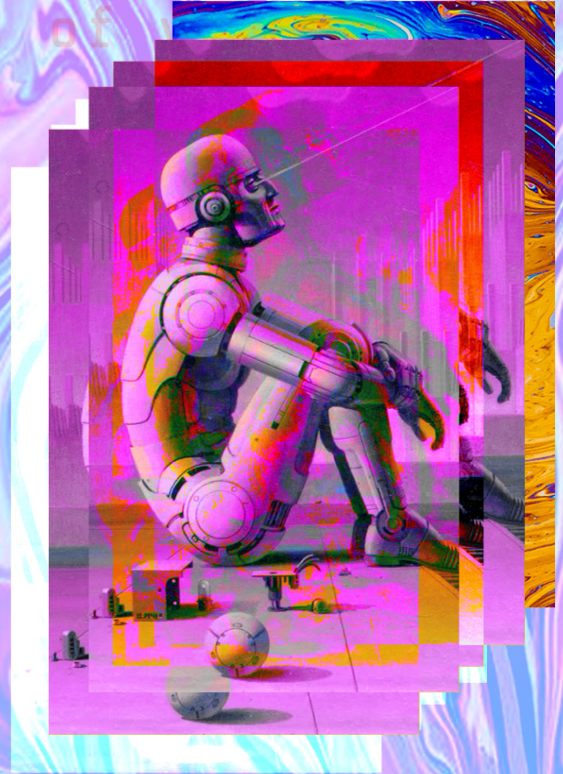


ALGORITHMS OF LATE-CAPITALISM
presents

[D/R]ECONSTRUCTING AI

dreams of visionary fiction
dreams of visionary fiction
dreams of visionary fiction
dreams of visionary fiction



ARS ELECTRONICA WORKSHOP
SEPT 2020

Content

- [3] Editorial
- [5] Initial Questions on AI & Discrimination
- [9] **Three cases of Machine Learning**
- [10] Case [1] AMS Service Austria ("Classification of unemployed people")
- [14] Case[2] Predicting a worker's mindset – with one click on their LinkedIn
- [18] Case [3] Jurisdictional risk assessment – Likely to re-offend?
- [23] **Dreams of Visionary Fiction**
- [24] Who Inspires Us?
- [26] How We Resist
- [28] Visionary Fiction 1
- [30] Manifesto Remix
- [32] Visionary Fiction 2
- [34] Visionary Fiction 3
- [36] Create your own Visionary Fiction
- [38] Bingo! Awkward Algorithms
- [39] Credits

Share · Distribute · Remix



Credits

Workshop and zine created by...

Nushin Isabelle Yazdani
<https://nushinyazdani.com/>

internet teapot
(Karla Zavala & Adriaan Odendaal)
<https://internetteapot.com>

Participants and zine contributions by...

Marie Dietze
Sophie Pigal
Waltraud Ernst
@malweene
Lisa, Bianca, Louis

Special thanks to...

Ars Electronica
Johannes Kepler University
Sandra Buchmüller for suggesting us for the workshop

BINGO! Awkward Algorithm

Drag a TOKEN to each 'awkward algorithm' you've encountered this week:



Endless Ads for a Product I've Already Bought 🤖	Recommendation Algorithm That Doesn't Know What I Want 🤖	Confused customer- service chatbot 🤖	Name is too short or too long for form
Promoted content that's eerily specific to a private conversation I had 🤖	Clearly Fake News	Camera Didn't Recognize My Face	Got caught in a Youtube recommendation rabbithole 🤖
I had to report a bot	Automated Rejection Letter	Automated Moderator Flagged my Content	One specific ad that is chasing me around the web 🤖
My Tinder date showing up in my friend recommendations 🤖	Watched one weird video, now Youtube thinks that's the only thing I ever want to see 🤖	Comic image recognition miss- labelling	Automated moderator deactivated my profile 🤖

[d/r]econstructing AI: dreams of visionary fiction

This zine is the result of a series of steps, instructions, and processes set out during an online workshop presented at the Ars Electronica festival 2020. It is, in a sense, the output of an algorithm. Yet, as in the cases of the algorithmic decision-making systems interrogated throughout this zine, the input processed as part of the workshop consisted of the thoughts, beliefs, perspectives, expertise, and experiences of the workshop participants themselves.

An interrogation of the non-technological structures behind

algorithmic decision-making systems that are so readily presented as neutrally non-human can be a powerful tool for imagining alternative futures and presents. The designs of these systems are normative rather than neutral and can consequently reproduce and reinforce structural discrimination in our society. Can we imagine radical design alternatives to create a more just and equitable digitally mediated world?



This special edition of *Algorithms of Late-Capitalism* was created by Nushin Isabelle Yazdani and internet teapot (Karla Zavala and Adriaan Odendaal) and the participants of the workshop:

[d/r]econstructing AI - dreams of visionary fiction and zine-making
How to Become a High-Tech-Anti-Discrimination Activist Collective

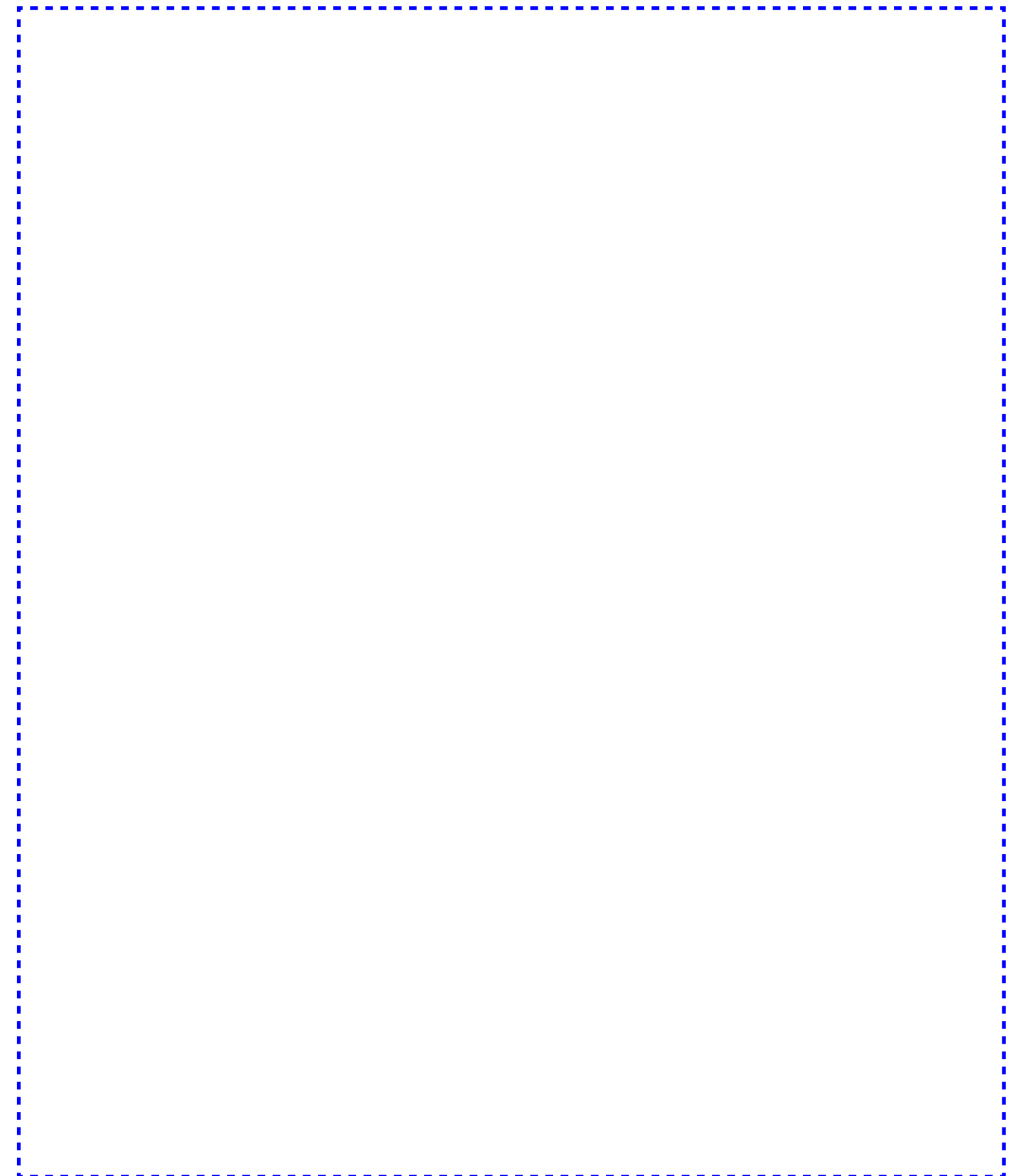
Kepler's Garden - Ars Electronica, September 2020

 **ARS ELECTRONICA**



How can we reinvent our technological futures?

1. Use one of the sentences on the previous page as your framing future scenario. What are the possible implications of this future?
2. Pick two of the values to help you create a re-imagined technological future.
3. Create a collage on this page to convey your new future vision.



Visionary Future

Sentences

"We have developed technology to digitally back-up our brains"

"Moods are controlled by brain stimulators embedded at birth"

"A corporation gets elected as president for the first time in history"

"Machines have attained equal legal status with humans"

"Most business transactions or information inquiries now involve dealing with a simulated person"

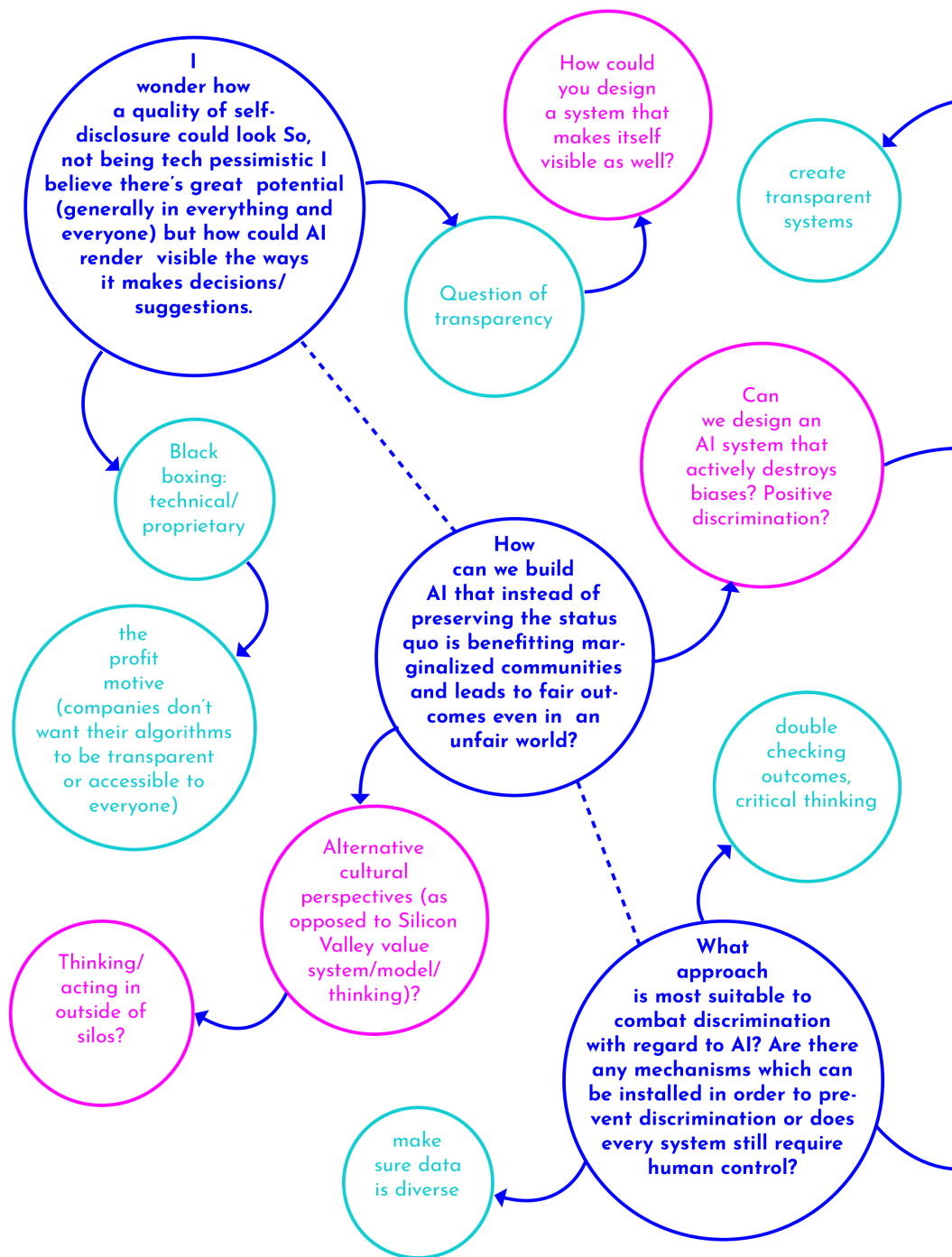
"High-resolution audio-visual cybersex has become the new sexual norm"

"All civil servants have been replaced by more efficient algorithms"

Values

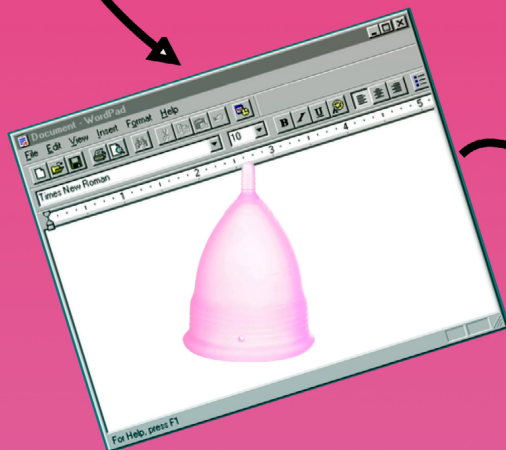


Initial Questions on AI & discrimination and further questions





ASK YOUR BIG BROT



"With a neural implant, anyone can wirelessly access the internet with their thoughts."



“technologies embody social relations (power). Through a design justice lens, we might say [that...] most of the time designers unintentionally reproduce the matrix of domination (white supremacist heteropatriarchy, capitalism, and settler colonialism).”

Sasha Costanza-Chock



Image: <https://twitter.com/schock>



"In the near future, all children are educated by robots..."

How can we reinvent our technological futures?

The
"view from nowhere" is
developed in Donna
Haraway's Situated Knowledges

<https://radicalai.net/principles>

We recognize that no one
has a 'view from nowhere'



Wir
wehren uns dagegen,
beobachtet, aufgenommen oder
erforscht zu werden. Wir sind nicht eure
Forschungsobjekte. Wir waren da, wir sind da
und wir werden immer da sein. Es gibt nichts zu
entdecken, nur zu lernen.

WATCH YOUR SILENCING GAZE!
http://www.wienwoche.org/de/1078/silencing_gaze

Three cases of Machine Learning

Unemployment
Recruiting
Jurisdictional Risk Assessment

Case [1]

AMS Service Austria ("Classification of unemployed people")

The Public Employment Service Austria has been planning to employ an algorithmic decision-making system from this year on (it's been delayed due to COVID).



The system is supposed to classify unemployed people into three groups: high, medium and low, according to their chances of being reintegrated into the labour market.

The group classified as "high" does not need much support, the middle group has good chances and receives a lot of support, e.g. further training. The third group is considered to be difficult to reintegrate and does not receive as much support. This group has a low score.

What reduces the score: being a woman, being over 50, not having an EU passport, compulsory childcare, few days of employment.

See more details here:
<https://paolalopez.eu>

```
BE_INT
= f( 0,10
  - 0,14 x GESCHLECHT_WEIBLICH
  - 0,13 x ALTERSGRUPPE_30_49
  - 0,70 x ALTERSGRUPPE_50_PLUS
  + 0,16 x STAATENGRUPPE_EU
  - 0,05 x STAATENGRUPPE_DRITT
  + 0,28 x AUSBILDUNG_LEHRE
  + 0,01 x AUSBILDUNG_MATURA_PLUS
  - 0,15 x BETREUUNGSPFLICHTIG
  - 0,34 x RGS_TYP_2
  - 0,18 x RGS_TYP_3
  - 0,83 x RGS_TYP_4
  - 0,82 x RGS_TYP_5
  - 0,67 x BEEINTRÄCHTIGT
  + 0,17 x BERUFSGRUPPE_PRODUKTION
  - 0,74 x BESCHÄFTIGUNGSTAGE_WENIG
  + 0,65 x FREQUENZ_GESCHÄFTSFALL_1
  + 1,19 x FREQUENZ_GESCHÄFTSFALL_2
  + 1,98 x FREQUENZ_GESCHÄFTSFALL_3_PLUS
  - 0,80 x GESCHÄFTSFALL_LANG
  - 0,57 x MN_TEILNAHME_1
  - 0,21 x MN_TEILNAHME_2
  - 0,43 x MN_TEILNAHME_3)
```

An excerpt from the AMS algorithm's documentation. (Src: Lopez, Paola - Reinforcing Intersectional Inequality via the AMS Algorithm in Austria / Holl, et. al, 2018, p. 11)

»Move at the speed of trust
Grow trust and move together with fluidity
at whatever speed is necessary.«
(The BlackSpace Manifesto)

If you want doctors to spend more time with their patients, is that really a question of automation? Or is the real question here if we should have a capitalist healthcare system that needs to generate income?

4 »We refuse the expansion of forms of data science that normalizes a condition of data extractivism and is defined primarily by the drive to monetize and hyper-individualize the human experience. We commit to centering creative and collective forms of life, living, and worldmaking that exceed the neoliberal logics and resist the market-driven forces to commodify human experience.«
(Data Manifest-No)

7 »Elevate emotion and embodiment«
(Principles of Data Feminism)

8 »We work towards non-exploitative solutions that reconnect us to the earth and to each other.«
(Design Justice Network Principle 9)

3a

»We refuse a data regime of ultimatums, coercive permissions, pervasive cookie collecting, and blocked access. Not everyone can safely refuse or opt out without consequence or further harm. We commit to "no" being a real option in all online interactions with data-driven products and platforms and to enacting a new type of data regime that knits the "no" into its fabric.«
(Data Manifest-No)

CHECK THESE OUT

The Design Justice Network Principles
The Feminist Data Manifest-No
Blackspace Manifesto
Critical Engineering Manifesto
Archimedean Oath
Programmer's Oath
Never Again
Radical AI Principles
The Xenofeminist Manifesto
Feminist Principles of the Internet
MIT Co-Creation Manifesto
Consentful Tech
Imagining a Universal Declaration of Digital Rights

MANIFESTO REMIX

1 »We use design to sustain, heal, and empower our communities, as well as to seek liberation from exploitative and oppressive systems.«
(Design Justice Network Principle 1)

What values are important to us?

Let's actually ask WHY this tool is to be created. Is it efficiency/money? Is that really the best reason to create something that can be so dangerous?

"Liberation of oppressive systems" is something that I haven't found in any corporate or government AI principles list, I wonder why.....

2 »We recognize that power is distributed unevenly, and People of Color, Black, Indigenous, Womxn, Queer, Gender Non-Conforming, Poor, Disabled, and other communities are pushed to the margins. We commit to resisting these interlocking systems of oppression, including Racism, Coloniality, Casteism, Heteropatriarchy, Capitalism, and Ableism. We commit to striving toward collective liberation.«
(Radical AI Principles)

Let's imagine together what that collective liberation looks like, and also look what has already been imagined before us

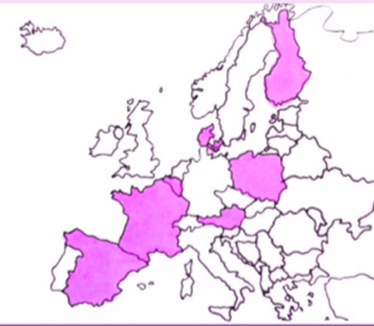
3 There has to be the option of actually also creating NO machine learning tool - and this is to be decided by the people you could be harmed most by the tool.

"We center the voices of those who are directly impacted by the outcomes of the design process."
(Design Justice Network Principle 2)

6 »Before seeking new design solutions, we look for what is already working at the community level. We honor and uplift traditional, indigenous, and local knowledge and practices.«
(Design Justice Network Principle 10)

5 »We refuse work about minoritized people. We commit to mobilizing data so that we are working with and for minoritized people in ways that are consensual, reciprocal, and that understand data as always co-constituted.«
(Data Manifest-No)

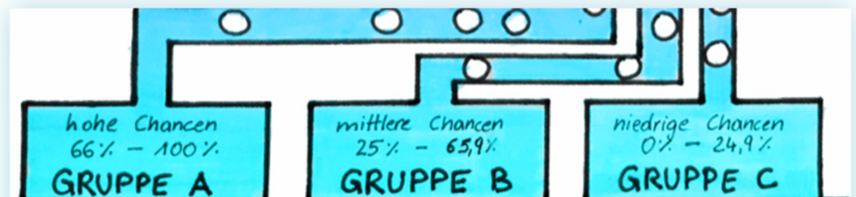
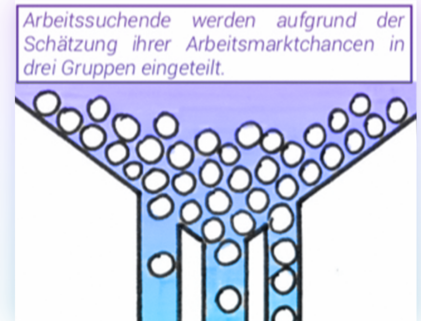
To have 1 (or more) "user interviews" is not sufficient. Who is deciding? Who is creating? Who is earning?



In vielen europäischen Ländern wurden in den letzten Jahren immer mehr Algorithmen eingesetzt, um Erwerbslosigkeit zu organisieren. Diese Algorithmen übernehmen unterschiedliche Aufgaben: Zum Beispiel analysieren sie das Online-Verhalten bei der Arbeitssuche, ordnen Stellenangebote, Interviews und Schulungen zu, sollen Arbeitssuchende mit Firmen die Arbeiter*innen suchen passend zusammenbringen. Mitunter entscheiden Algorithmen sogar über Arbeitslosenhilfe und Unterstützungsleistungen.



So wird zum Beispiel in Österreich, seit Januar 2020, vom Arbeitsmarktservice (AMS) ein Algorithmus eingesetzt, der die Chancen auf dem Arbeitsmarkt vorhersagen soll.

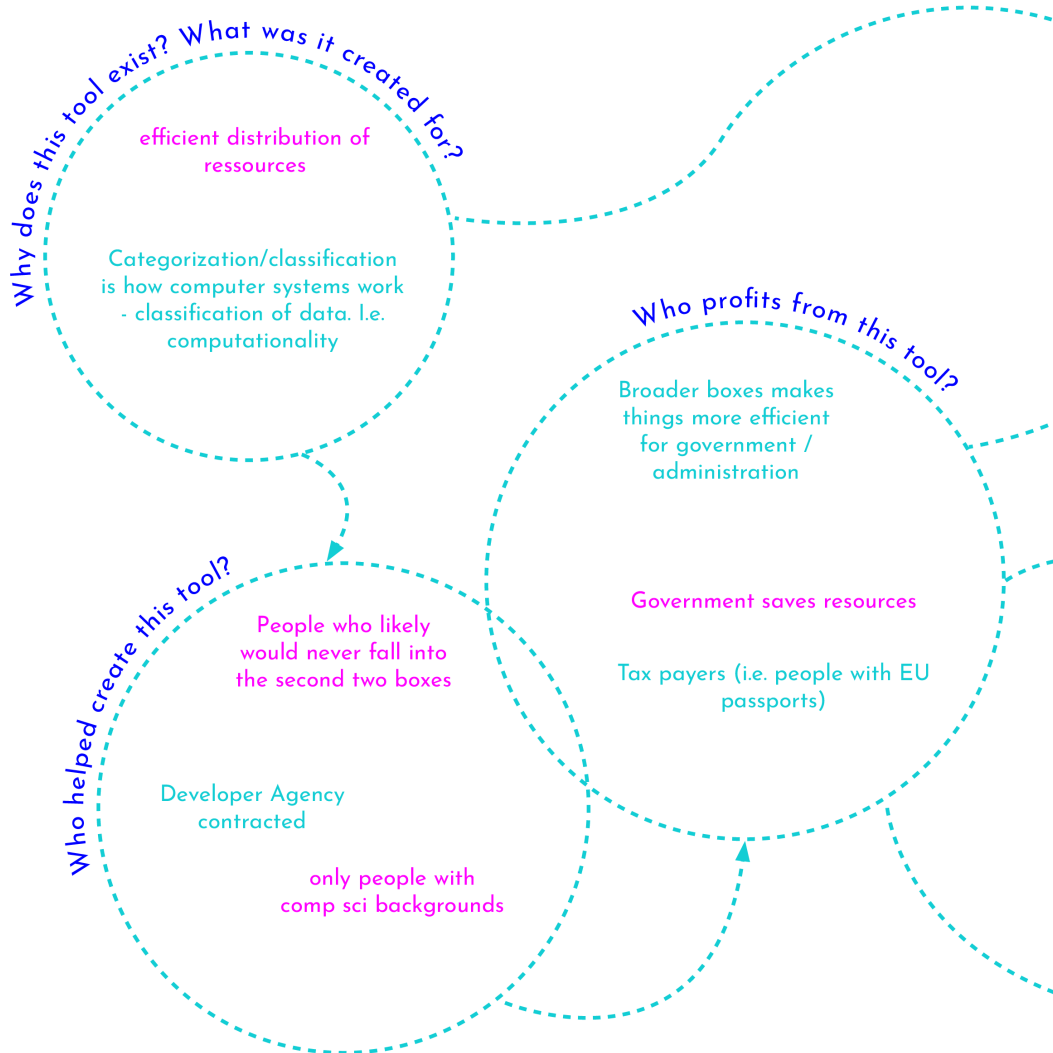


Jeder Gruppe stehen unterschiedliche Unterstützungsleistungen zur Verfügung. Gruppe A bekommt weniger Unterstützung, weil davon ausgegangen wird, dass sie leicht eine Arbeit finden. Der Hauptfokus des AMS liegt auf der Gruppe B, die die meisten Unterstützungsleistungen vom AMS bekommt. Gruppe C wird aus den AMS internen Ressourcen ausgeschlossen. Diese Personen bekommen, dann wesentlich weniger Unterstützung, zumindest keine vom AMS, sondern werden an eine andere Institution ausgelagert.

Excerpt from the AMS comic by Anna Kraher, created during the "Data Justice" class by Nushin Yazdani and Jasmin Grimm at Humboldt University, 2020.

Case[1]

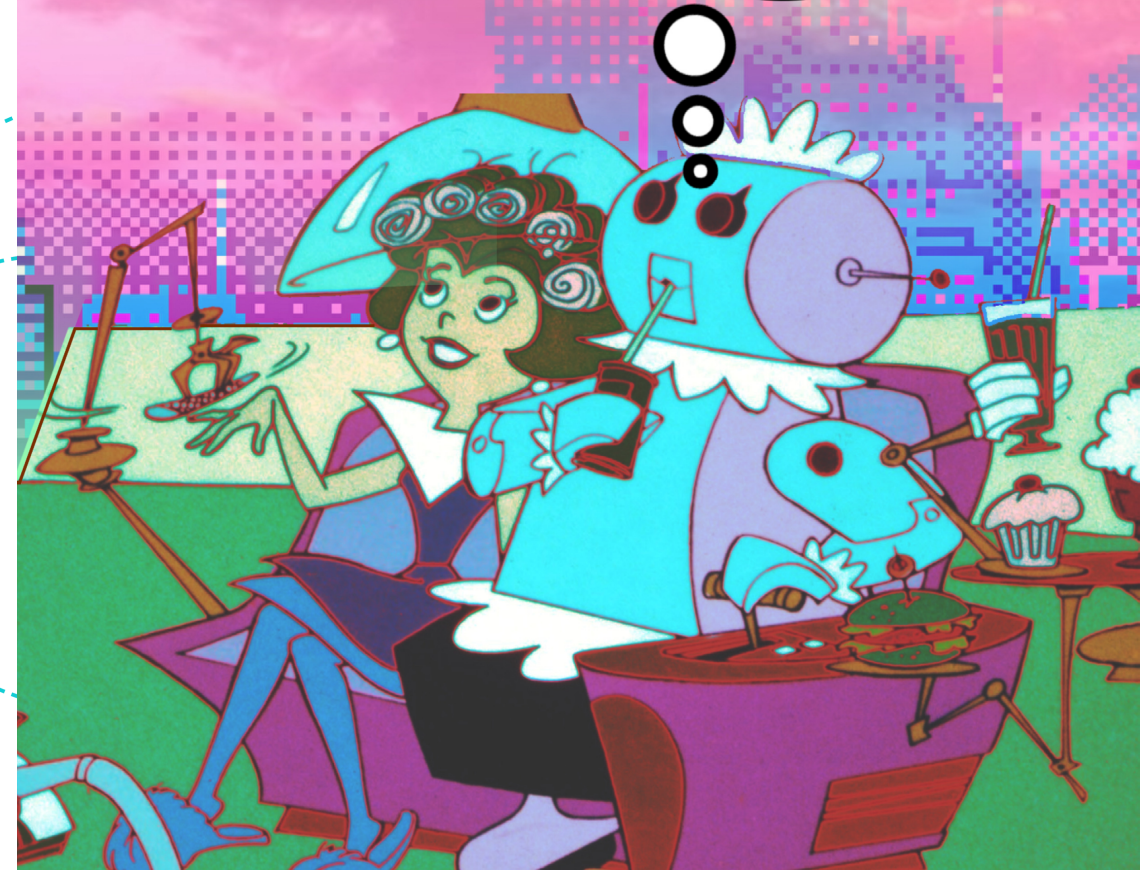
AMS Service Austria ("Classification of unemployed people")



This method is inspired by the Design Justice Network, the Stop LAPD Spying Coalition and Free Radicals, by Patricia Hill Collins and Kimberlé Crenshaw

man beings
doing the

ecisions as if
amazon

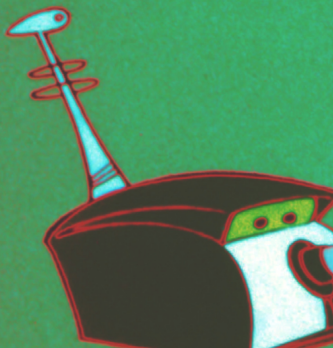


"You live in a world where humans and robots work side-by-side, jobs they <3"

Robots don't have to make important socio-cultural decisions, they are humans / humans don't have to work in the Amazon warehouse like they are robots

"Technology should not aim to replace humans, rather amplify human capabilities."

– Doug Engelbart



In what ways does this tool do harm?

Acceleration of inequality!
("reproduction and reinforcement of inequality")

quick fix solutionism

people who need the most help don't get it: In the long run it doesn't solve the problem they are trying to solve, as they would just create more poverty and people who need state support

Who is harmed by this tool?

people that are being constrained already

people with children, lots of household tasks might not be able to attend all meetings (teilnahme)

people not fitting the efficient normative system

How does racism, sexism, classism, ableism, homophobia, transphobia... ON THE INSTITUTIONAL LEVEL play a part in this?

ableism (I guess "beeinträchtigt" = disabled which alone is problematic enough) - people with disabilities might need more support at the workplace (because workplaces often aren't built with accessibility in mind) - again, saving money and being efficient

Definitely xenophobia- Immigrants and refugees probably more often than not end up in the last category

If women get discriminated on, can we assume that also anyone who is explicitly not male?

How does racism, sexism, classism, ableism, homophobia, transphobia... ON THE SOCIETAL LEVEL play a part in this?

Case[2]

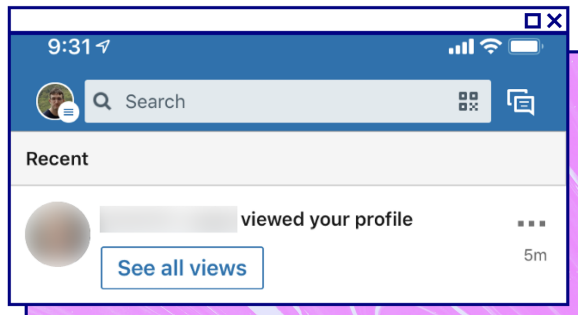
Predicting a worker's mindset – with one click on their LinkedIn

The Berlin start up bunch.ai promised to assess people based on their LinkedIn profile – with only 1 click.

“Meet Emma, an A.I. that’s able to predict a person’s mindset, motivations, and working style based on 100 indicators in their public



profile. Emma combines information like past employers and roles with more subtle indicators like the language candidates use to describe their work, the posts they share publicly, and the way colleagues talk about them.



The result? A more holistic picture of a person’s priorities – and potential fit for the role – with 1 click.”

Status Quo: LinkedIn asked Bunch.ai to make several changes to their software, and Bunch.ai had to abandon their service – for good? Who knows.

See more details here: <https://bunch.ai/blog/meet-emma-ai/>



HOW WE RESIST

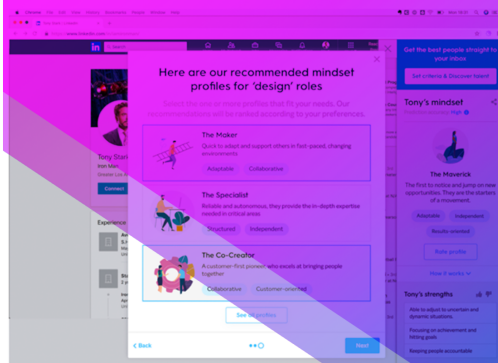
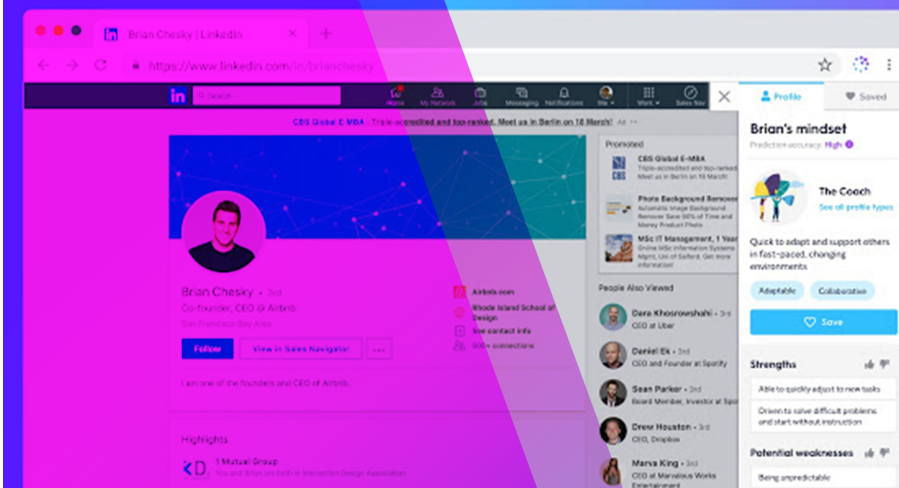
We aren't powerless subjects of technology as in dystopian science-fiction. We can resist, remake, and reclaim our technological futures.

Sources of Resistance:

Appropriation
Artistic intervention
Boycotts
Civil disobedience
Counter-culture
Decolonialization
Design Justice
Détournement
Feminism
Hacktivism
Indigenous knowledge
Innovation
Ludditism
Public mobilization
Revolution
Reform
Social activism
Tactical Media



Get to know anyone with just one click



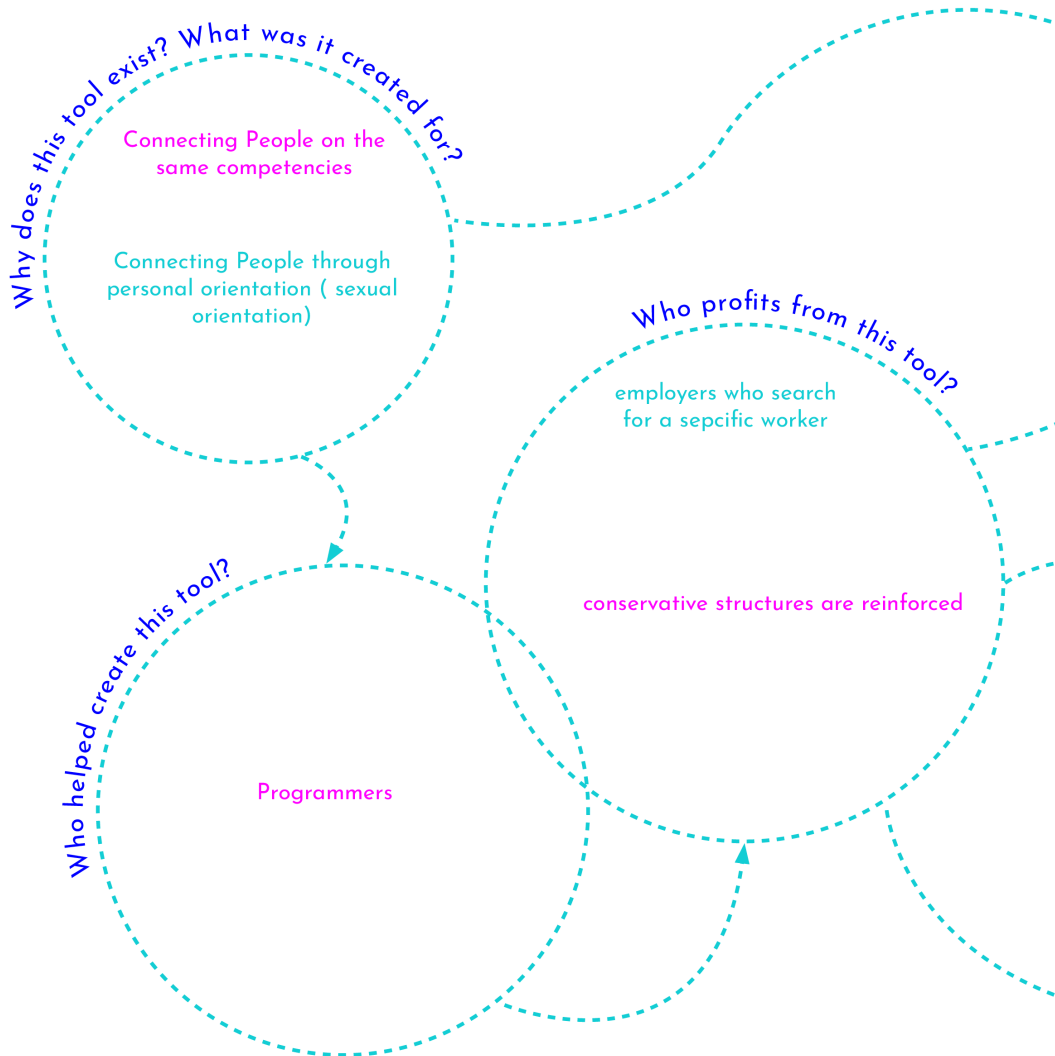
Find people with the right attitude

Based on your settings we will recommend you mindsets of people that are likely to thrive in your open position. However, you're always free to choose a mindset on your own.

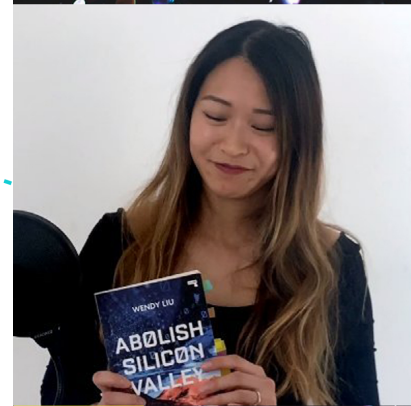
After you set your preferences and desired mindset we will find the best matching people and rank them accordingly.

Case[2]

Predicting a worker's mindset – with one click on their LinkedIn



Who are the artists, academics, critics, thinkers, thinkers, technologists who we need to look to in order to understand our technological presents and change our technological futures?



WENDY LIU

P
R
O
F
I
T

The problem of Silicon Valley is its relationship with capital. It's the profit motive. It's the fact that a very small minority of people control the industry.

PRATYUSHA KALLURI

P
O
W
E
R

Don't ask if artificial intelligence is good or fair, ask how it shifts power.



MUTALE NKONDE

AI FOR THE PEOPLE

P
U
B
L
I
C

In order to create a truly equitable future, public interest technologists should be critical of the asymmetrical power systems that lead to the weaponization of technological systems against vulnerable communities.

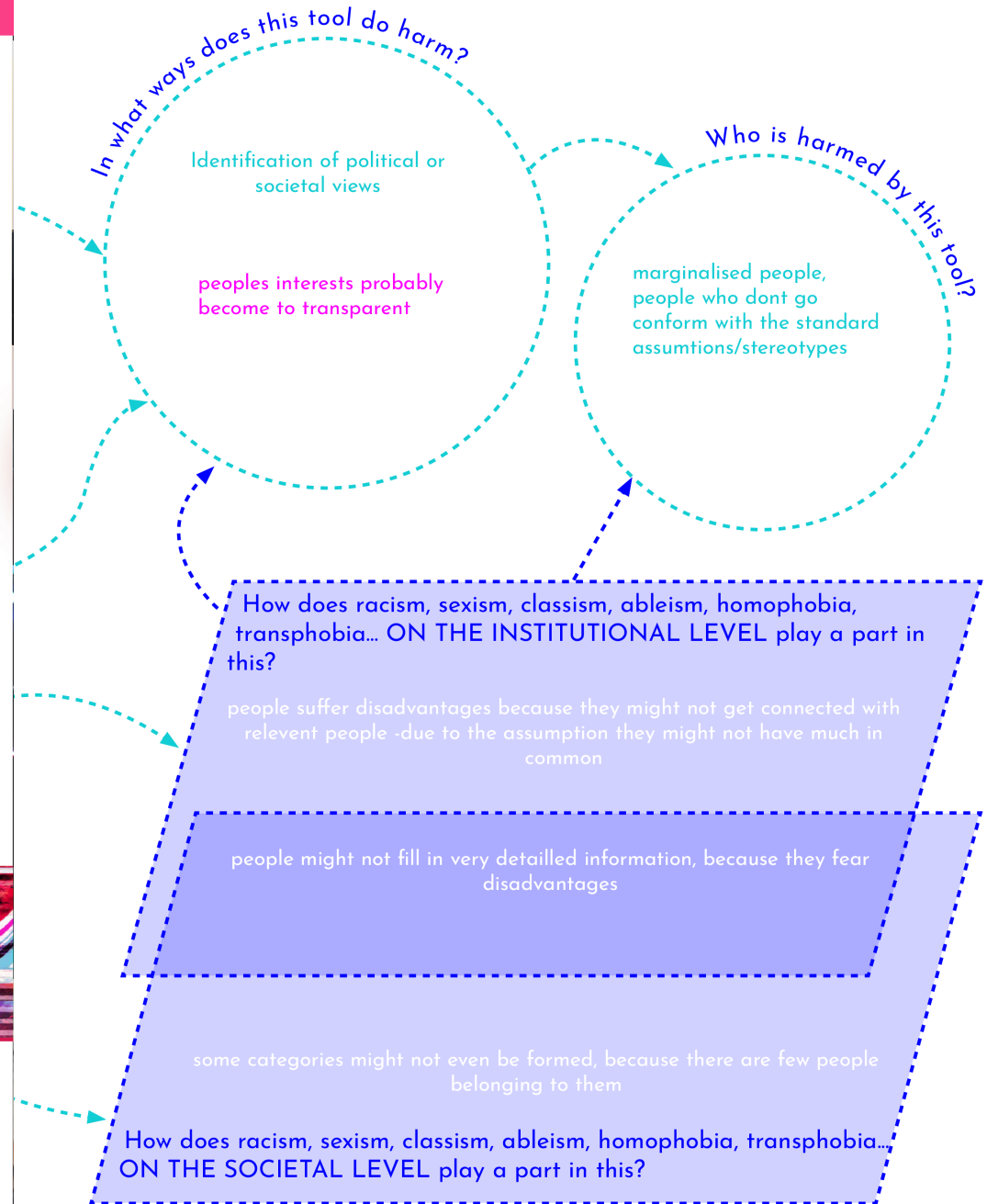


Who Inspires Us?



Chela Sandoval wrote a book "Methodology of the oppressed" where she explains how we all can learn from theories and strategies developed by academics and activists what she calls "US third world feminism". The point is that we can use technologies and deconstruct them and resignify them and do meta-ideologizing by redefining their use along an orientation that she calls democratics. At one point she quotes **María Lugones** who said that love is a requisite for anti-racist feminism. Also **Audre Lorde** says that mutual love is a potential to overcome hierarchies.

Now there is the musician **Björk** who has made a great song "all is full of love" with a very great video showing two robots in really erotic loving interactions. For one time these robots are not fighting machines or machines for profit maximation but for inspiring loving interaction on a quite non hierarchical plane. Computer science classes and video games might inspire more for such loving interaction, if social meanings and ethical values are discussed.



Case[3]

Jurisdictional risk assessment - Likely to re-offend?

The jurisdiction in many of the US states relies on algorithms to support decisions during every stage of the criminal justice system. These risk assessment tools are used to predict a defendant's likelihood to reoffend. The resulting score from low to high risk effects decisions regarding probations, bond amounts and even the length of jail time in criminal sentencing.

In 2016, the US nonprofit newsroom ProPublica assessed one of the most widely used commercial risk assessment tools, called COMPAS (developed by the forprofit company Northpointe, now Equivant).

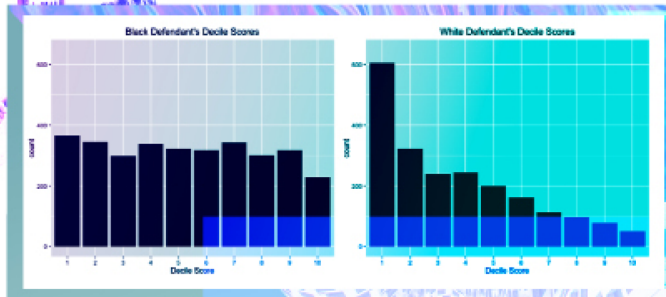
ProPublica found that Black defendants were more likely to be misclassified as higher risk while white defendants were more often misclassified as low risk. Black folks were

inaccurately identified as future criminals at almost twice the rate as white defendants.

When comparing the "Risk of Violent Recidivism" scores to the actual recidivism rates of defendants, they found the prognoses to be "remarkably unreliable" - only 20% of the people predicted to commit violent crimes actually did.

How does COMPAS work? An important part of it is a questionnaire consisting of 137 questions that are either answered by the defendant or drawn from their criminal record. The questions are not only directly related to risk but also comprise the topics "criminal personality," "social isolation," "substance abuse" and "residence/stability," where defendants are each ranked low, medium or high risk.

"These histograms show that scores for white defendants were skewed toward lower-risk categories, while black defendants were evenly distributed across scores." (Src: ProPublica)



Dreams of Visionary Fiction

Redefine
Remix
Reimagine

“We have the gift and the responsibility to imagine. And yes, this is a dark age. And a darkness such as this is the perfect setting for our dreams. Visionary fiction is a way to shape dreams of justice - to understand that art is not neutral, that what we dream and create is a practice ground for the futures we need”

adrienne maree brown



“Race” is not one of the categories. Instead, questions such as “Was one of your parents ever sent to jail or prison?”, “How many of your friends/acquaintances are taking drugs illegally?”, “How often do you have contact with your family?”, “How often have you moved in the last twelve months?”, “Do you have an alias (do you sometimes call yourself by another name)?”, “How many times did you skip classes while in school?”, “How often did you get in fights while at school?” and “How hard is it for you to find a job above minimum wage compared to others?” are asked.

An interesting factor is the change of use: COMPAS was originally developed to provide judges with an understanding of

the defendant’s rehabilitation needs. For instance, it should help them decide on how much mental health counseling they have to offer if the defendant is put on probation - or if it is likely that they are “unsuitable” for treatment.

Question to think about: How likely is it for the judge to decide against the recommendation of the tool?

See more details here: <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing>

<https://www.propublica.org/article/how-we-analyzed-the-compas-recidivism-algorithm>

The screenshot displays the COMPAS Assessment Bar Chart and Questionnaire. The bar chart shows scores for various risk factors, and the questionnaire lists questions about the defendant's background and behavior.

COMPAS Assessment Bar Chart:

Risk Factor	Score
Unstable Residence	10
Unstable Employment	10
Unstable Family	10
Unstable Financial	10
Unstable Social	10
Unstable Health	10
Unstable Education	10
Unstable Employment	10
Unstable Family	10
Unstable Financial	10
Unstable Social	10
Unstable Health	10
Unstable Education	10

COMPAS Questionnaire:

68. Do any of the people in your neighborhood feel they need to carry a weapon for protection?
☐ No ☒ Yes

69. Is it easy to get drugs in your neighborhood?
☒ Yes ☐ No

70. Are there gangs in your neighborhood?
☐ No ☒ Yes

Education

71. Think of your school experiences when you were growing up.
 Did you complete your high school diploma or GED?
☒ Yes ☐ No

72. What was your final grade completed in school?
☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ Did not attend

73. How many times did you skip classes while in school?
☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ More than 12

74. Have you ever been suspended or expelled from school?
☐ No ☒ Yes

75. Did you ever repeat a grade level?
☒ Yes ☐ No

76. How often did you have conflicts with teachers at school?
☐ Never ☐ Sometimes ☐ Often

77. How many times did you play classes while in school?
☐ Never ☐ Sometimes ☐ Often

78. How strongly do you agree or disagree with the following: I always behaved myself in school?
☐ Strongly disagree ☐ Disagree ☐ Not sure ☐ Agree ☐ Strongly Agree

79. How often did you get in fights while at school?
☐ Never ☐ Sometimes ☐ Often

Work

80. Think of your past work experiences, job experiences, and financial situation.
 Do you have a job?
☒ Yes ☐ No

81. How often have you been laid off or fired from a job?
☐ Never ☐ Sometimes ☐ Often

82. Do you have a skill, trade or profession at which you usually find work?
☒ Yes ☐ No

83. Do you work for an employer or school (if attending)?
☒ Yes ☐ No

84. Have you worked or been enrolled in school in the last 12 months?
☐ No ☐ 1-3 Months Part-time ☐ 4-6 Months Full-time ☐ 7-9 Months Full-time ☐ 10-12 Months Full-time ☐ More than 12 Months Full-time

85. Have you ever been fired from a job?
☐ No ☐ Yes

86. How many times have you been fired from a job?
☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ More than 12

Northpointe Suite’s COMPAS Assessment Bar Chart

Excerpt of the Questionnaire (Src: <https://assets.documentcloud.org/documents/2702103/SampleRisk-AssessmentCOMPAScore.pdf>)

Case[3]

Jurisdictional risk assessment - Likely to re-offend?

