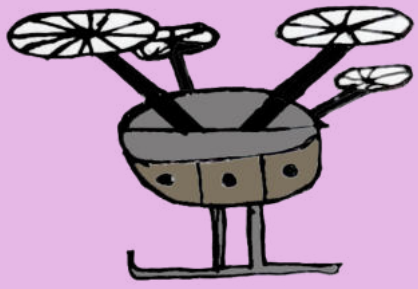
Diversity



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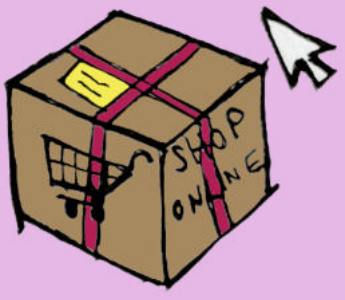


Technology

A Zine by
Sol Martinez Demarco
& Laura Schelenz

Contents

+++ THE AUTHORS +++

Hi! I'm Sol and my research interests are Feminist Techno-science, Science and Technology Studies, Information Technologies and Science and Technology Policy. In this zine you will learn a little about my research on grassroot initiatives working for diversity in IT.

SOL MARTINEZ DEMARCO

Hi! My name is Laura and I do research at the intersection of American Studies, Gender Studies, and Science and Technology Studies. This zine presents some of my work on diversity-aware technology.

LAURA SCHELENZ

Hey!

Thank you for picking up this zine. It is the result of research carried out in the framework of the digilog@bw project. In the following pages, you will find different approaches to the topic diversity and technology. Let's dive in!

***

First, we consider the meaning of diversity in general – and diversity is quite an ambiguous concept, so there can be vastly different interpretations.

***

In the second chapter, Sol presents some of the results of her work on diversity initiatives in IT. These are communities, collectives, associations, and similar projects that aim to generate interest in tech by minority groups and increase the number of non cis men working in the IT sector. Her guiding questions are "What are grassroot initiatives in IT doing for diversity?" "What are their values, ideals, motivations, practices, and imagined futures?" and "What do they care for and about?" Read on if you are curious about the answers.

In the third chapter, Laura deals with diversity concepts embedded in the technology itself. She sheds light on the shortcomings of using certain diversity concepts (e.g. demographic attributes) to optimize the technology for users. Often, these diversity notions obscure social inequalities, and the technology can be biased as a result. Laura presents her take on "diversity-aware technology" and proposes to link diversity (back) to social justice as a way of designing technology that involves an active analysis of power.

***

Now turn the page and let's begin!

***

A brief Intro

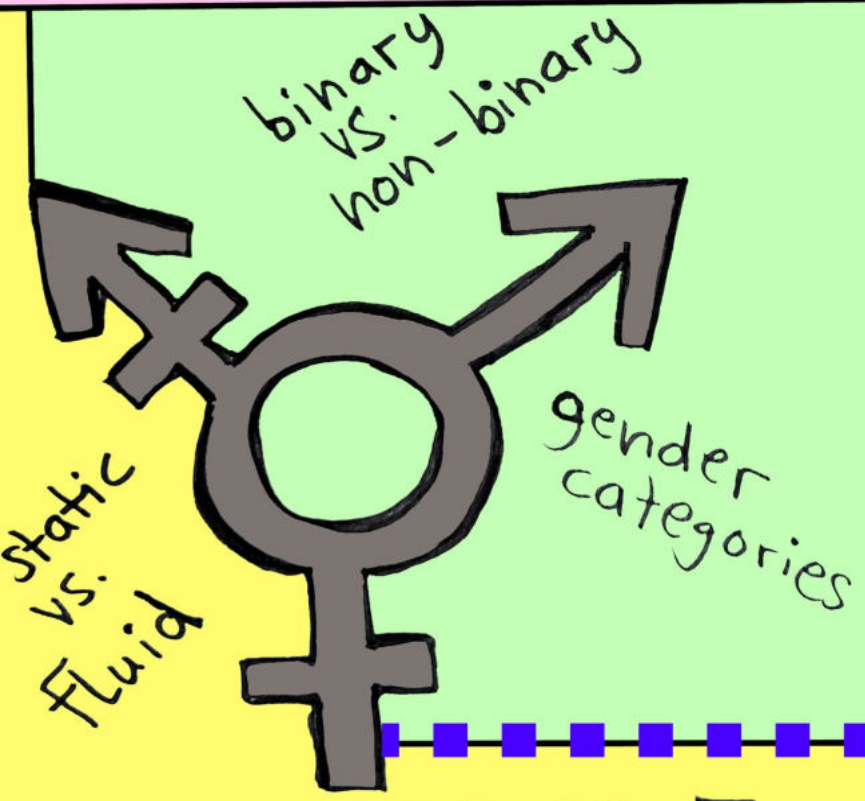

Diversity
an ambiguous concept
different cultures
- social differences
- personalities
- backgrounds
- gender, race
INCLUSION & TOLERAN
DIFFERENCES between humans & animals
"Different species"
What does it mean?

Diversity is an ambiguous term and is used in public and academic discourses in many ways. Diversity can be linked to value statements and have a moral appeal for inclusion, equality, and justice. Diversity can also be a descriptive concept used to articulate differences. It is important to acknowledge that diversity concepts are social constructs. This means they are produced by someone with some motivation. A definition of difference, especially as it pertains to differences between humans, is not neutral but involves ideas about "who belongs" and "who has power." History reveals example of how definitions of difference have been leveraged for oppression, e.g. during colonization, see Rusert, 2017; Subramaniam, 2014.

DIVERSITY

Diversity is often associated with differences between people For instance, people might be perceived as different in their gender. Here, gender is usually seen in binary terms, encompassing females and males. Such binary "demographic" categories, whether they are used in data collection or statistics, can be harmful because they subsume diverse experiences of people into predefined boxes, Keyes, 2019 .

Another problem is that binary categories obscure differences within one category. Women's experiences differ significantly depending on their position at the intersection of race, disability, class, ability, etc. Rather than seeing gender as a demographic diversity category, we should think of gender as a category of power and acknowledge its performativity, Butler, 1999



GENDER

DIVERSITY

also
Diversity is often understood to mean different cultures, including languages and social practices. Understanding diversity as culture goes back to theories of liberal multiculturalism. Pluralism and integration are core values negotiated in the context of a diversity discourse centering cultural aspects of diversity. However, language skills and social practices are also influenced by social dynamics, such as having access to resources. Critics have said that a "culture" understanding of diversity obscures the social inequalities underlying our societies, see Dhamoon, 2010.

CULTURE


Diversity as Social Justice
REDISTRIBUTION
LOVE
This means...
When we are talking about
DIVERSITY,
we also have to talk about the redistri-bution of power to ensure
REAL DIVERSITY
in our institutions, companies, and society!
Diversity as Social Justice
POWER
EQUITY

DIVERSITY Diversity

Diversity DIVERSITY

The idea that diversity involves the redistribution of POWER is inspired by Black Feminism.

Black feminists have criticized mainstream diversity discourses and argued that the very reason why we need diversity programs in the first place
->
OPPRESSION and DISCRIMINATION of Black women and marginalized communities
<-
is obscured in these discourses.

Real diversity work is making visible the historical and ongoing discrimination of Black women.*

Ahmed, 2009 and 2012
Nash, 2019
Crawley, 2006

*This is true for all structurally marginalized communities. While some members may be included in institutions for optics, real changes in hierarchies are prevented.

Diversity Diversity Diversity Diversity

Diversity Initiatives

in

Technology Development

Sex, Gender, and Diversity in Tech Development

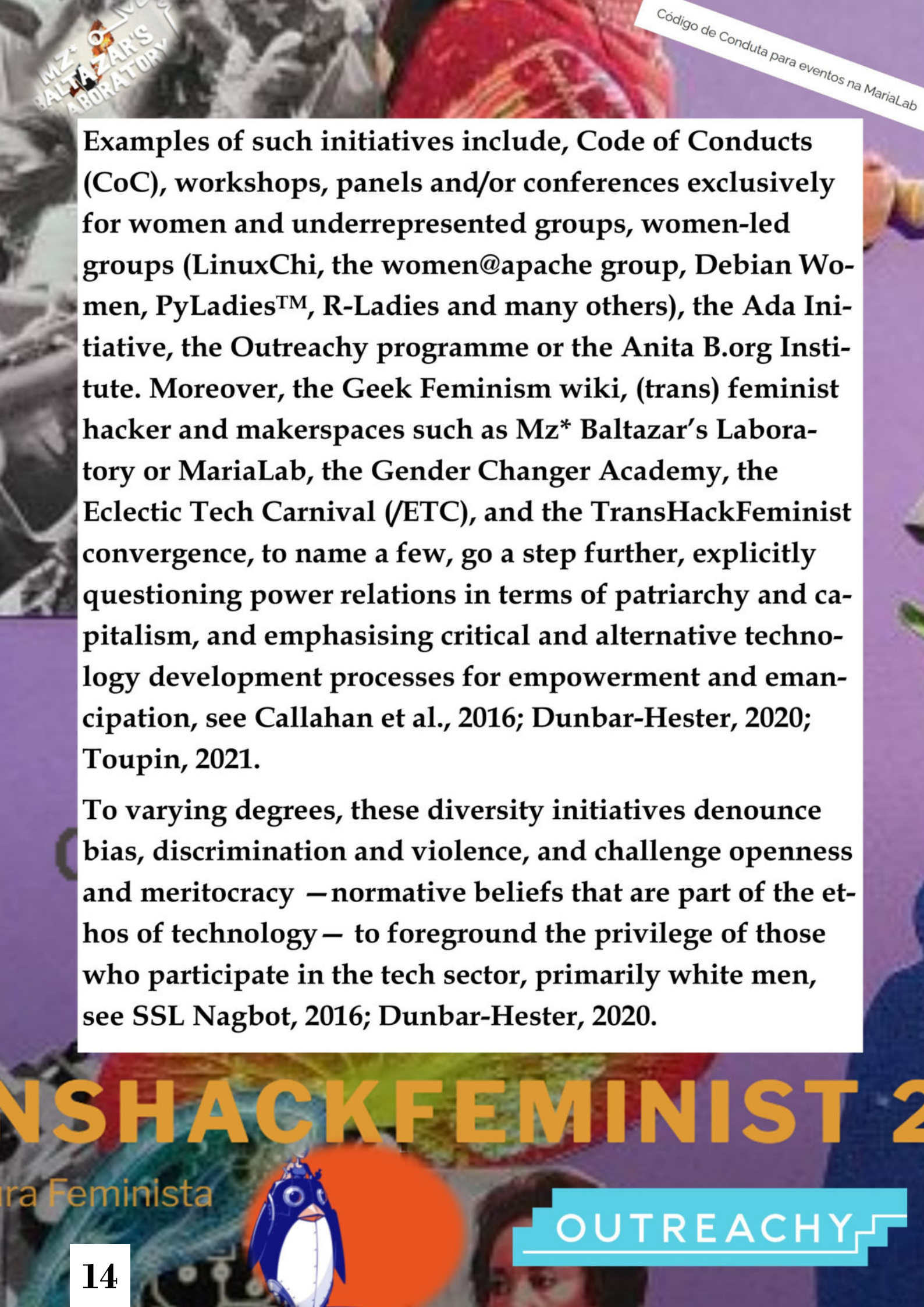
Diversity is also a topic in IT, but it is often not clear what the notion means. Although, there is plenty of research and policy on the subject, the focus is on the low percentage of women in the tech academia and professional world. A main reason is the lack of agreement in terms of conceptualisations and indicators. Current statistics at national level are only disaggregated by sex (or binary gender), which explains the association that public discourses make between diversity and girls and women in IT.

Yet, a minority, visible among grassroots initiatives (communities, collectives, associations, and other projects) have a more comprehensive and provocative vision of 'diversity'. They are committed to changing the masculinist image of computing and work to bring diversity in IT, understanding it as complex, anti-essentialist and/or non-normative identities, see Vitores & Gil-Juárez, 2016; Sey & Hafkin, 2019; Abbate, 2021.

Diversity Initiatives

There is much interest in bridging the 'digital gender divide' in the technology industry. First, because of the ethical imperatives of fairness and equality, and second, because of the 'business case for diversity' which argues that the presence of women and other minorities in the IT labour market provides economic benefits to companies and members of these groups themselves. But women are still a minority in the IT labour market, where proprietary software is predominant, see WB, 2016; Sey & Hafkin, 2019. This is also true for Free, Libre and Open Source Software (FLOSS) communities, see Arjona-Reina et al., 2014. These groups are peer-production spaces, whose members work collaboratively to create, run, study, modify, improve and (re)distribute source code, which distinguishes FLOS software from proprietary software.

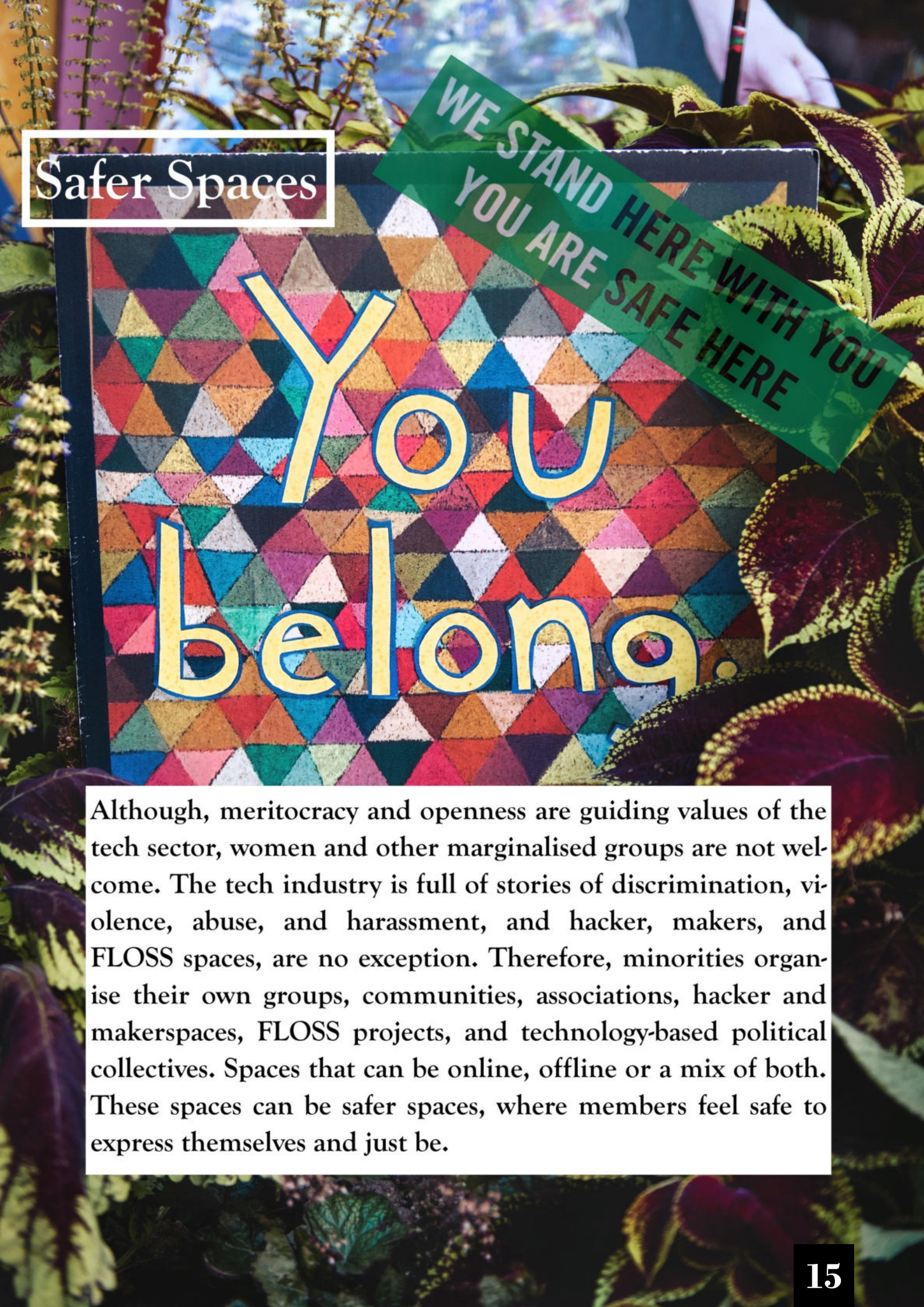
To increase the number of women and minority groups in tech (proprietary and FLOSS), different initiatives are continuously emerging, both self-organised and within the already existing communities.



Examples of such initiatives include, Code of Conducts (CoC), workshops, panels and/or conferences exclusively for women and underrepresented groups, women-led groups (LinuxChi, the women@apache group, Debian Women, PyLadies™, R-Ladies and many others), the Ada Initiative, the Outreachy programme or the Anita B.org Institute. Moreover, the Geek Feminism wiki, (trans) feminist hacker and makerspaces such as Mz* Baltazar's Laboratory or MariaLab, the Gender Changer Academy, the Eclectic Tech Carnival (/ETC), and the TransHackFeminist convergence, to name a few, go a step further, explicitly questioning power relations in terms of patriarchy and capitalism, and emphasising critical and alternative technology development processes for empowerment and emancipation, see Callahan et al., 2016; Dunbar-Hester, 2020; Toupin, 2021.

To varying degrees, these diversity initiatives denounce bias, discrimination and violence, and challenge openness and meritocracy —normative beliefs that are part of the ethos of technology— to foreground the privilege of those who participate in the tech sector, primarily white men, see SSL Nagbot, 2016; Dunbar-Hester, 2020.

Safer Spaces



Although, meritocracy and openness are guiding values of the tech sector, women and other marginalised groups are not welcome. The tech industry is full of stories of discrimination, violence, abuse, and harassment, and hacker, makers, and FLOSS spaces, are no exception. Therefore, minorities organise their own groups, communities, associations, hacker and makerspaces, FLOSS projects, and technology-based political collectives. Spaces that can be online, offline or a mix of both. These spaces can be safer spaces, where members feel safe to express themselves and just be.

Safer spaces stress that safety is not an outcome, but a process, which is why 'safer' is used instead of 'safe'. As a non-static notion, safer spaces are based on continuous and relational work, an ongoing negotiation and reflection on agreements and self-regulation. Therefore, creating a safer space can be seen from two different perspectives: *safety from* abuse, harassment, fear and oppression, and *safety to* express, engage in dialogue, challenge, disagree, learn, discover and fulfil one's potential, see Toupin, 2013; Lewis et al., 2015; Silvestrini & Ghattas, 2021.

In spaces that strive to avoid sexist, misogynistic, racist and ableist attitudes, harassment and abuse, members come together because they explicitly or implicitly share values, experiences, and/or a feeling of belonging, but not necessarily an identity. Protected by restricted access —as opposed to openness— and a commitment to trust, care, support, inclusivity, and intimacy, members can discuss their ideas and set up their own agenda, see Toupin, 2014; SSL Nagbot, 2016; Savic & Wuschitz, 2018; Martínez Pozo, 2019.

Care and Caring Spaces

Safer spaces have their own ways of caring, which continually change and adapt to the different needs, expectations, and experiences of its members as much as to the technology at hand, Silvestrini & Ghattas, 2021.

But care is not just a practice; it also is an ethico-political perspective. It considers some things and lives as well as social and/or political issues as deserving of its attachment and commitment and dismisses others. Therefore, care is also reflected in collaboration and accountability. Instead of supporting an 'ethos of competition', diversity initiatives emphasise group support, communication, cooperation and learning and doing together. By recognising that meritocracy is also associated with stereotypes and having the 'right' social connections, these spaces denounce the false belief and the double standards that minorities face in the tech world. At the same time these initiatives acknowledge that technology is not neutral. Learning and/or developing a technology is accompanied by a critical (and alternative) proposition: What is its purpose? Whose problem and benefit will it consider? See Abbate, 2021; Toupin, 2021.

Infrastructuring care

Diversity initiatives can be described as infrastructures of care. This stresses the relational aspect of these safer spaces. They can provide physical room or be an online community and yet offer a breadth of possibilities: access to a range of technologies and knowledge, a space to learn and hack or simply to gather, share and discuss, and a place to feel safe and give and receive affective support, see SSL Nagbot, 2016; Savic & Wuschitz, 2018. The practice of care is reflected in (re)creating these (new) initiatives that serve to marginalised communities and challenge privilege and power asymmetries in IT.

AnarchaServer

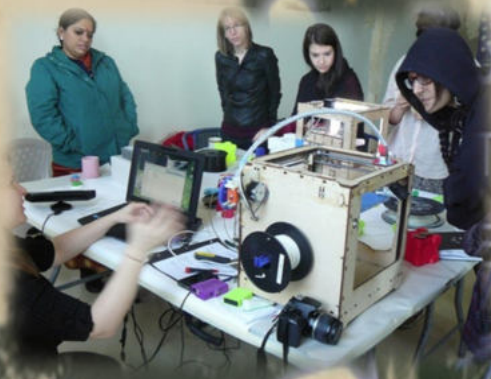
a feminist server / una servidora feminista

Building, developing, hacking, and repurposing infrastructures are also about alternative technological developments. Feminist servers, community or mesh networks, hacker and makerspaces, festivals and conferences address the need for other systems of values, resisting patriarchy, racism, sexism, ableism, and other forms of discrimination, and/or capitalism and its environmental consequences, see TacticalMedia, 2015.

REPOSITORY / LA REPO

COLLECTIVE MEMORIES : Collection of images, sounds and videos /

MEMORIAS COLECTIVAS : Colección imágenes, sonidos y videos

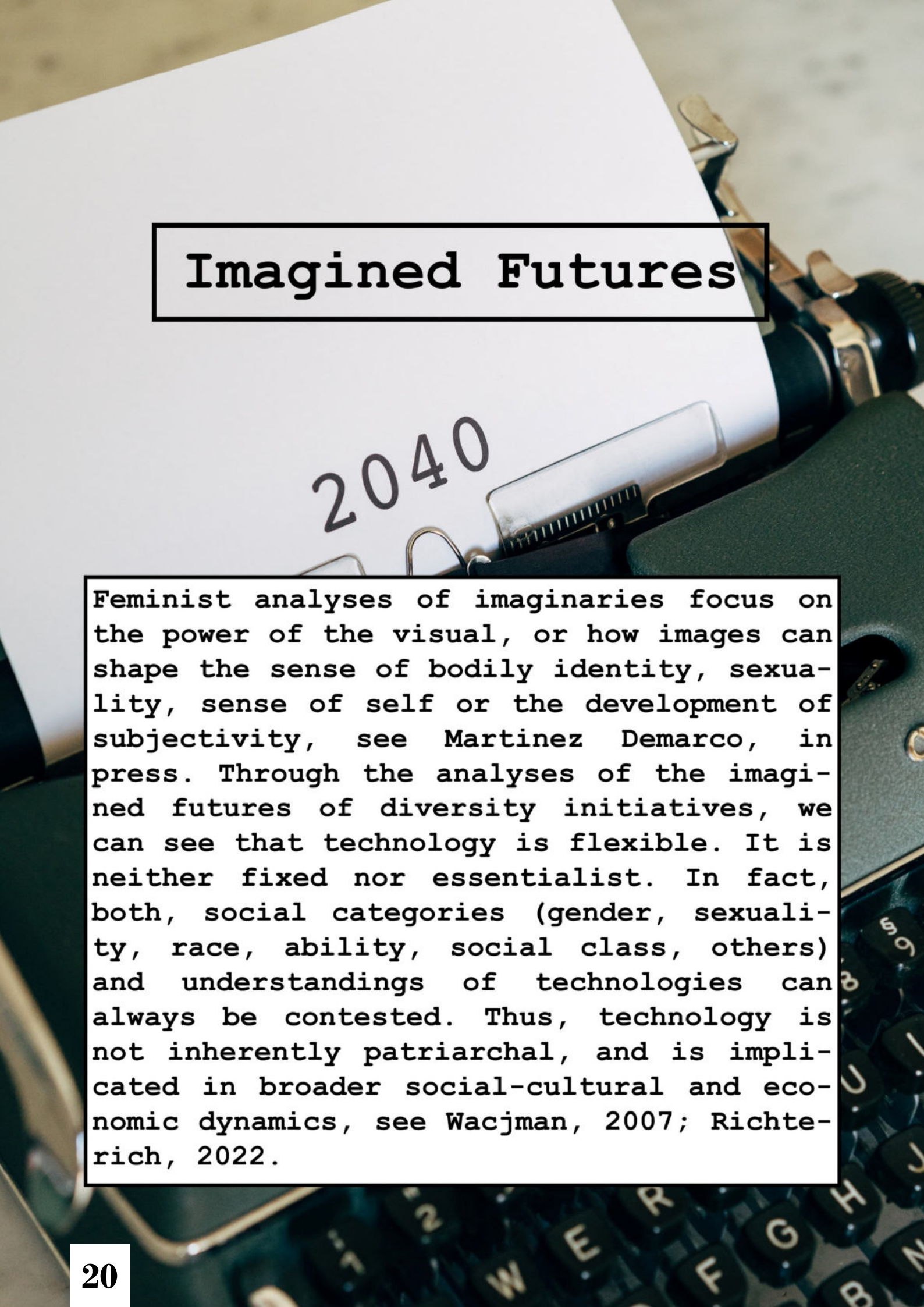


NAL / TRANSICIONAL

ENT : Temporal encrypted data transfers & surveys /

NTE : Servicios para transferir datos cifrados y encu

NEKROCEMETERY



Imagined Futures

Feminist analyses of imaginaries focus on the power of the visual, or how images can shape the sense of bodily identity, sexuality, sense of self or the development of subjectivity, see Martinez Demarco, in press. Through the analyses of the imagined futures of diversity initiatives, we can see that technology is flexible. It is neither fixed nor essentialist. In fact, both, social categories (gender, sexuality, race, ability, social class, others) and understandings of technologies can always be contested. Thus, technology is not inherently patriarchal, and is implicated in broader social-cultural and economic dynamics, see Wacjman, 2007; Richterich, 2022.

But no two visions of this feminist future are the same. Diversity initiatives draw on the local capacities and experiences of their members, are situated in specific socio-political-economic contexts and confront historically constructed unequal power and technological relations. Their efforts are aimed at empowerment through learning to code, developing software that meet their needs, deploying their own servers and community networks or recycling technology to reduce environmental damage. Based on common general visions, but situated and as such having unique practices, each community, project, space, group, or association develops its own feminist future. Solidarity connects them.


FIERD
CYBO
AN
DIO

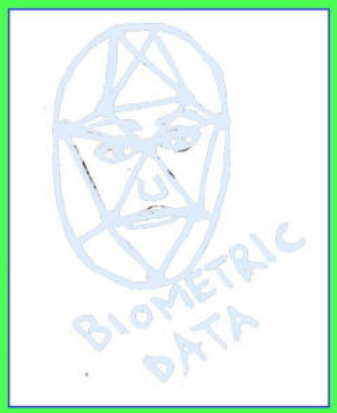
concepts embedded

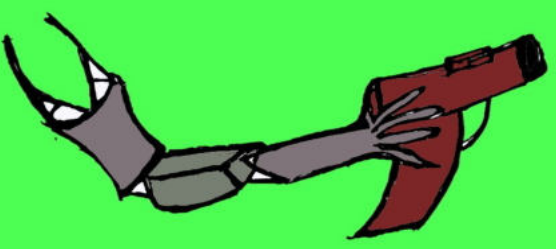
IN TECH

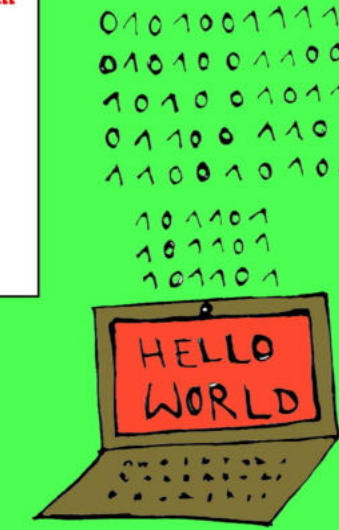
DIVERSITY CONCEPTS IN COMPUTER SCIENCE

+++

In Computer Science and Technology Development, designers increasingly leverage notions of diversity to better cater to the individual user. For example, when designers create personalized recommendations to incentivize a user to click on certain content or buy a specific item, they have so far relied heavily on the users' "implicit feedback." Such feedback is collected as users' clicks, (non)likes, shares, and mouse movement. Recently, designers started incorporating diversity metrics to better account for users' preferences. They model the user acording to demographics, personality, culture, and social practices. The problem is that these user models often consider user differences and possibly resulting preferences from an individual perspective. Structural societal factors such as social inequalities, poverty, discrimination, or underrepresentation are not taken into account, see Schelenz, 2022.

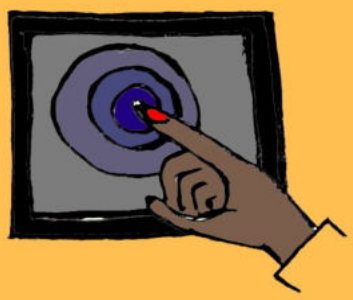


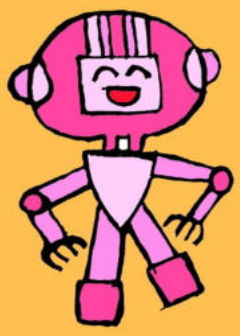




Designers work with so-called personas to envision the characteristics, preferences, and needs of their users. Unfortunately, superficial, binary, static, and stereotypical classifications are produced to describe users, see Wachter-Boettcher, 2017, p. 32.

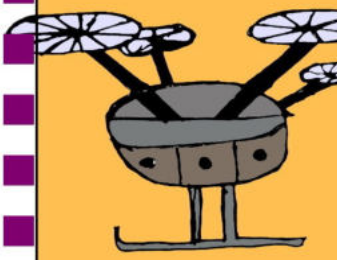
Rather than representing the actual experiences of privilege and oppression that users experience in society and in interaction with technology, designers look at the user as a person detached from their social environment.

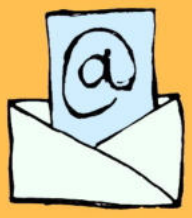


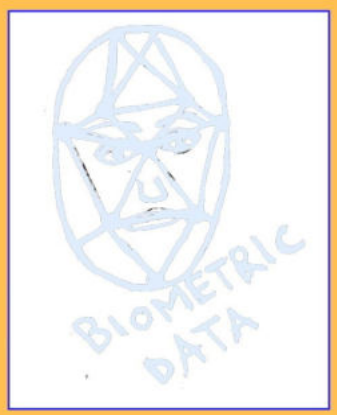


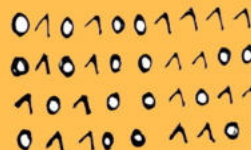
When we are talking about diversity-aware technology, we have to differentiate between designs that leverage diversity at the individual level and designs that leverage diversity at the structural level. An individual-level classification of users may improve designs to some extent (e.g. user satisfaction), but it does not ensure the redistribution of power that is required to achieve "real" diversity. Only when structural-level diversity such as a person's social status or positionality in society is considered, designers can anticipate how their designs relate to existing injustices.

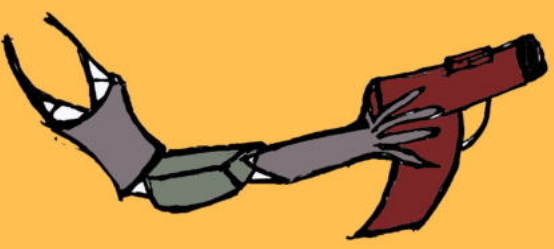
DESIGNERS can then take measures that mitigate potential discrimination through technology.

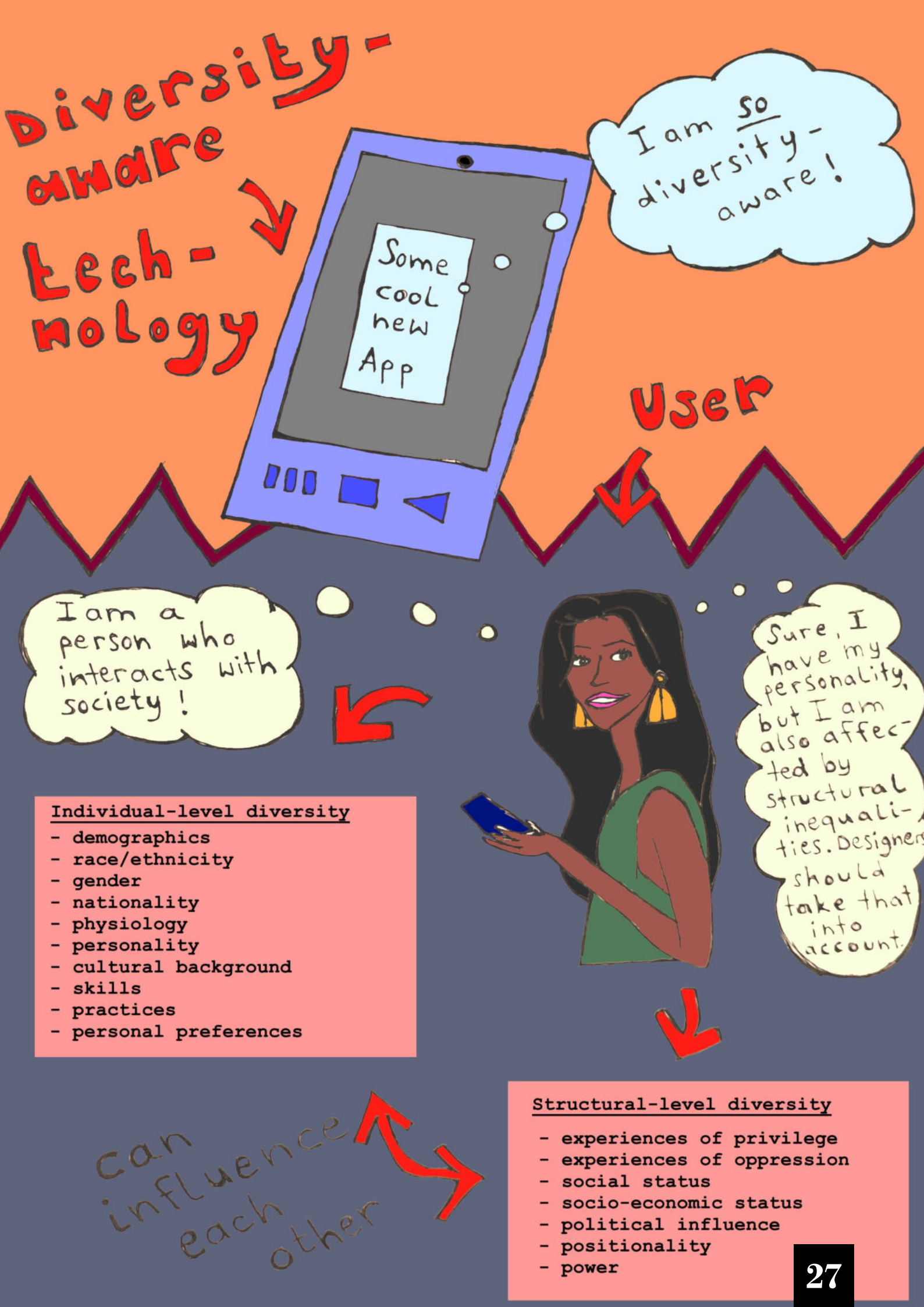











Diversity-aware tech-nology
Some cool new App
I am so diversity-aware!
User
I am a person who interacts with society!
Sure, I have my personality, but I am also affected by structural inequalities. Designers should take that into account.
Individual-level diversity
- demographics
- race/ethnicity
- gender
- nationality
- physiology
- personality
- cultural background
- skills
- practices
- personal preferences
can influence each other
Structural-level diversity
- experiences of privilege
- experiences of oppression
- social status
- socio-economic status
- political influence
- positionality
- power

Criteria

diversity

tech

1

Reflecting our own privileges as designers

If we – as designers – consider our own experiences of privilege (and oppression), we can be aware of bias and blind spots, and better respond to the shortcomings of our designs.

* see Erete et al., 2018

2

Mapping the experiences of technology stakeholders

If we – as designers – map the experiences of privilege and oppression of the envisioned beneficiaries, we can take into account their needs and preferences. The mapping can be done through interviews with beneficiaries or ethnographic research.

see Wong-Villacres et al., 2018

* Recommendation: Reflecting our own privileges as White people is important, whether we are working in technology development or not. A book by Layla F. Saad helps us: Me and White Supremacy.

for
-aware
nology

3

Contextualizing diversity categories

If we – as designers – work with superficial diversity categories like gender, age, personality, etc., we should contextualize them by reflecting on the power relations at play in these categories.

4

Enabling justice

Diversity-aware designs should enable just societal structures and support social justice. Inspiration is provided by Hyphen Labs, 2019.

5

Dismantling oppression

Diversity-aware designs should help to counter oppression and undo harmful power relations. Inspiration is provided by Benjamin, 2019.

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