

# DISOBEY ELECTRONICS

PROTEST

# DISOBEDIENT ELECTRONICS

PROTEST

Garnet Hertz, Editor

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Garnet Hertz

The Studio for Critical Making

TABLE OF CONTENTS

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More information on this project is at  
<http://disobedientelectronics.com>  
and <http://conceptlab.com/>

## TABLE OF CONTENTS

Introduction • G. Hertz	01
Abortion Drone • Women on Waves & Collaborators	03
The 79% Work Clock • J. Carreiro of PARTY New York	07
A Piece of the Pie Chart • A. Rüst	11
PeriodShare • M. Søndergaard & L. Hansen	15
Mixed Messages Bra • J. Hansen	17
Blinkini • N. Wu	18
Home Surgery Instructions • Barbie Liberation Organization	19
The Knitted Radio • E. Kurbak & I. Posch	21
Probots • C. Csikszentmihalyi, V. Aguiar & V. Azevedo	23
Backslash • P. Olivera & X. Chen	25
BIT Rocket • Bureau of Inverse Technology	29
Robotic Graffiti Writer • Institute for Applied Autonomy	31
Dissenting Jabots • J. Liu & C. Baumann-Jaeger	33
CRAF • T. Sawangdee & E. Ishikawa	35
Improvised Empathetic Device • M. Kenyon & D. Easterly	37
Gun Control • S. Rildall	39
Campus Carry Doorbell • SP&CE Media Lab	41
The Transparency Grenade • J. Oliver	43
THERO • R. Torre & Á. Angulo	45
Integrated Entropic Sanitization • M. Klapman	47
Phantom Kitty • N. MacAloney	49
Device for the Emancipation of the Landscape • M. Walker	53
Solar Cooker • S. Kuznetsov, S. Chung & S. Puthenpurakkal	55
What if Artifacts Had a Different Sort of Politics • L. Forlano	57

A piece of the Pie Chart [1] is a robot that protests gender inequity with edible pies. It is a "sweet" form of robotic criticism. It also tweets. Below, I am providing some background information regarding gender inequity in art and tech and why gender inequity is a problem. Then I am going to describe my feminist protest robot and explain why collecting data on the gender gap is important. Finally, a call to action specifically aimed at men.

Looking at the first edition of *Critical Making* [2], I found that roughly 30% were women authors. This is pretty common. Why? Because for women in art and tech, things are pretty grim. In tech, the gender question has been subject to much research. One much cited report by the Harvard Business Review states that coveted creator and producer roles in tech (and science, math, and engineering) jobs are primarily occupied by men and that women are kept out by hostile macho cultures [3]. Feminist art historian Lisa Nochlin already stated in 1971 that the same thing keeps happening in art history [4]. Even in 1971, art had a broader pipeline than tech: Women were graduating at the same rate as men from art programs [5] and since then, the number of women in art has only increased. But when you look at who is invited to exhibit by major museums and galleries you will see that creator roles in this field are still primarily occupied by (white) men.

So why is this important? It's an obvious economic issue. If women and minorities invest in an education and career but cannot get ahead at the same rate as white men because of discrimination, this creates economic inequality among other things. In a just society, women and minorities should logically be rewarded at the same rate as men both financially and in terms of recognition.

#### THE ROBOT

So yes, how to protest economic inequality and the invisibility of female labor using a robot? Through pies! My robot puts pie charts onto real, edible pies. It's a gallery installation that looks like a miniature industrial production line. It consists of a computer, household electronics, as well as adapted robotics

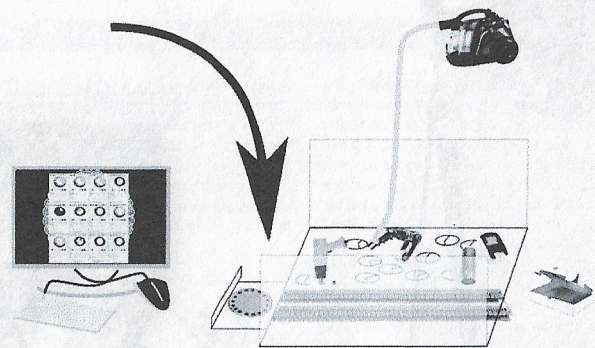
kits. The gallery visitor can browse gender ratios from art and tech using a computer (screen, keyboard, mouse) and select the gender ratio that they would like to put on a pie. The screen then prompts them to put a pre-baked pie onto a designated place and press a button. The machine then pushes this pie onto a conveyor belt. The conveyor belt moves it under a heat gun. The heat gun heats up the chocolate on top of the pie until it is sticky. The conveyor belt moves the pie to a robotic arm. The robotic arm is surrounded by paper pie charts. The arm then selects the pie chart that the visitor previously selected. Attached to the robotic arm is a hose that leads to a vacuum cleaner. Once the robotic arm touches the middle of the pie chart, the vac turns on and the pie chart sticks to the arm. The arm then transports the pie chart to the pie and presses it lightly into the heated chocolate where it sticks as the chocolate cools. Then, the thus decorated pie is transported by the conveyor under a web cam that takes a picture and distributes it via Twitter [6]. When this is done, the finished pie is presented to the visitor along with a label to ship the pie to the place (art museum, gallery, tech company, etc.) where the data originates. If visitors do not want to send the pies, they are encouraged to take them to their workplace and discuss gender and other inequities with work colleagues.

The mix of household electronics and robotics kits is intentional. The installation consists of repurposed robotics kits and household electronics. My project is a mix of "high-tech" robotics kits such as a kit to make a tank robot and a robot arm, as well as "low-tech" domestic appliances such as a vacuum cleaner. By removing unnecessary boundaries between seemingly disparate forms of technologies, I am paying tribute to the invisible labor of female inventors of household appliances and the products of household labor (the pies).

#### COUNTING GENDER RATIOS

I collect data on the gender gap primarily myself, counting presented gender via "A Piece of Inequality", a website I created to archive the ratios I count [7]. People have asked me why I am not going





beyond the male/female dichotomy in "A Piece of the Pie Chart". Let me explain. In theory, going beyond the female/male dichotomy is easy. In practice, it is more difficult. I collect data from artist bios. Bios don't across the board provide a nuanced picture of gender identity, sexuality, and race. And I would find it awkward and creepy to ask friends and strangers about the specifics of their gender identity, sexuality, and race. So I don't have any way of providing a more nuanced picture. In artist bios, people will typically present as male or female via gender pronouns. If I am not sure based on artist self-presentation, I list this person as "unknown". I do the same for artist collectives where gender is not identified on a per-person basis. This adds a margin of error but the margin of error is usually not large enough to be significant. What is significant however is that the data makes it obvious that the gender gap exists in art and tech and that it will likely not go away anytime soon.

I am not alone in collecting data on the gender gap in art, tech, architecture, and other fields: The Guerrilla Girls have been counting since 1985 [8]. The Gallery Tally Project [9] directed by Micol Hebrón is a crowd-sourced effort. Gallery Tally participants collect gender ratios from commercial galleries and visualize them on posters which are collectively exhibited. The Countesses [10], GenderAvenger [11], and the feminist wall of shame also count [12]. Heather Dewey-Hagborg created the #KissMyArse

hashtag [13] to protest the fact that Ars Electronica, the oldest Art and Technology festival has in its 29-year history given 9 out of 10 of its top awards to men. Why counting? Because we're dealing with a power differential and data as evidence is less easy for those in power to dismiss or explain away [compared to anecdotal evidence]. It also helps confront those who pretend to be blind to the gender gap. In 1971 for example, the Los Angeles Council of Women Artists (LACWA) confronted the then head curator of the Los Angeles County Museum of Art (LACMA), Maurice Tuchman. He had curated the Art & Technology (A&T) program at LACMA which brought together exclusively male an overwhelmingly white artists like Andy Warhol and James Turrell with industrial tech companies like Hewlett Packard and Garrett Corporation. In the catalog accompanying the exhibition, Tuchman said that he had attempted to include "as wide a range of artists as possible" [14]. The LACWA report shows succinctly [in just seven pages] that this was a gross misstatement [5]. Data helps reveal institutional bias and institutional weakness that is glossed over in official documents (such as the A&T catalog). Counting is about holding institutions responsible because numbers can easily show the difference between rhetoric and reality. Institutions who receive taxpayer funding must represent demographic diversity of taxpayers at all ranks of their organization. This is something that LACWA already demanded in their 1971 report.



#### CALL TO ACTION

I want to end this project description with a call to action. If you are a famous male artist, curator, festival director, editor, and/or hold some other position of power – I am talking to you in particular. Read Lisa Nochlin's paper from 1971 [4]. You are an integral part of pushing the feminist cause forward. Some male artists (two cited at the link) have manifested that protests done by women artists against Ars Electronica via the #KissMyArse hashtag are not revolutionary enough [15]. Dear male artists, do not tell women that they are doing feminist protest all wrong because people tell us stuff like that all the time. Do not make feminist protest all about you [and women's labor therefore invisible]. Instead do the opposite: Support women and minorities. Promote our work and feminism. Again, we are all an integral part of pushing the feminist cause forward.

- [1] Annina Rüst. A Piece of the Pie Chart, 2013-ongoing. <http://anninaruest.com/pie>
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- [8] The Guerrilla Girls. Our Story. <http://www.guerrillagirls.com/our-story/>
- [9] Micol Hebrón et al. Gallery Tally Project, 2013-ongoing.
- [10] CoJNTess – Women count in the artworld. <http://countesses.blogspot.com/>
- [11] GenderAvenger. <http://www.genderavenger.com/>
- [12] Feminist Wall of Shame. <http://feministwall.tumblr.com/>
- [13] Heather Dewey-Hagborg. #KissMyArs, <http://dewey-hagborg.com/projects/kissmyars>
- [14] Maurice Tuchman. A Report on the Art and Technology Program of the Los Angeles County Museum of Art, 1967–1971, P. 17. [https://archive.org/stream/reportonarttechn00losa\\_/reportonarttechn00losa.pdf](https://archive.org/stream/reportonarttechn00losa_/reportonarttechn00losa.pdf)
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