

# INCLUSIVE DESIGN

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# DOES PARTICIPATORY DESIGN WORK?

- WHAT PERSPECTIVES WERE REPRESENTED AT YOUR TABLE?
- WHICH WERE MARGINALIZED?
- WHO SPOKE THE MOST?
- WHO SPOKE THE LEAST?
- WHOSE PERSPECTIVE WAS MOST REPRESENTED BY YOUR SUMMARY?
- WHOSE PERSPECTIVE WAS LEAST REPRESENTED?
- WHAT WERE POINTS OF DISAGREEMENTS? HOW DID YOU RESOLVE THEM?
- DID YOU FEEL COMFORTABLE TO SPEAK AND DISAGREE?
- DO YOU THINK OTHER PEOPLE FELT COMFORTABLE SPEAKING & DISAGREEING? DID YOU CHECK?
- DID YOU UNDERSTAND OTHER PEOPLE'S PERSPECTIVES? DID YOU CHECK?

## READING LIST:

1. Angwin, Julia, et al., Machine Bias: There's software used across the country to predict future criminals. And it's biased against blacks, *ProPublica* (2016)
2. Barabas, Chelsea. "Beyond Bias: Re-Imagining the Terms of 'Ethical AI' in Criminal Law." *Chelsea Barabas, Beyond Bias: Re-imagining the Terms of "Ethical AI" in Criminal Law* 12 (2019).
3. Benjamin, Ruha. "Race after technology: Abolitionist tools for the new jim code." *Social Forces* (2019).
4. Black, Emily, and Michael A. Madaio. "A Call for Universities to Develop Requirements for Community Engagement in AI Research."
5. Brown, Anna, et al. "Toward algorithmic accountability in public services: A qualitative study of affected community perspectives on algorithmic decision-making in child welfare services." *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. 2019.
6. Criado-Perez, Caroline. *Invisible Women: Data Bias in a World Designed for Men*. New York: Abrams Press, 2019.
7. Hill, Kashmir. Wrongfully Accused by an Algorithm, *The New York Times* (2020)
8. Katell, Michael, et al. "Toward situated interventions for algorithmic equity: lessons from the field." *Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency*. 2020.
9. Lohr, Steve. Facial Recognition Is Accurate, if You're a White Guy, *The New York Times* (2018).
10. McCradden, Melissa D., et al. "Ethical limitations of algorithmic fairness solutions in health care machine learning." *The Lancet Digital Health* 2.5 (2020): e221-e223.
11. Obermeyer, Ziad, et al. "Dissecting racial bias in an algorithm used to manage the health of populations." *Science* 366.6464 (2019): 447-453.
12. Sloane, Mona, et al. "Participation is not a Design Fix for Machine Learning." *arXiv preprint arXiv:2007.02423* (2020).
13. "Predictive Policing Algorithms Are Racist. They Need to Be Dismantled." MIT Technology Review. 2020.
14. Green, Ben. "Data science as political action: grounding data science in a politics of justice." Available at SSRN 3658431 (2020).
15. Chen, Irene, Fredrik D. Johansson, and David Sontag. "Why is my classifier discriminatory?." *Advances in Neural Information Processing Systems*. 2018.

## PROBLEM: WE HAVE DESIGN BLINDSPOTS

- PERSPECTIVE GAP
- DATA GAP
- NEGLECT OF THE SOCIAL SYSTEM

## SOLUTION: PARTICIPATORY DESIGN

- DIVERSIFY THE DECISION MAKING SPACE
- BUILT ON LIVE-EXPERIENCE

## PROBLEM: THERE ARE BARRIERS TO PARTICIPATION!

• YOU DON'T EVEN KNOW WHO TO TALK TO!

"VISIBLE VS INVISIBLE AXES OF MARGINALIZATION"

↳ "GENDER PRESENTATION U.S. GENDER IDENTITY"

- PEOPLE DON'T FEEL COMFORTABLE PARTICIPATING
  - "MICRO-AGGRESSION"
    - ↳ "GATE-KEEPING"
    - ↳ "STEREOTYPE THREAT/LIFT"
  - "INSIDE JOKES"
  - "JARGON"
  - "EXCLUSIVE VALUE SIGNALING"
  - "STANDARDS"
- IT TAKES A LOT OF WORK TO PARTICIPATE!
  - "INVISIBLE LABOUR"
    - ↳ EMOTIONAL, TIME, UNPAID, UNRECOGNIZED
- BECAUSE YOU'RE HARD TO TALK TO!
  - "PRIVILEGE HAZARD" → "SUCCESS HAZARD"
  - "SURVIVOR HAZARD"



# SOLUTION: ACTIVELY DISMANTLE BARRIERS!

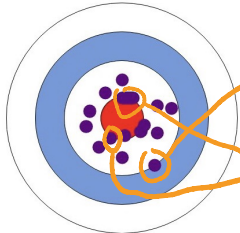
→ APPLY THEORETICAL FRAMEWORK

1. RECOGNIZE & UNDERSTAND
2. INTERVENE → IDENTIFY: • INSTITUTIONAL • PERSONAL
3. BE PREPARED TO BE WRONG!

## ① RECOGNIZE & UNDERSTAND

EX: BIAS VS VARIANCE

PERSON A



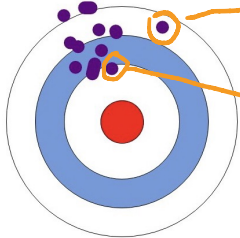
"I'VE ALSO HAD BAD DAYS / SET-BACKS / STRUGGLES"

"WHEN I WORK HARD GOOD THINGS HAPPEN TO ME"

"MY ADVERSITY MADE ME STRONGER"

}  $E[\text{OUTCOME}(\text{EFFORT})]$   
interactions  
=  $\text{OUTCOME}(\text{EFFORT})$

PERSON B



"MAYBE YOU HAD A BAD DAY"

"MAYBE THAT PERSON WHO MISTREATED YOU WAS HAVING A BAD DAY"

"MAYBE IT'S JUST ONE BAD APPLE"

}  $E[\text{OUTCOME}(\text{EFFORT})]$   
interactions  
 $\neq \text{OUTCOME}(\text{EFFORT})$

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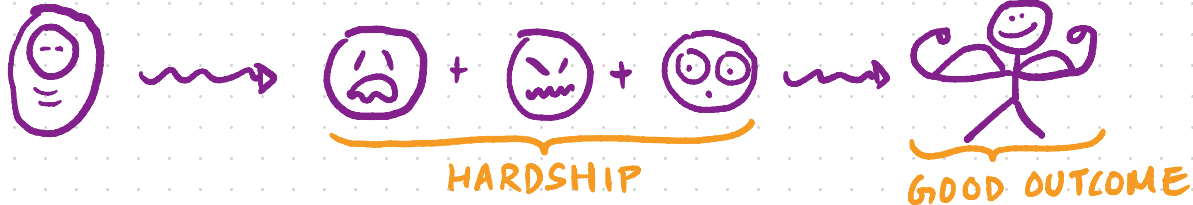
3. BE PREPARED TO BE WRONG!

→ IDENTIFY:  
• INSTITUTIONAL  
• PERSONAL

### ① RECOGNIZE & UNDERSTAND

EX: TELEOLOGICAL & MODAL SCOPE FALLACIES

"IT HAPPENED SO IT MUST HAVE HAD TO HAPPEN"



TELEOLOGICAL: "BECAUSE A HAPPENED THEN B HAPPENED, THEREFORE A CAUSED B"

MODAL SCOPE: "BECAUSE A, B RESULTS IN C, THEREFORE A AND B ARE NECESSARY FOR C"

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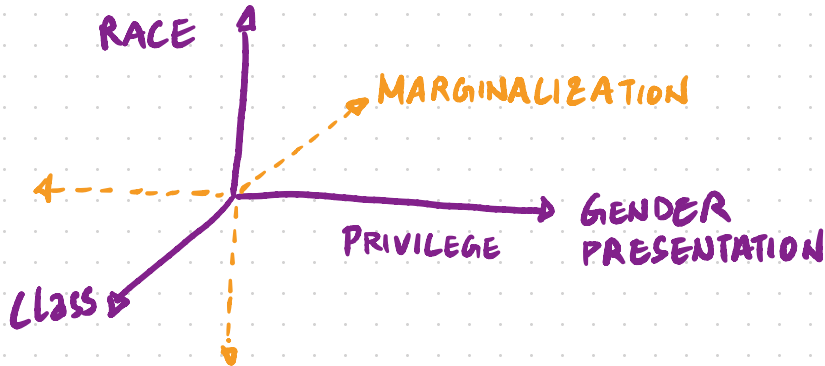
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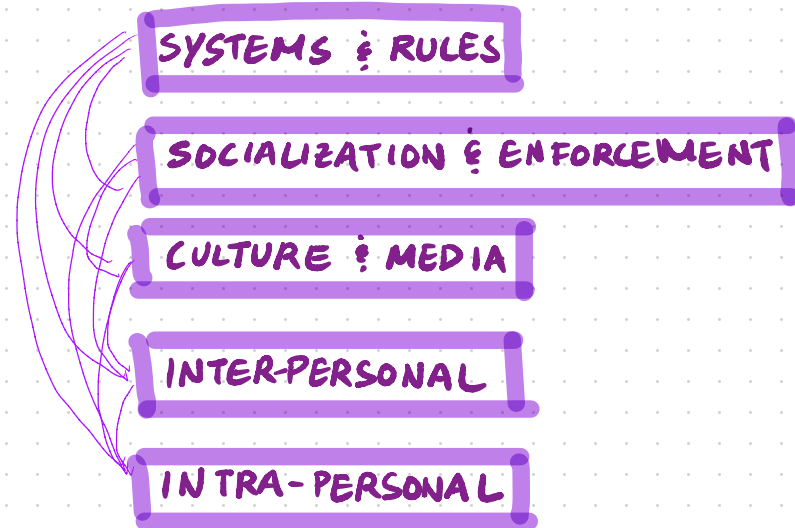
## ① RECOGNIZE & UNDERSTAND

EX: INTERSECTIONALITY

"EACH EXPERIENCE OF EACH PERSON IS A (NON)LINEAR COMBO OF IDENTITIES (BASIS ELEMENTS)"



EX: MATRIX OF DOMINATION



THIS IS A COMPLETE GRAPH!