**Where is she? Finding the women in electronic music culture.**

I run a Music Computing program at a famous art school. My life, and my art practice, revolves around sound. Until recently, I toured extensively and performed at many digital art and electronic music festivals. I was rarely one of more than just a handful of female names in the program. The academic world mirrors these dismal numbers. At conferences and workshops, there are always a few of us eyeing each other and asking ourselves: Why are women still so under-represented in electronic music? Recently, this question has become a subject of popular debate, with Bjork’s high profile interview on the subject featured in Pitchfork[[1]](#footnote-0), the website female:pressure attempting to chronicle a compendium of female electronic musicians (Electric Indigo), and ethnographical works such as Tara Rodger’s (2010) *Pink Noises* hitting popular consciousness at the same time.

I once had a conversation with Janet Cardiff, a prolific Canadian sound installation artist. She spoke at length about how in the seventies, unlike now, it would not have been acceptable to program a high-profile music or arts festival with so few women on the bill[[2]](#footnote-1). In the arts, the slow gains of feminism seem a retreating mirage in a world where few question whether its goals have been achieved. When doing my admissions work, the numbers of female candidates applying to Music Computing is so terrifyingly low as to seem an anomaly. A colleague’s[[3]](#footnote-2) informal survey of Music faculty in the UK shows a dismal landscape to encourage graduates, with the numbers of female lecturers pushing one in four. Looking around this past year at the NIME (New Interfaces for Musical Expression) conference and seeing how few women were present there, I asked myself the same thing I did when playing those festivals. Where are all the women and why aren’t they involved?

It’s true that women face a unique set of pressures as electronic music performers. They must often choose between sexualizing themselves or being invisible in modern culture. For many, there is no right choice in a system so flawed. A fantastic, and very public, discussion on the subject took place in 2013 when Sinead O’Conner wrote an open letter to Miley Cyrus and Amanda Palmer responded to it. O’Conner (2013), amongst other things, stated that: “Real empowerment of yourself as a woman would be to in future refuse to exploit your body or your sexuality in order for men to make money from you”. To counter, Palmer (2013) asked that society: “give our young women the right weapons to fight with as they charge naked into battle, instead of ordering them to get back in the house and put some goddamn clothes on”. Or in other words: that female artists be allowed to pick their own ways of presenting themselves without judgment, even through such thorny mechanisms as sexual provocation.

But being interested in performance is not the same thing as being interested in music production or other related practices. Not everyone wants to, nor is able to, present themselves in a sexual context to bring attention to their art, and even the most high-profile female music producers are rarely acknowledged for their technical contributions as separate from their voices or bodies. In Jessica’s Hopper’s (2015) interview, *The Invisible Woman: A Conversation With Björk*, Björk speaks out about how often her production work is misattributed to her male collaborators or simply ignored by the media. If a rich and famous woman such as Björk can’t get attributed for her technical work as a music producer, what chance do other women in the field have[[4]](#footnote-3)?

While it’s impossible to have a discussion about women in electronic music that doesn’t acknowledge the twin difficulties of sexualization and invisibility, these topics are not the main focus of this article. Instead, I’d like to examine my own history as an artist and educator to try to understand how to get more women involved in the technical aspects of electronic music, and to determine why women are so under represented in this field.

As a musician, I’ve released a few solo albums, and appeared on several releases by a fairly famous band. I’m always amazed at how, when people discuss those albums with me, they assume I simply added my voice to someone else’s music, or worse. My work is part of a lineage of experimental music artists who include such heroes as Cosi Fanni Tutti and Diana Rogerson, both of whom I’m sure were asked the same questions in their time. I am explicitly mentioning these women, because there were very few female artists visible in the experimental electronic music I was listening to growing up and I would like to write about origins.

I’ve been making electronic music and other forms of technology-driven art for twenty years. I started when I was a computer science student. I was an avid electronic music fan, but I’d never studied any form of instrument. As soon as I started programming computers I had this epiphany that computers could **do** things. I immediately began to dream of using them to make music. My first experiments were through programming, making sounds using numerical patterns in a language called Visual Basic, but I soon found sound editing software and immersed myself in experimentation. I couldn’t play an instrument, so I would sing into a microphone or sample random objects from around my room, process their sounds beyond recognition and sequence those results into compositions. At the time, I didn’t know there were other people who did this. I didn’t think it was ‘Art’, and when I did find out there was an academic field called ‘Electro-acoustics’ I wept because the bar for entry seemed unbearably high. I was told I needed eight years of music theory behind me before I would be considered to study it formally.

At the time, most of my friends were male. They would get together to play around with electronics and make recordings. Some of these guys knew how to play their instruments and some of them didn’t. Occasionally, there would be a female instrumentalist allowed to join them, but mostly, girls were only invited if they were dating one of the guys who was otherwise involved. This mirrored the situation I saw in popular music where, seemingly without fail, women were either only contributing their voice or dating someone else deemed more important in the band. I desperately wanted to join my friends, but I was a late bloomer who didn’t know how to play any instruments. I found it incredibly frustrating that the guys didn’t need to be good at anything to come and experiment with sound in these social situations. To be included, all they needed to do was show up, while the girls needed some form of social or technical currency to barter.

I’m going to repeat what I just said because I think it’s important: the boys were invited to make music before they had the necessary skills to be successful at it. The girls were only invited if they were someone’s girlfriend or had pre-existing technical knowledge. If we want to figure out why there aren’t more women working in electronic music, this is where we need to start.

Electronic music is mostly a DIY culture. For most, there is a significant social component, not only to learning how to produce electronic music, but also to the performing and marketing of it. The necessary skills are passed around closed communities and friend-networks, often predominantly male, and as a result, solo female artists have more difficulty acquiring them. The problem is compounded by social structure. There are fairly well documented behavioral differences in the gender-normative ways that young girls and boys learn. Girls tend to absorb knowledge through reading and verbal explanation, while young boys tend to favor active engagement. If there is a neurological basis[[5]](#footnote-4) for these differences during early childhood, by adolescence, any divergent behaviors have been stratified through repetition, cultural expectation and gender conditioning.

None of the girls I knew as a teenager taught each other how to do technical things[[6]](#footnote-5). We read books and discussed the world, watched movies, talked about our families, our feelings, our thoughts, but we weren’t really involved in skills-sharing unless it was related to school. When I wanted to participate in my friends’ musical experimentation, I was joining a skills-sharing network that for them had always been male.

For many young women, entering an electronic music DIY-network is as awkward as trying to make friends with the schoolyard boys in the first grade. Even if each is friendly when you meet them one-on-one, you aren’t invited to the monkey bars if all the boys are there. I needed to find my own entry point into electronic music production, since there were so few people around for me to learn from. While I did eventually manage to join in on the experiments my friends were making, I also applied to an art school in Montreal where I was able to study electronic music production in an Electro-acoustic Studies program. It was there that I picked up the majority of my advanced skill set.

In many ways, this is the role of the academic institution. To correct for the bias in the social sphere and allow whoever can gain admission to learn the knowledge or techniques on offer. Montreal, a city with four schools each teaching a variant of Electro-acoustic music, had significantly more women involved in the music scene than I had otherwise ever seen, but this did not mean equal representation in either performance venues or educational institutions. In my Electro-acoustics classes, I noted that after the first year of study women were outnumbered by men 10:1, - the same ratio I noted in my Computer Science classes during the mid nineties. While many of the women in Montreal’s experimental music scene fit the mold of girlfriends and singers I had previously experienced, this did not diminish their artistic contributions, and a significant population had acquired sufficient technical skill independently to hold their own in their chosen music communities. These women were few but also fierce, competing in a domain with few role models or allies.

It wasn’t only the universities in Montreal that helped train so many female electronic musicians. Studio XX is a bilingual feminist art and technology centre aimed at helping to develop the careers and skills of women[[7]](#footnote-6) in technology driven art and its related professional fields[[8]](#footnote-7). The centre was founded in 1996 and offers residencies, workshops, special events and networking opportunities to Montreal’s feminist-allied artistic community. The studio was founded by four women: Sheryl Hamilton, Kim Sawchuck, Kathy Kennedy and Patricia Kearns in 1996 who “were trying to find other alternative ways, outside of academia, that would actually make links between artists, activists, academics, and anybody” (Sawchuck in Tripp). It’s run collectively, with a board presiding over its major decisions.

In 2007, I briefly served as Studio XX’s technical director and taught a few short courses, in one of which participants built simple audio circuits such as contact microphones, amplifiers, and light-controlled oscillators. I had previously taught a programming workshop at the studio, aimed at web professionals who wanted to upgrade their skills. While the programming workshop was nothing revolutionary, other than perhaps its entirely female population, the electronics one felt completely different.

Kathy Kennedy, who attended the workshop, commented that the original goal of Studio XX was to encourage community-based sharing of skills and that she found it much more effective than the top-down authoritarian model of instruction. While her comments seemed targeted towards all teaching, there is an obvious crossover between the skills associated with DIY electronics design and the craft culture traditionally cultivated within female society. For starters, the workshop involved a lot of physical and repetitive ‘doing’ with lots of community support and opportunities for correction. The instructions that were demonstrated used the same design metrics as recipes, including both critical tasks and creative improvisation. More importantly, the social component of the gathering encouraged its results. Generations of women have passed craft-based knowledge from one-to-another in the exact same way.

I was working on a circuit in the middle of the group when I suddenly realized that around me were twelve women, all of whom seemed interested in the same modes of music-making that I was. We all lived in the same city and I had never met most of them before. With a quick show of hands, I asked how many of the workshop participants were electronic musicians, how many of them created music alone, and how many performed. I was surprised to find out that many of the participants made electronic music and had an independent practice, but almost none of them were performing publicly. Several of these women had graduated from the city’s Electo-acoustic Music programs, while others were self taught, being avid fans of electronic music.

It was clear that even though these women had deep artistic practices, they were unable to graduate into participation within their local music community. They each had the necessary technical skills to produce and perform their own music, but few contacts outside of their academic circles. The necessary knowledge they missed wasn’t theoretical, but social, deeply local, and always in a state of change. It involved details such as who was promoting other similar acts in town, how to book specific venues, knowledge of performers with whom to collaborate on events, and skills leading to self-promotion. They needed to be informed of local opportunities for music publishing or distribution, of festivals and other performance opportunities. Mostly, they needed to know who to submit their work to in order to take advantage of those opportunities and how to meet the criteria for selection. If a musical act is sufficiently promising they may attract a manager or agent to shape their success, but this help is quite rare outside of commercial culture. Instead, dense social networks of musicians teach young musicians the necessary skills to do these things for themselves at the level of their community. Not having enough social engagement with other performing musicians was stopping these women from growing to the next stage of their careers. But, those social networks were almost entirely populated by young men and those they vetted through sexual and social means. Without the required social currency to enter those networks, aspiring female musicians were unable to learn from them.

My story has a happy ending. With the help of one of the ladies involved who co-ran an independent label, we created a series of compilations called *Ladies Club* that featured the work of many women from the electronics workshop. The series encouraged the featured artists to prepare a track for release, but also taught them to book and promote shows, and to rely on each other to fill them. I’m happy to report that this small collaboration helped push many of these musicians into more visible practices where they were able to continue organizing the culture they had always wanted to participate in.

The two volumes of Ladies Club were 3” CDRs, pressed in small editions with professional covers. They were explicitly designed to fit a distribution method local to Montreal: the distroboto machines[[9]](#footnote-8) – repurposed cigarette machines that vended small artist handicrafts for 2 dollars a piece and served as a surprisingly effective method for music distribution between local musicians. A show was held for each launch, which all the included artists were encouraged to help promote, tech, and organize under guidance from the project creators. The most important long-term result from *Ladies Club* was not the CDRs, but the experience and community that came about from the launch parties. Further events were organized by several of these musicians after the experience and the positive feedback they received from their performances.

There are currently a growing number of projects that make use of community building and skills-sharing practice to help women engage with electronic music culture. Notably, *Rock Camp for Girls[[10]](#footnote-9)*, a large alliance of local organizations that offer young women the chance to build rock bands and perform their music under guidance from older female performers and technicians. While *Rock Camp* aims to provide role models to the young women involved, part of their success stems from their summer camp model, which creates an atmosphere of community and inclusion. Recently, TECHNE, the electronic music teaching organization of Suzanne Thorpe and Bonnie Jones have introduced a DIY electronics component to several of these retreats[[11]](#footnote-10). The success of the *Rock Camp* model is inspiring similar programs, such at *GEMS* or Girls Electronic Music Seminar[[12]](#footnote-11), now being staged for the first time as a summer intensive workshop at New York University directed by Daphna Naphtali.

Now when people ask me how to get more women involved in electronic music culture, I have two answers: *share your skills with them,* but also: *share your friends with them*. Remember that culture is something that we build together, by doing, and teaching each other how to do. Host a workshop. Throw some shows. Promote each other’s work. Open up your files and show each other what you’re making, and more importantly, show each other how you’re making it. Help each other to get your art out into the world. Don’t worry if they don’t already know how to be involved, we are all going to build the future of music together.

ENDNOTES

Arcmtl. (2015). About. *distroboto*. Retrieved from: http://www.distroboto.com

Cannon, Kristine. (April 2015). Music Festival Lineups with Male Acts Removed Sends a Powerful Message. *sheknows.* Retrieved from:

http://www.sheknows.com/entertainment/articles/1080274/coachella-and-other-music-festival-lineups-with-the-male-acts-removed-photos

Dalton, Josh M. [crackintheroad]. (February 24th, 2015). #How it would look if the Reading / Leeds line-up only included the acts that have a female musician in the band. Retrieved from:

https://twitter.com/crackintheroad/status/570325123007455232/photo/1

Electric Indigo. About female:pressure. *female:pressure*. Retrieved from: http://www.femalepressure.net/fempress.html on May 1st, 2015.

Girls Rock Camp Alliance. (2015). About GRCA. *Girls Rock Camp Alliance*. Retrieved from: http://girlsrockcampalliance.org/

Gurian, Michael, and Kathy Stevens. "With Boys and Girls in Mind." *Educational Leadership* 62.3 (2004): 21-26.

Hopper, Jessica. (January 21st, 2015). The Invisible Woman: A Conversation with Bjork. *Pitchfork*. Retrieved from:

http://pitchfork.com/features/interviews/9582-the-invisible-woman-a-conversation-with-bjork/

New York University. (2015). Department of Music and Performing Arts: Girls Electronic Music Seminar (GEMS). *NYU STEINHARDT*. Retrieved from: http://steinhardt.nyu.edu/music/summer/gems

O’Conner, Sinead. (October 3rd, 2013). Sinead O’Conner’s Open Letter to Miley Cyrus. In: The Guardian. Retrieved from:

http://www.theguardian.com/music/2013/oct/03/sinead-o-connor-open-letter-miley-cyrus

Palmer, Amanda. (October 3rd, 2013). An Open Letter to Sinead O’Conner, Re: Miley Cyrus. *amandapalmer.net*. Retrieved from:

http://blog.amandapalmer.net/20131003/

Pestova, Ksenia. (August 10th, 2013). A Quick and Dirty Survey of Man/Woman Ratios in UK Academic Music Departments. *Doctor X.* Retrieved from: http://xpressz.tumblr.com/post/57863437835/quick-and-dirty-survey-of-man-woman-ratios-in-uk

Rodgers, Tara. (2010). *Pink noises: Women on electronic music and sound*. Duke University Press.

Studio XX. Studio XX’s Mandate. *Studio XX: Femmes + Art + Technologie + Société | Women + Art + technology + Society.* Retrieved from: http://www.studioxx.org/en/mandat on May 1st, 2015.

Thorpe, Suzanne and Bonnie Jones. (May 24th, 2015). Help TECHNE Teach Electronic Music This Summer! *TECHNE Modular Workshops in Music Technology and Improvisation.* Retrieved from: http://technesound.org/2015/05/24/help-techne-teach-electronic-music-this-summer/

Tripp, Stephanie. Feminism, Media Technologies, and Studio XX: An Interview with Kim Sawchuk**.** *Media-N, Journal of the New Media Caucus*. Tracing New / Media / Feminisms (Spring 2013). Retrieved from: http://median.newmediacaucus.org/tracing-newmediafeminisms/feminism-media-technologies-and-studio-xx-an-interview-with-kim-sawchuk/

1. See Hopper (2015) [↑](#footnote-ref-0)
2. This discouraging trend has been documented by many, such as popular blogs Crack in the Road and SheKnows. See Dalton (2015) and Cannon (2015) [↑](#footnote-ref-1)
3. An informal survey completed by Ksenia Pestova in 2013 counted 110 women and 327 men listed as faculty on the websites of UK Universities. See Pestova (2013) [↑](#footnote-ref-2)
4. This question was directly posed to me by performing artist Blevin from Blechdom. [↑](#footnote-ref-3)
5. The hippocampus, associated with memory and verbalization, is larger and more developed in girls’ brains, while boys’ develop the cortical area, related to spatial-mechanical functioning. See Gurian and Stevens (2004) [↑](#footnote-ref-4)
6. With the exception of crafts, whose production are traditionally female dominated and which are often used as a means of social gathering. [↑](#footnote-ref-5)
7. Self identified women and their feminist allies. [↑](#footnote-ref-6)
8. See Studio XX [↑](#footnote-ref-7)
9. See Arcmtl [↑](#footnote-ref-8)
10. See Girls Rock Camp Alliance [↑](#footnote-ref-9)
11. See Techne [↑](#footnote-ref-10)
12. See NYU [↑](#footnote-ref-11)