

A Rail of One's Own" – Creating Spaces for Women in IT

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ABSTRACT

Volunteer-based programs such as the Rails Girls project are recruiting people from within the field of information technology (IT) to help change the ratio of men and women in programming. By offering free coding workshops for women without any prior experience, the Rails Girls project is challenging hegemonic notions of technology as difficult to master. Rails Girls has chapters all over the world and is quite popular within the Ruby / Ruby on Rails community. This paper gives insight into the workings of Rails Girls Berlin, analyzes how spaces for women in IT are created and which processes of inclusion and exclusion need to be considered when trying to create an empowering experience.

Author Keywords

Empowerment; women in IT; intersectional; Ruby; Ruby on Rails; Rails Girls; volunteers; participant observation; semi-structured interviews; programming

INTRODUCTION

While there are numerous programs by governments, universities and corporations to raise girls' interest in information technology (IT) -related subjects, professionals from within the field of IT itself are offering various events and workshops focused on adult women. These volunteer-based groups usually start in one place but they branch out as soon as volunteers from other cities and/or countries gain interest. In Berlin, for example, there are the Berlin Geekettes and a local chapter of Geek Girl Dinners that focus mainly on building networking structures for women in IT-related jobs. But there are also workshops by local chapters of PyLadies and Rails Girls, both offering introductions into coding and thereby giving women without prior experience in programming an easy access to the basics of IT.

As Demaiter and Adams [2] note, chances of gender equality on the labor market are highest in times of growth and increasing employment opportunities while in times of stagnation, less women enter IT and more tend to leave the field. Ruby on Rails, the coding framework that Rails Girls¹ teaches, is currently in worldwide demand. Even with only basic knowledge, one can have a chance at internships and jobs, giving a wider range of people the opportunity to participate in the creation of technology. Rails Girls can spark a first interest in the subject of programming and by offering a positive learning experience, may even inspire a career change in some women, giving them the opportunity to make a difference in a male dominated area.

There are numerous works on girls and women in relation to IT (for an overview, see [3]). However, they mainly focus on girls or on female university students. As the German system of higher education does not include general studies before choosing a major, female-oriented introductory courses such as suggested in [7] are difficult to implement. Furthermore, research on programs for adult women outside of university is rare. Research on Rails Girls and similar projects is a valuable addition to the existing body of work as it can include women who never went to or have already left university. It can also give insight into worldwide networking structures of volunteers who want to increase women's participation in technology.

This paper will focus on a recent study I conducted on Rails Girls Berlin which was based on participant observation and semi-structured interviews. I will briefly summarize the basic structures of this non-profit volunteer group. From an anthropological perspective, I will then turn to a concept of empowerment [5] and theories of space [4, 6] to understand what values and concepts Rails Girls participants connect to IT and how processes of inclusion and exclusion work within the activities of Rails Girls Berlin. My main objective is to show that since the creation of social space is usually not an issue in the planning of workshops, some well-established relations of power can continue to operate unseen even when others are challenged. Therefore, I will

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¹ I will refer to Rails Girls as a project, not as people, since it cannot be assumed that each participant of the project identifies as female and/or as a girl.

also raise the question whether gender is the only category that is relevant to women who might be interested in learning to code.

ON RAILS GIRLS BERLIN

The project called Rails Girls grew out of a one-time event in Finland in 2010 which was aimed at women interested in learning some basics in Ruby on Rails. Its main goal was to get women excited about web development and to give them the vocabulary and tools to become creative within this field. Since then, Rails Girls has found volunteers all over the world; chapters are coming into existence everywhere from Lima, Chicago and Kampala to Ljubljana and Melbourne. German chapters can be found in some larger cities, but since every chapter is organized according to the preferences of local volunteers, I will focus on only one chapter: Rails Girls Berlin. The group is well integrated into an active scene of Ruby and Ruby on Rails programmers in Berlin and recruits most of its coaches from there. While the organizing team is women-only, coaches are of any gender, though currently about two thirds identify as male. Rails Girls Berlin offers not only beginners' workshops but also hackdays for women who already have some experience in coding and want to collaborate on a certain project intensely for one day. There are also self-organized study and projects groups, some meet once a week, others less frequently. Depending on sponsorship involvement, some events offer free lunches and coffee, on others, attendees bring and share food. There are also some characteristics that add to a certain Rails Girls branding: organizers usually put up posters custom-made for Rails Girls Berlin, there are red balloons in similar style and stickers or buttons can be used to decorate laptops or bags. Not only do these items increase recognition value, but they also convey alternative concepts of technology and coding² as will be described later on.

THEORETICAL BACKGROUND AND METHODS

As Naila Kabeer notes, “[...] empowerment refers to the process by which those who have been denied the ability to make choices acquire such an ability” [5]. She adds that empowerment implies the existence of alternatives and that these alternatives are “*seen to exist*” [5]. However, actively exercising choice is just one dimension of empowerment. In order to have agency, one must do so “in ways that challenge power relations” [5]. Thus, agents must be aware of said power relations. Within the field of programming, those relations are not only attached to gender, they also include matters of language, accessibility, age, financial background, race, ethnicity and so forth. How these aspects

² “The modernistic association of technology with masculinity translates into everyday experiences of gender, historical narratives, employment practices, education, the design of new technologies, and the distribution of power across a global society in which technology is seen as the driving force of progress.” [1]

are integrated into the Rails Girls Berlin workshops will be discussed in the following.

First, I'd like to introduce a perspective on how space can be an important factor when thinking about power relations. Following sociological theories, I understand space as something that is created through people, goods and interactions [4]. Social and material worlds cannot be separated when thinking about space. Rather, space is inscribed with positionings, alignments, exclusions and arrangements of people and goods which themselves are organized alongside social hierarchies [8], meaning that those previously mentioned power relations as well as social values are inscribed into spaces. Foucault offers the idea of “heterotopia”, spaces of otherness, spaces that are connected to hegemonic spaces, but controvert those settings [4]. Rails Girls Berlin could offer such alternative spaces, seeing as it creates a female-dominated programming event. However, Foucault also mentions that heterotopian spaces usually operate with a system of inclusion and exclusion, making them both isolated and permeable at the same time. In addition, heterotopian spaces usually exist for a limited time frame. Whether these heterotopian spaces are inclusive and exist long enough to make a meaningful impact will be discussed in the next section.

In order to analyze how Rails Girls Berlin creates its own spaces, I refer to Martina Löw's concepts of spacing and “Syntheseleistung”, which I will translate to synthesis effort. While spacing describes “the placement of social goods and people” or rather the “positioning of mainly symbolical markers” [6], synthesis effort describes the process in which space is created through perception, imagination and memory [6]. Spacing can be rather visual while synthesis efforts are more difficult to observe. It was hence helpful to include semi-structured interviews with some students, coaches and organizers of Rails Girls Berlin. I also attended two workshops and one meeting of a study group, joined the Rails Girls Berlin mailing list and continuously followed its online activities. Evaluation and interpretation of the collected data followed the principles of Grounded Theory [9], meaning that concepts were developed during an ongoing dialogue of empirical data and theory. It was used for both participant observation and the six interviews which had taken, on average, forty-five minutes to complete.

SOCIAL CREATION OF SPACES

As previously described, Rails Girls Berlin uses bright red custom-made posters, balloons, stickers and pins to create a its own branding. These items join programming-related statements with female-connotated imagery (see Figure 1 and 3). For instance, they use Ruby on Rails code to describe how one should do something one loves or they refer to Marilyn Monroe's song “Diamonds are a girl's best friend” and exchange “diamonds” for “rubies”. There are other posters with statements like “I <3 Ruby more than

Ryan Gosling” and a sponsored cake had a big pixel heart on top.



Figure 1. Poster with Ruby on Rails code about love.

This strategy actively challenges conservative ideas about how programming is a male area. As participants described, it also adds to an atmosphere of playfulness and coziness which then creates a positive learning environment. There are, however, further aspects of spacing, and these are less obvious. Stickers on laptops brought and T-shirts worn by coaches who are already into tech-related subjects often make references to certain tools, jokes or narratives that are common knowledge for people within the field. For people who are not yet accustomed to tech-culture, this can be either positively fascinating or negatively irritating. Laptops brought by some students were often visibly expensive, which can also make other attendees uncomfortable.



Figure 2. Study group during workshop, green shirt reads: “Ruby makes me happy”, courtesy of Ute Mayer

One participant summarized her feelings about this setting in a short interview: “There is this thing about space. When you’re in a room and you’re visibly, or feeling like, you’re the only person like you, it changes the way you interact or how comfortable you feel. Race has a lot to do with it, having a fast laptop, wheel-chair accessibility. [. . .] There is also language – English. There are native speakers who hold presentations, and they sometimes do a good job [in speaking clearly], but sometimes they don't.”

Throughout the longer, semi-structured interviews, I could identify four concepts that are important to those who are affiliated with Rails Girls Berlin: creativity, happiness, community and support. Each is connected to the others, meaning that they also account for each other: supporting members of the community through creative ideas causes happiness; an easy-to-read programming framework like Ruby on Rails makes programmers happy and gives them more time to be creative, and so on. Interestingly enough, these are not concepts that are traditionally associated with programming and they are also concepts that are not necessarily associated with masculinity. However, they are concepts that are emphasized when developing IT programs for women (for example: creativity and collaboration [7]). They are also repeatedly referred to during presentations and conversations; they constitute a narrative that participants of Rails Girls value highly. In addition, creativity, happiness, community and support are also valued by men outside the Rails Girls team, as one interviewee mentioned: “A lot of men asked: We’d like to have an event like that - can I come along? We wish we could do something like that. But no one would take us seriously.” Another interviewee mentioned how he himself is tired of IT being seen as an asocial area. He also presented his company’s effort to appear more relatable and amiable through a cute company mascot and, again, various stickers. In conclusion, the Rails Girls project uses spacing to and encourages synthesis efforts that create spaces connecting gender and technology in alternative ways.



Figure 3. Balloon with reference to Ruby (programming language and Rubies (gemstones)).

Seeing as Rails Girls Berlin is a relatively young project, its success must be measured over time. However, it can already be noted that some participants are deeply involved in self-organized study and project groups that are offered almost every day of the week in Berlin. This is an indicator for the intense interest that Rails Girls generates for web development but it also shows that women try to create spaces for themselves and their learning process that exist for longer than just a weekend. Some former students are now coaching during beginners’ workshops and some participants have even changed their career path and found a job that is closer related to technology and/or programming. The Rails Girls Summer of Code was

established and funded by various individuals, organizations and companies to enable a couple of former participants of Rails Girls workshops worldwide to work three months full time on an Open Source project while getting paid. This does show that Rails Girls Berlin can have a meaningful impact on individuals.

Nevertheless, spaces created by Rails Girls Berlin cannot be entirely described as heterotopian. While workshops and study groups are predominantly female and therefore challenge hegemonic conceptions of women in programming spaces, they are also predominantly white, able-bodied, english-speaking and middle class. Efforts have been made to be more inclusive, e.g. by trying to collect older laptops that could be offered to applicants who don't own a laptop. It is, however, still an issue that Rails Girls promotes itself mainly via Twitter and similar social media, thereby only reaching women who are already familiar with new technologies, leaving women behind who already have a disadvantage by not using social media.

CONCLUSION

This paper focused on how Rails Girls Berlin creates spaces for women who are interested in programming. Subjects were both the production of space as well as processes of inclusion and exclusion. This is especially interesting because the project is not funded by government aids but based on volunteer work. The project has been adapted in many different cities and countries, indicating that it can attract both volunteers and students with different backgrounds.

By connecting female-connotated imagery and concepts with programming, Rails Girls Berlin actively challenges hegemonic conceptions of technology. Indirectly, it also offers alternative understandings of masculinity which could be further investigated. Rails Girls workshops empower women to deepen their knowledge in web development and encourage some of them to rethink their career choices. However, I have also shown that not all realities and power relations that women face are factored into the planning of Rails Girls workshops, meaning that access for already privileged women is easier than for those who are less privileged. Therefore, Rails Girls Berlin can only partially be described as empowering. The question remains how volunteers can be encouraged to reflect their own practices and positions in order to make the Rails Girls project more inclusive. It would be interesting to see how chapters in other cities and countries are composed and how they can inspire each other. Also, widening research by analyzing online communication and web tutorials that Rails Girls uses could be fruitful to gain a more

comprehensive understanding of the project and motivations of individual volunteers.

Further research could also focus on the Ruby community in general since some activists I spoke to generally encourage resisting conservative notions of technology and consider themselves to be feminist. Also, ideas about why the term "feminist" is avoided by the Rails Girls project in general could be an interesting starting point for a discussion.

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