn more or create structures, events and institutions that focus on community health, moderation, anti-harassment, diversity, equity and inclusion within open source communities which are finding resources. In an experiment for this report, I attempted to track down code of conduct implementation trainings. When Googling “code of conduct implementation”, this was the top search result:

The screenshot shows a Google search interface. The search bar contains the text "code of conduct implementation training". Below the search bar, there are navigation tabs for "All", "News", "Images", "Videos", "Shopping", "More", "Settings", and "Tools". The search results show "About 91,500,000 results (0.63 seconds)". The top result is titled "Implementing a code of conduct | Business Queensland" with a URL starting with "https://www.business.qld.gov.au". The snippet below the title reads: "Jun 29, 2016 - Implementing a code of conduct. Implementing a code of conduct in the workplace involves communicating the policies and guidelines to all staff and providing any necessary training to ensure they understand the code. The code should be practised and promoted by management to lead the way for staff." Below this is another result titled "Develop and Implement an Effective Code of Conduct - The ..." with a URL starting with "https://complianceandethics.org". The snippet below the title reads: "Dec 21, 2016 - 'Code of conduct' and 'code of ethics' are terms that are used Effective implementation requires ethical leadership and support, training, ...". At the bottom of the search results, there is a section titled "People also ask" with four questions: "How can code of conduct be improved?", "What should be included in a code of conduct?", "Who makes the code of conduct?", and "What does the code of conduct mean?". Each question has a downward arrow next to it. At the very bottom right of the search results area, there is a small "Feedback" link.

While this may seem minor, this is a major roadblock for communities trying to train themselves if they cannot find vetted resources. For example, Mozilla has a public training module on implementations for codes of conduct but it's impossible to find. Only when I googled the author's full name and "code of conduct implementation" did I find the training module linked in a Medium post. It also seems this resource is not easily accessible and potentially not even hosted on Mozilla's own website. Frameshift Consulting and Valerie Aurora's trainings are available online and hosted on her website but her work does not immediately appear in Google's search results. This inability to find resources, from unhelpful algorithmic searches and link rot, contribute to knowledge being lost. Resources need to be stored and maintained, potentially with emphasized SEO on websites, and indexable links.

Trainings and Implementations

At the end of this report, I have collected and synthesized best practices and created a more indepth series of suggestions for communities and conferences to implement. From interviewing organizers and volunteers across large conferences, smaller meet ups and for individuals, notably gaps emerged in how individuals and groups respond to harassment. Only some organizations, like JS Conf EU and Global Diversity CFP Day, had specific plans and trainings on how to respond to harassment, as well established responses on how to respond to varying levels of harassment. Some conferences had specific volunteers to respond to harassment matters, others did not.

The following best practices were collected and gleaned from interviews with interviewees and resources that have been utilized by interviewees. These suggestions are also reflected in Frameshift Consulting's research on implementing codes of conduct⁵¹, This Dot created an open source ladder of consequences or accountability ladder⁵², and Mozilla's internal training quiz on a ladder of consequences for employees and volunteers across the Mozilla Foundation and the Mozilla Corporation⁵³. Communities could consider implementing the following best practices to create better response to toxicity and harassment:

- **Trainings:** Communities should provide and or take trainings focusing on harassment mitigation and code of conduct implementation for their volunteers.
- **Sharing and Documentation:** these trainings should be documented- if new trainings are created, communities could write about how they created trainings and what they learned so knowledge is shared with the community.

51. <https://frameshiftconsulting.com/code-of-conduct-training/>

52. <https://github.com/thisdot/accountability-ladder>

53. The author of this report has taken the Mozilla internal training quiz.

- Create a Ladder of Consequences: a ladder of consequences is a series of decisions and procedures for how to respond to harassment cases with punitive actions that organizers can make. Not all harassment is the same, some is more serious than others, and should be met with appropriate responses.
- Maintaining and Updating CoCs: codes of conduct should be reassessed frequently, and adapted based on learnings. These CoCs could be updated yearly or once every few years, but they should be updated based on feedback from participants and volunteers.
- Reporting: Groups need to create ways to intake or receive harassment reports
- Documentation of Harassment Reports: Communities need to create ways to document and archive harassment reports.
- Harassment Focused Volunteers: Communities or meetups should have dedicated members to covering harassment in meet ups and having those members be consist.

An Emphasis on Community Health

How can we make community health, which includes harassment, a key part of open source conversations, meetups, communities, etc? Open source communities, and conferences, need to support community health talks and workshops, with a further emphasis and support from funders. Much like other aspects of open source critical, digital infrastructure, community health and online harassment work falls to volunteers within these communities. Often, it's on the volunteers to create their own systems and responses or try to hire an expert to train their organizers, which for some communities is cost prohibitive. This commitment to this research would help support better norms and best practices within the open source world. These findings could be shared as often as they share technical talks so communities can learn how to help each other, establish best practices so it proliferates across communities, mitigate harm and continue to learn. For community participants interested in furthering conversations and research on moderation, anti-harassment, diversity, equity, and inclusion, these participants should recognize the weight of their voices in asking for more talks, workshops, and organizers' commitment in supporting these topics.

Conclusion

Community health and harassment mitigation is intentional by design, and are sustained by a series of choices organizers make- by having a diverse team of organizers, of centering marginalized experiences and voices. Not all conferences get this right, and there is always room for improvement, something that harassment and technology expert, Kim Crayton, pointed out in interviews. But having a code of conduct does not deter harassment, or create a safer space, it's a first step in doing so. But, defining responses to harassment, and having a structure for intaking reports is as necessary as the code of conduct itself. As Crayton said in our interview, "A code of conduct is reactionary, it is the least thing you can do. Most of them don't work because they are not defined. Sexual harassment means many things to many people, and until you define it as a organization or a leadership team, it means absolutely nothing. Most code of conducts are copied and paste, and then there is no real thought about if there's a violation, what's going to happen?" Creating a ladder of consequences and a clear plan for implementation needs to be as natural as having a code of conduct itself.

Moving forward, individuals and communities need to have more community health conversations and support. But, it's important to emphasize, who is important for sharing and sustaining conversations on toxicity, harassment and harassment? I reflect on a conversation I had at a conference during the research. While attending React Day in Berlin in December 2019, a man sat down next to me before a talk started. He asked what kind of engineering I did⁵⁵, and I told him I'm actually a researcher looking at community health and harassment in technology communities. He started to ramble, mentioning how Vikings were spent all day fighting and it was strange for people to assume for them to come home and be nice. I realized he was trying to have a conversation about harassment. I paused and told him that harassment is a pervasive problem but also contextual, and he said exactly, that's what he meant. The lights dimmed, and the talk started so our conversation was paused. After the talk, he asked me if harassment is really a problem when GitHub has a block button. I responded that harassment can occur across all platforms and is not necessarily contained to one platform. I got up and walked away but I wondered "who is responsible for educating this man?" In this one instance, somewhat randomly, this person and I crossed paths. I was there in a research context but I was not there

55. A known, recurring microaggression of misogyny is male participants assuming female participants at conferences are designers or girlfriends of other attendees. This participant already assuming I did engineering could have been his attempts at avoiding assuming female participants are not technical.

to speak, so our interaction was wholly happenstance. Even though I am a researcher in this context, should I have shared more? However, I started to think through what are all of the touch points in this person's life to learn more about community health and harassment in technology. It could be at this person's job, and his co-workers and managers could unpack harassment for him, it could be in programming meetups where talks could cover information on harassment and harassment mitigation, or it could be at the very conference we were out, or funders could fund and support research and encourage communities to learn more. I present this example more so as a provocation- if harassment and toxicity affect open source, what or who is responsible for creating sustainable research, education and solutions for the community, for individual participants? Additionally, how can community health conversations, supports and trainings happen at a sustainable scale for volunteers? This kind of gap could be filled by a commitment from funders like the Sloan Foundation, the Ford Foundation, Mozilla and others. If we recognize the importance of funding for supporting new open source software, let's extend that support further to support best practices to create and manage healthy communities to reduce toxicity.