

The Data Bias



Michaël Pilaeten



BIAS

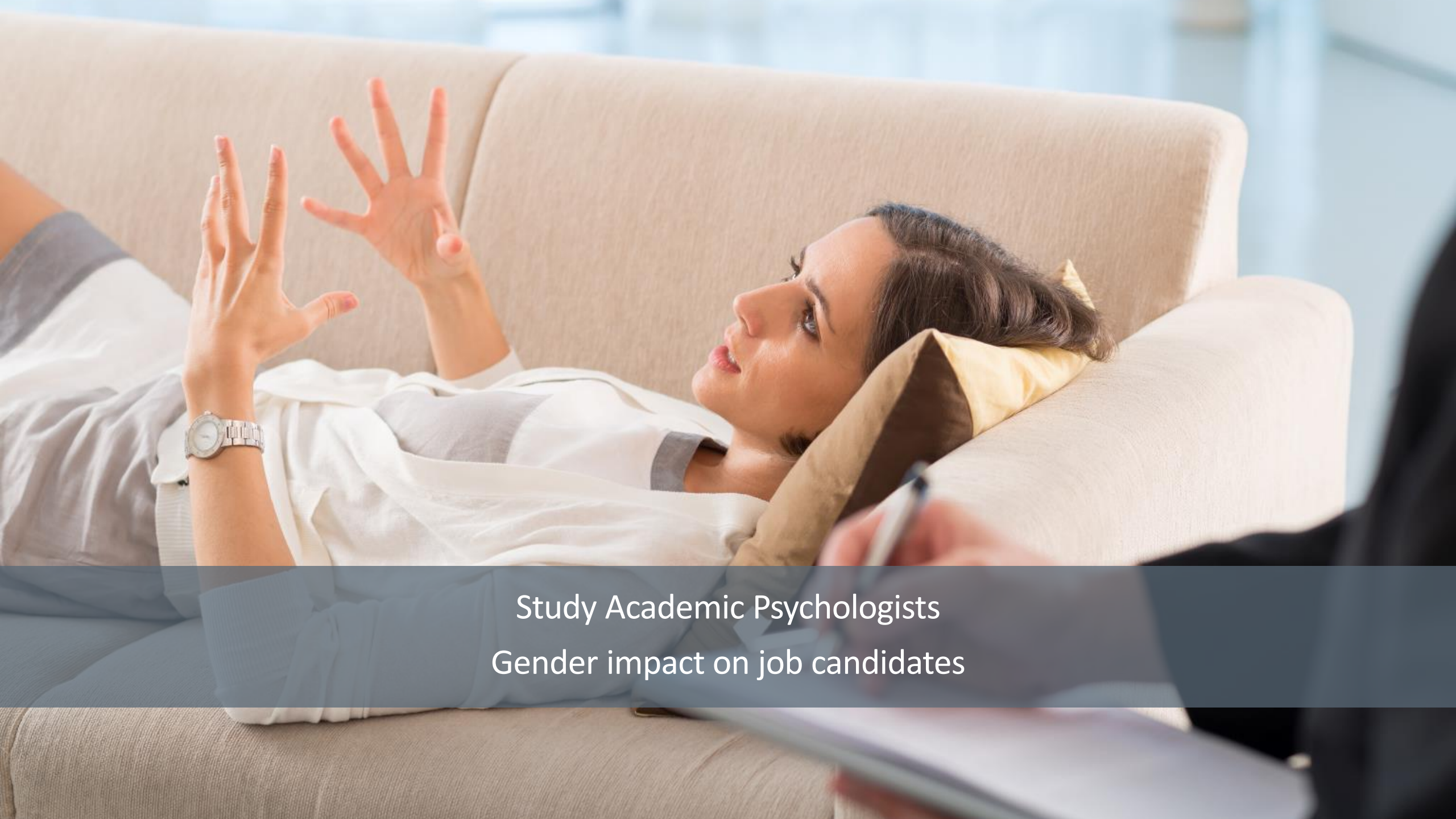
[Fr]: biais – partialité

An inclination toward something, a prejudice or a preference

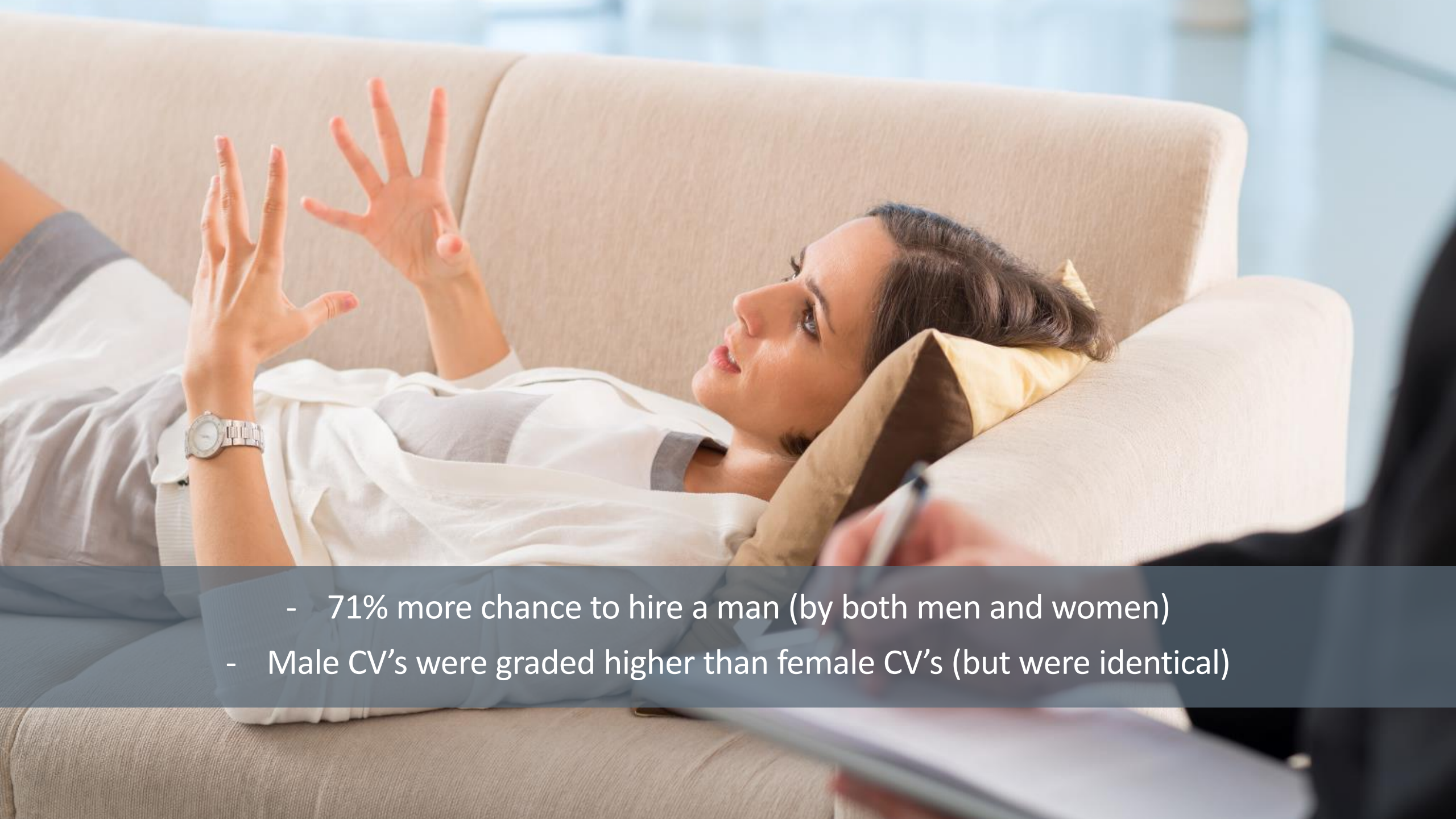
[statistics]: the systematic distortion of data

The Data Bias
is often a gender bias

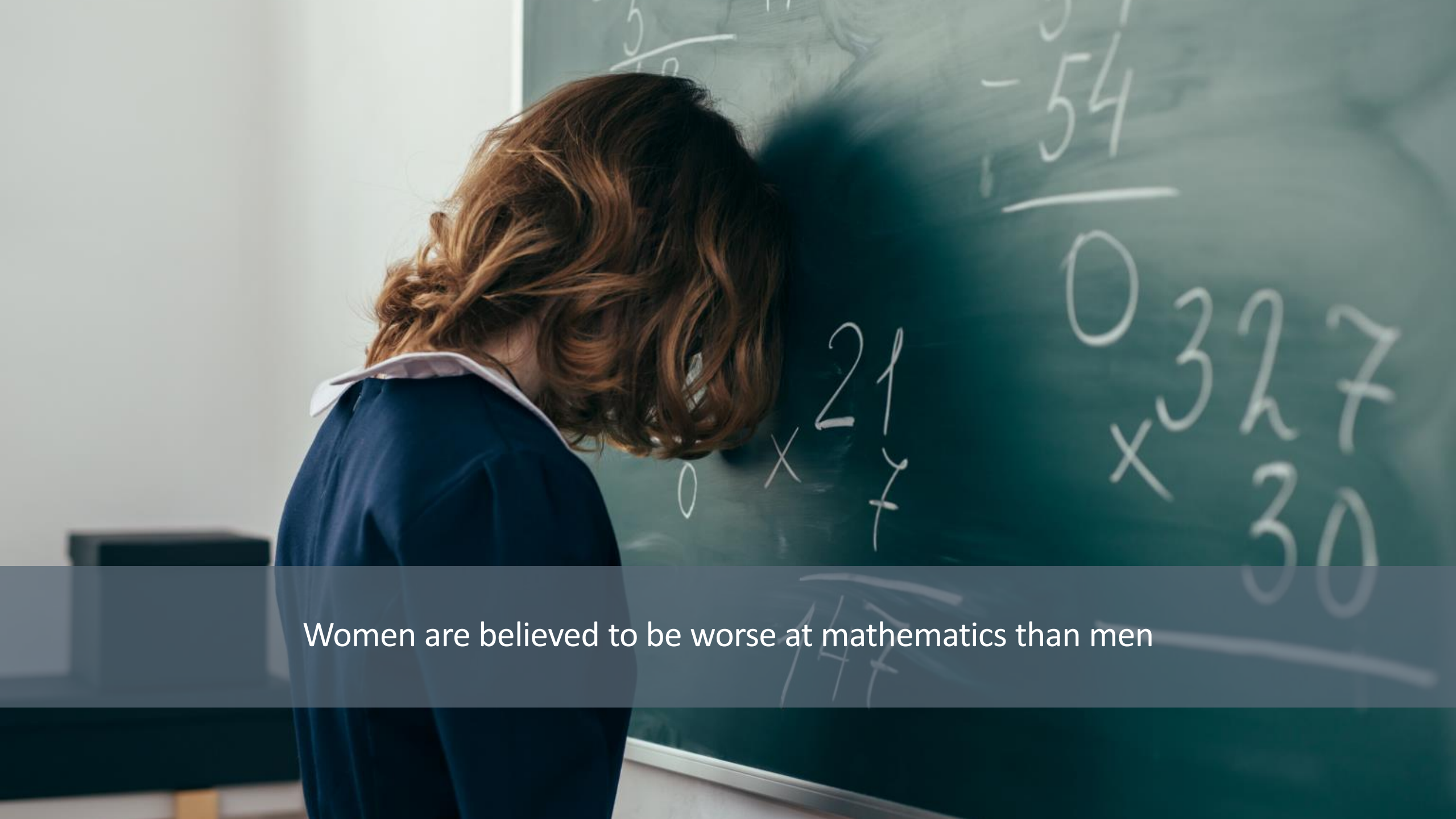





Study Academic Psychologists
Gender impact on job candidates



- 71% more chance to hire a man (by both men and women)
- Male CV's were graded higher than female CV's (but were identical)



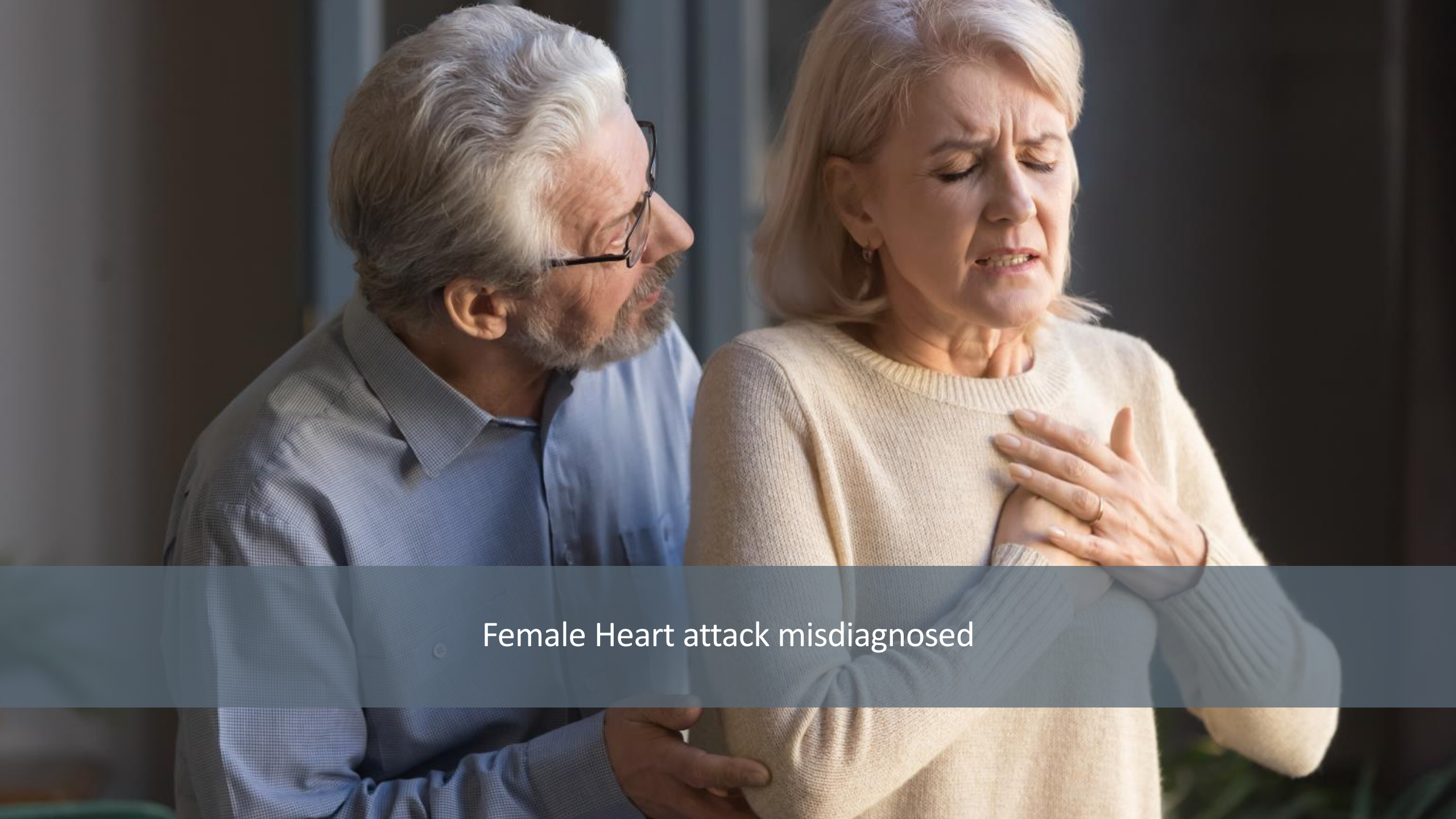
Women are believed to be worse at mathematics than men



Even with a better test result for women,
the employer was still 59% more likely to choose the male candidate







Female Heart attack misdiagnosed



UK healthcare: new program for Heart Attack Prediction



Women:

17% higher chance to die in car crash
47% higher chance of severe injuries

New medicine: tested primarily on male animals (and men)





NASA's spacewalk by 2 women



POLICE

UK's armored vests



Al... ai ai ai



Speech recognition
70% more likely to understand male voices



Smartphones & the female hand

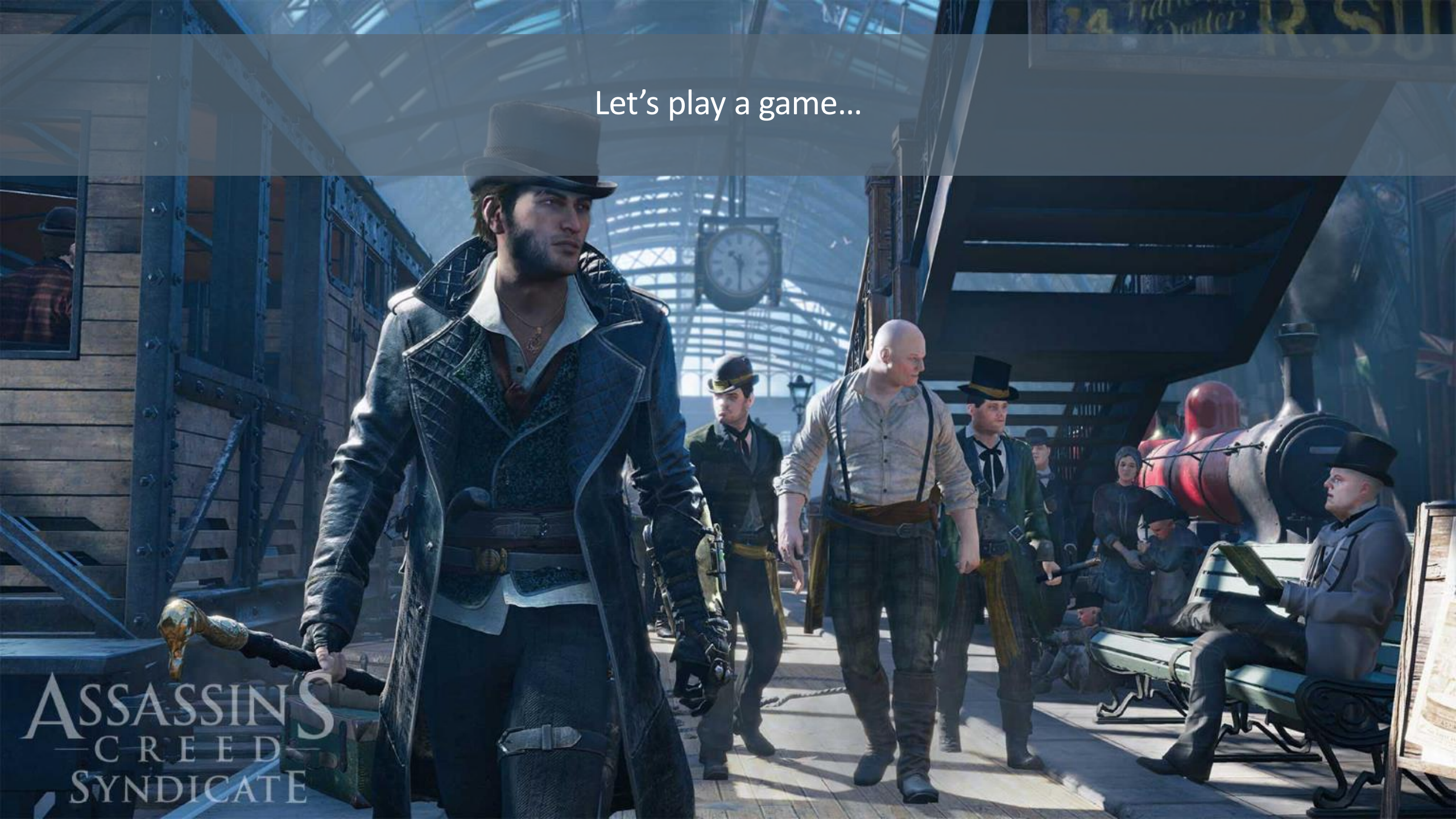




UBER's self driving car

Let's play a game...

ASSASSIN'S
CREED
SYNDICATE





U+1F3C3 ("Runner")



apple



google



facebook



twitter



mozilla



microsoft



samsung



lg



U+1F575 ("Spy")



apple



google



facebook



twitter



mozilla



microsoft



samsung



lg



U+1F483 ("Dancer")



apple



google



facebook



twitter



mozilla



microsoft



samsung



lg

Visual Attention Pattern

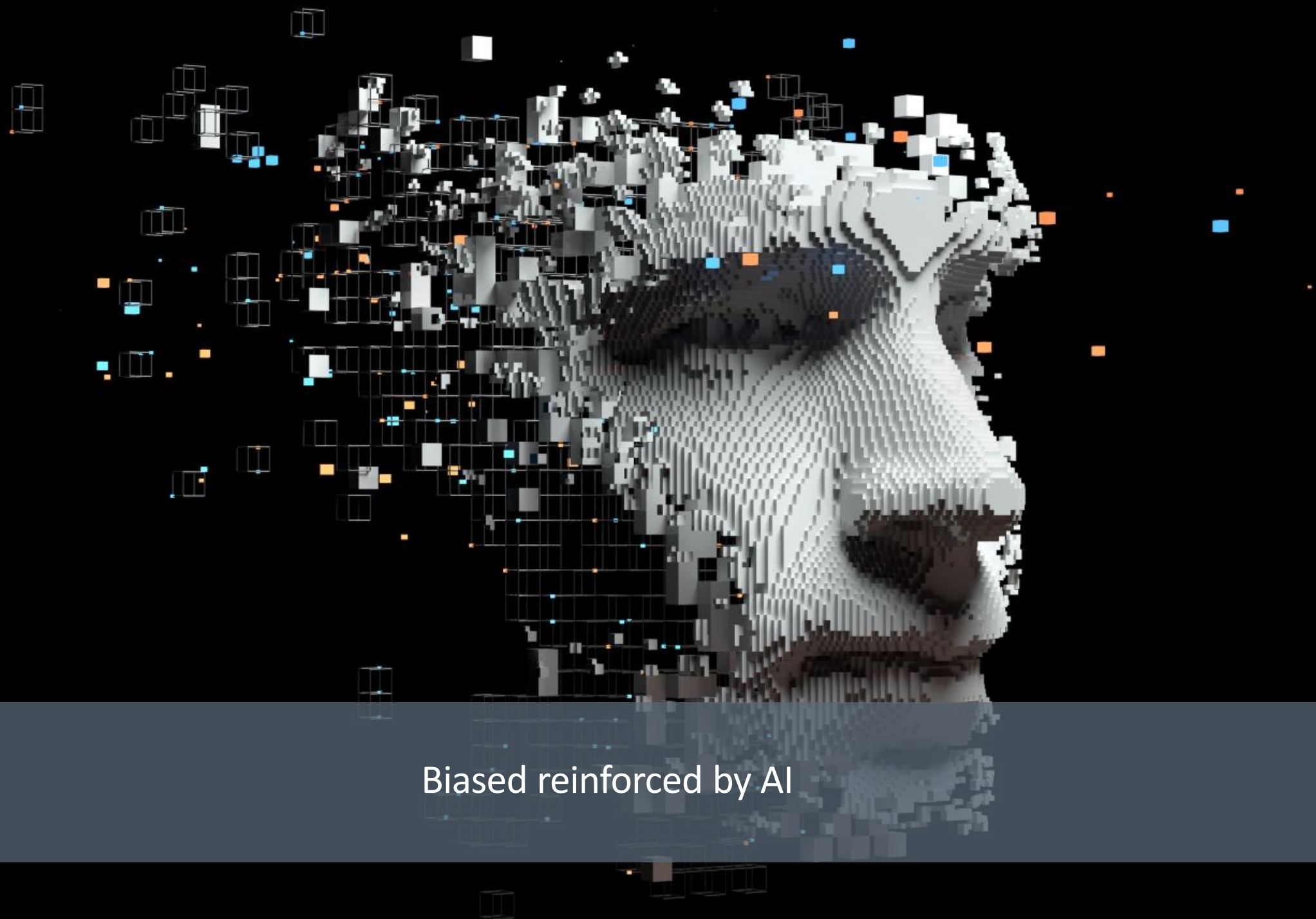


Visual Attention Pattern



Data Bias?
Or
Data Gap?





Biased reinforced by AI

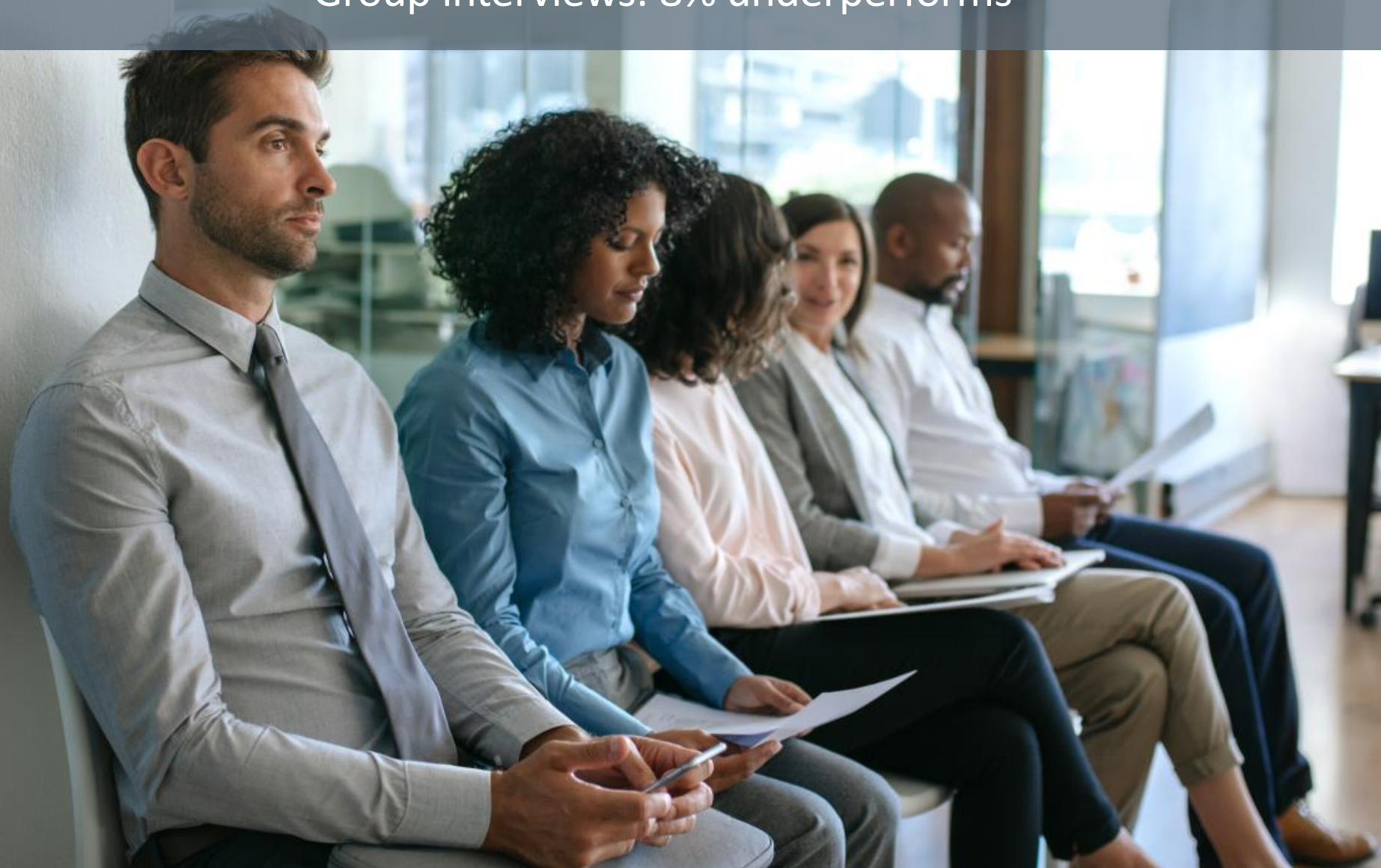
Solutions





(1) Recruit (more) women

Individual interviews: 51% underperforms
Group interviews: 8% underperforms



(2) Crowd Testing



ISO/IEC 25010

(3) Go beyond the standard(s)

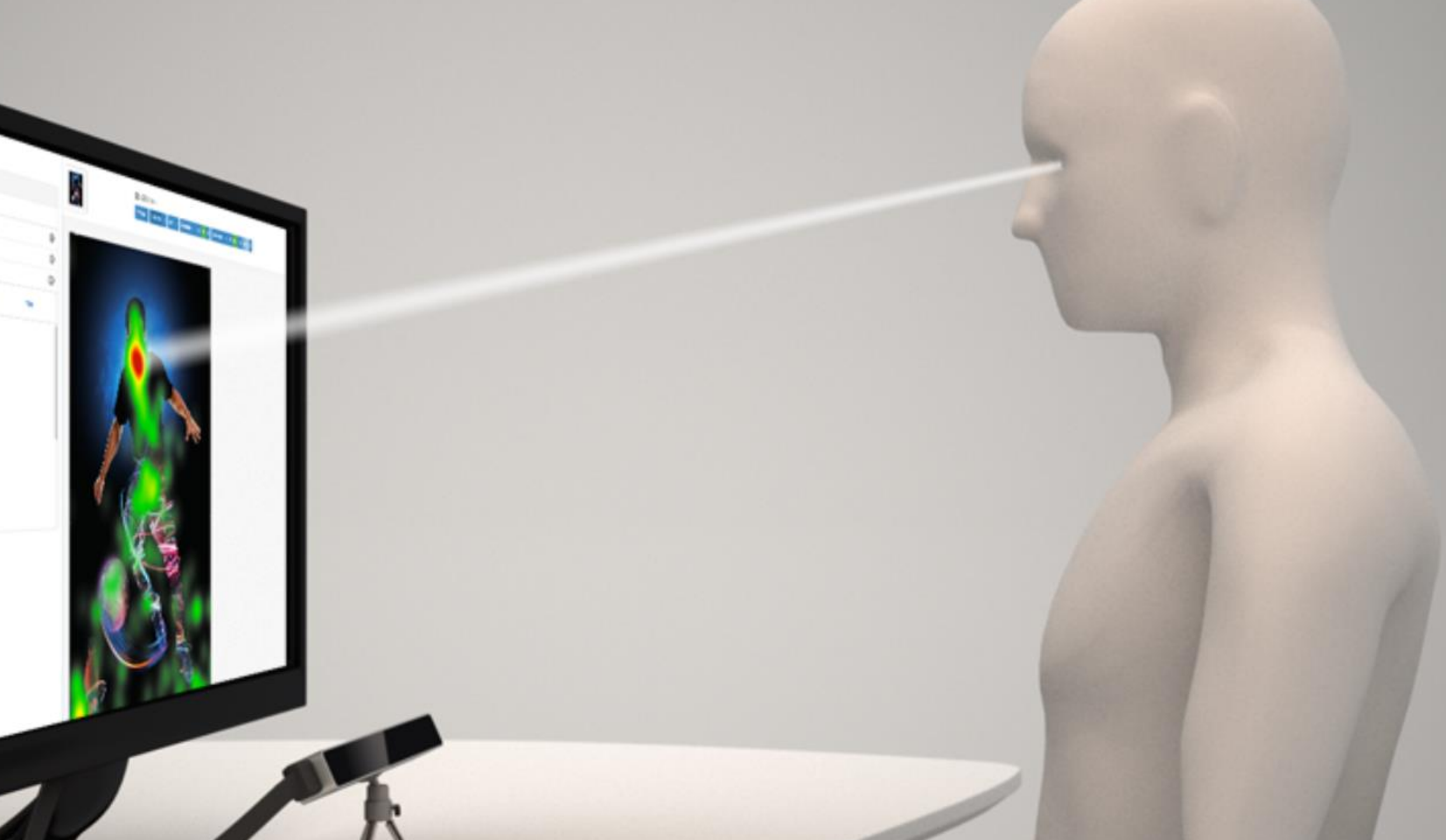
STANDARD



(4) Heat Maps & Eyetracking



 **THEEYETRIBE**









Smart Scroll



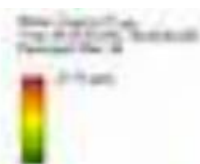
Extra-gentle for the most sensitive skin.

Each baby's skin is sensitive, delicate, and has a different pH and moisture level. Baby's skin is especially sensitive, and your baby's diaper rash is a sign of irritation.

Baby's skin is especially sensitive, delicate, and has a different pH and moisture level. Baby's skin is especially sensitive, and your baby's diaper rash is a sign of irritation. Clinically tested and dermatologist recommended for babies with allergies and sensitive skin.



baby



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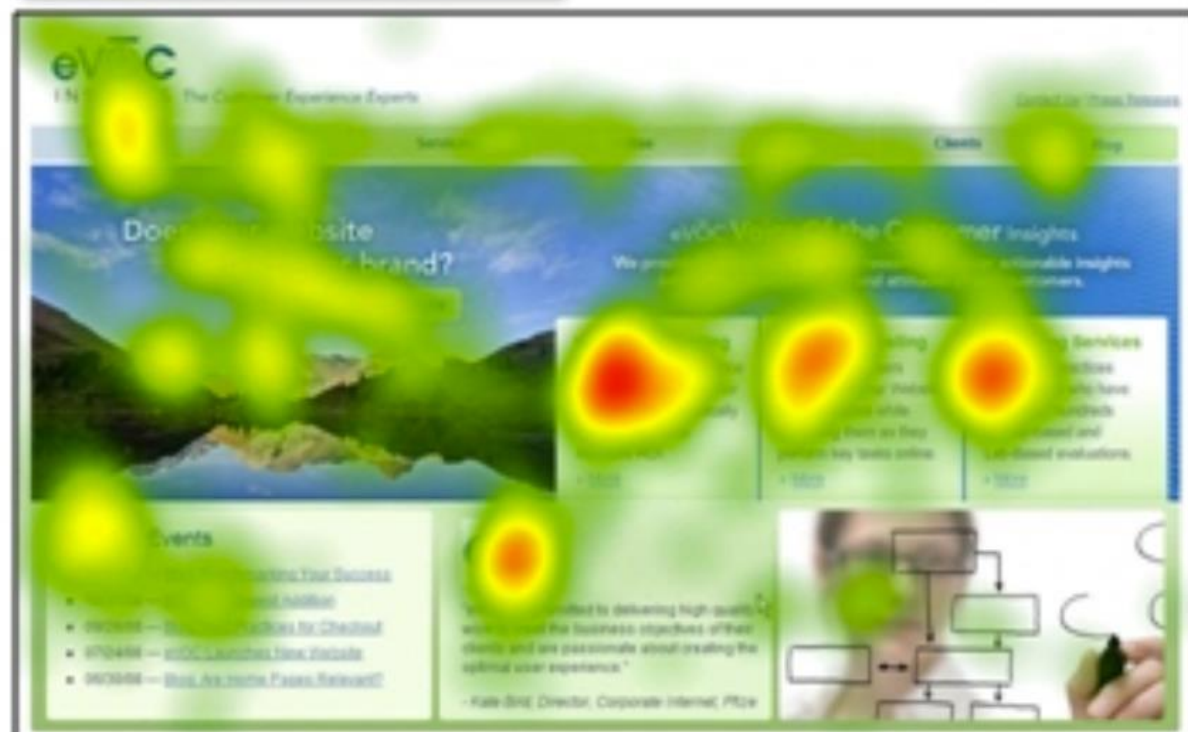
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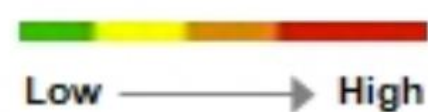


baby

Aggregated Heat Map

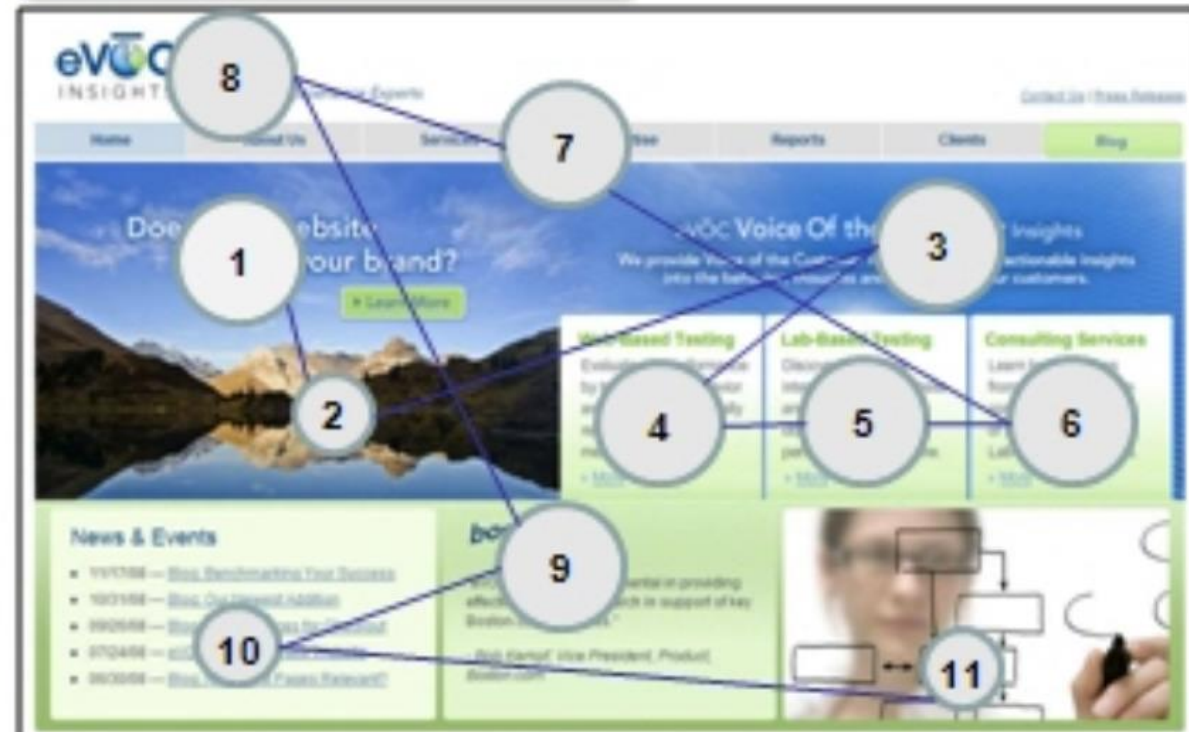


Intensity of Viewers



Sample	12
Time of Snapshot	20 sec

Chronological Gaze Plot



of Viewers Per Area



Sample	12
Avg. Time on Page	20 sec

(5) Persona Based Testing



Clark Andrews

AGE 26

OCCUPATION Software Developer

STATUS Single

LOCATION San Jose, CA

TIER Experiment Hacker

ARCHETYPE The Computer Nerd

Friendly

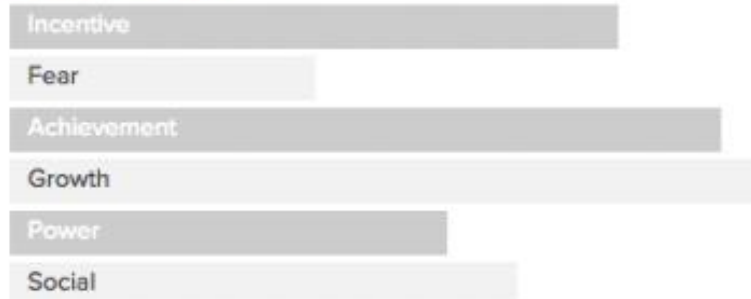
Clever

Go-Getter



"I feel like there's a smarter way for me to transition into a healthier lifestyle."

Motivations



Goals

- To cut down on unhealthy eating and drinking habits
- To measure multiple aspects of life more scientifically
- To set goals and see and make positive impacts on his life

Frustrations

- Unfamiliar with wearable technology
- Saturated tracking market
- Manual tracking is too time consuming

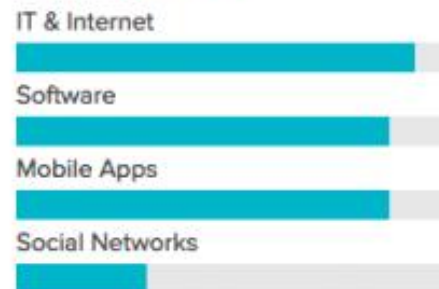
Bio

Aaron is a systems software developer, a "data junkie" and for the past couple years, has been very interested in tracking aspects of his health and performance. Aaron wants to track his mood, happiness, sleep quality and how his eating and exercise habits affects his well being. Although he only drinks occasionally with friends on the weekend, he would like to cut down on alcohol intake.

Personality

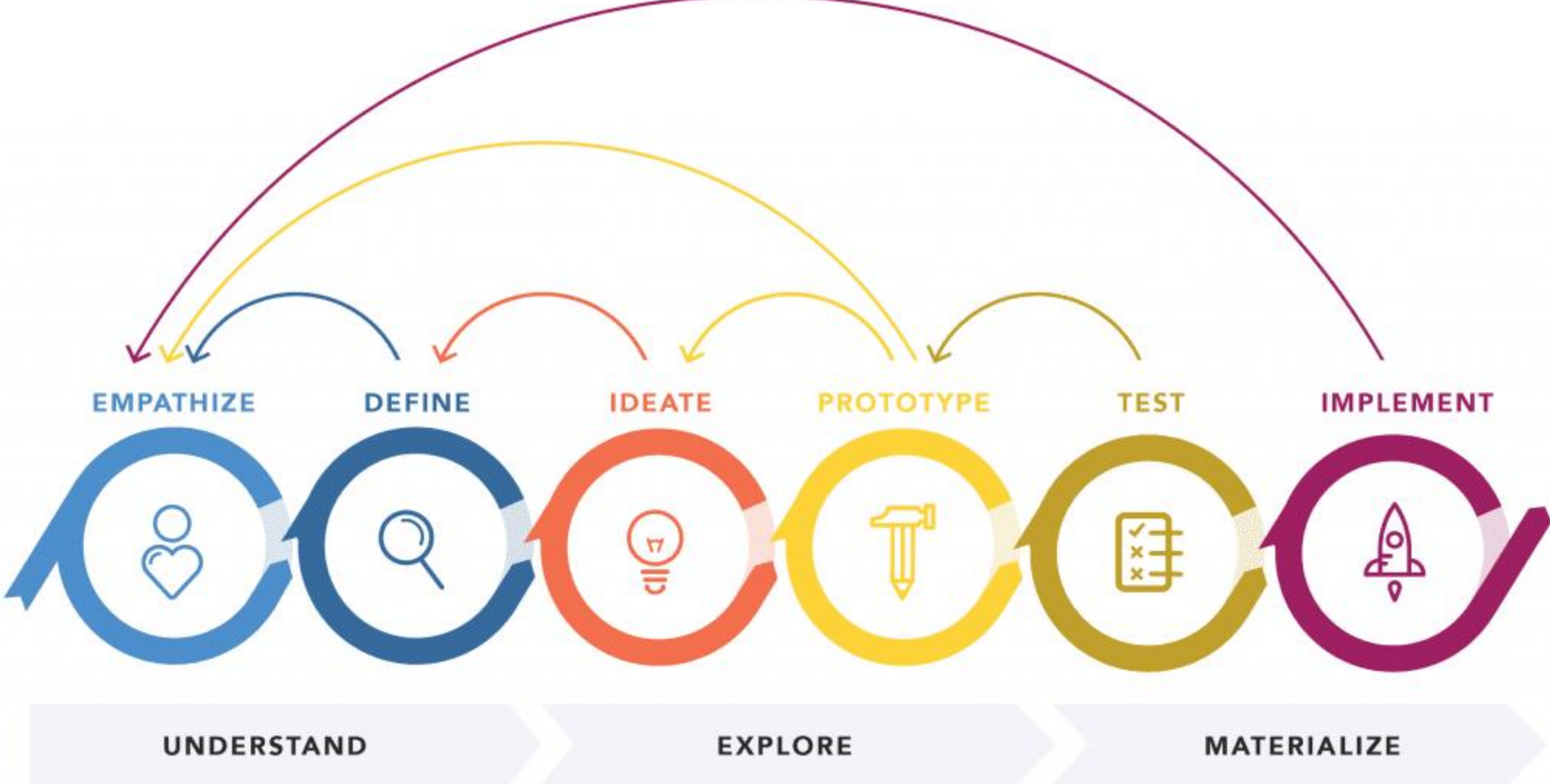


Technology



Brands





CONCLUSION

(1) Bias Awareness

CONCLUSION

(2) Test the Known Unknowns



THANK YOU