



# Individual fairness vs Group fairness (ETHICS vs LAW)

## Backdrop:

Individual Fairness: Treating individuals with equality according to their circumstances and merits.

Group Fairness: The essence of fairness is addressed by the context of systemic inequalities for disadvantaged groups.

## Origin:

Individual Fairness: It emanates from theories of classical justice based on equal treatments.

Group Fairness: This is influenced by social movements that address historical inequities.

## Moral Dilemma:

Individual Fairness: May continue inequality by not paying attention to systemic bias.

Group Fairness: It is not fair at all because it is adjusted by outcome and hence bypasses merit.

# The Lawsuit

A threat to educational opportunity for millions of young people

In November 2014, an organization founded by anti-race conscious admissions activist Edward Blum that billed itself as Students for Fair Admissions (SFFA) sued Harvard, alleging that the university discriminates against Asian-Americans and sought to bar Harvard College and other colleges and universities from using a holistic admissions process that considers the whole person.





## **Individual Fairness vs Group Fairness Dilemma**

### Individual Fairness:

Asian-American applicants with high test scores and credentials filed a suit arguing that they were the ones being discriminated against.

Merit-based admission: An applicant should be admitted only based on the academic performance and scores of tests but not by race.

### Group Fairness:

The attempt was made by Harvard to reach a diverse class by giving racial minorities, who have historically been underrepresented on the campus, better chances for admission, such as Black and Hispanic students.

Holistic review: Harvard defended its policy on the grounds that it uses race as one factor among many to promote a diverse educational environment that benefits all students.



## **Case Study: Facebook's Discriminatory Advertising Practices**



Justice Department Secures  
Groundbreaking Settlement Agreement  
with Meta Platforms, Formerly Known  
as Facebook, to Resolve Allegations of  
Discriminatory Advertising

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**Targeted advertising deploys algorithms to customize advertisements according to a user's browsing history, location, and demographics. While this may serve to improve the user experience and effectiveness of such ads, it gives rise to several concerns regarding fairness, especially when the targeting is based on sensitive attributes like race, gender, or age.**

**In 2019, civil rights groups filed a complaint against Facebook for its role in enabling advertisers to discriminate based on race, gender, and age in ads that related to housing, employment, and credit-three essential areas of life where discrimination is illegal under U.S. law.**



**Targeting based on such exclusion also let advertisers exclude specific demographics, say, the housing ads would only appear for the white users or job ads would appear only to younger people. This effectively curbed minority and older groups from seeing some possibly very key resources and was, in fact, a breach of civil rights under the Fair Housing Act and the Civil Rights Act.**

**Impact on Individual Fairness:**

The algorithm at Facebook, in fact, allowed advertisers to treat people differently based on their personal attributes such as race and gender. This constituted a violation of the principle of individual fairness, which is about treating individuals similarly if their behaviors online have been similar.

For example, an African-American user with the same qualifications and interests as the white user will not see the same job or housing opportunities, just because of their race. This disparate treatment at an individual level is a clear breach of anti-discrimination norms.

**The impact on Group Fairness:**

It is an even bigger problem of group fairness. By disproportionately excluding minorities and older users from key ads, Facebook's ad practices perpetuate systemic inequality. Vulnerable groups who already face many disadvantages in areas such as employment and housing are then marginalized even further by being shut out of such opportunities.

Policy and technologies must guarantee fairness of the group through equitable access so that poor groups are not further disadvantaged. In this case, failure to do so meant that minority groups bore a disproportionate brunt, thus continuing discrimination and segregation.

# PRIVACY VS FAIRNESS

- Privacy: Think of privacy as allowing people to control their personal data—it's about keeping your info in your hands.
- Fairness: This is all about making sure everyone has an equal shot, whether it's in a job, in accessing tech, or in data that's used about them.
- Challenge: The tricky part is when protecting privacy may seem to limit fairness, or vice versa. For instance, if we don't collect certain data to protect privacy, we may miss out on creating fairer outcomes.







## 1. Apple's Health App and Gender Bias (2014)

- Case Overview: When Apple first launched its Health app, it included features for tracking various health metrics, but it overlooked period tracking, a basic health need for many women.
- Privacy Aspect: Some people may prefer not to share reproductive health data due to privacy concerns, especially since this data could potentially be accessed by third parties.
- Fairness Aspect: Excluding period tracking reflected a gender bias, as it failed to represent the health needs of a large segment of users, specifically women.



## 2. Google Flu Trends (2008-2015)

- Case Overview: Google Flu Trends aimed to predict flu outbreaks based on search data. While this data was aggregated and anonymized, there were concerns about privacy, as health-related searches could be traced back to individual users in some cases.
- Privacy Aspect: Google used search data to estimate flu activity, which raised concerns about health privacy, even though the data was anonymized.
- Fairness Aspect: The accuracy of predictions was biased toward areas with higher internet access, meaning rural and low-income populations might not have been accurately represented.

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## Representational Fairness: Fair & Inclusive Representation

- Definition: This means making sure all groups in society are visible in data, media, and decision-making.
  - Why It Matters: When groups aren't fairly represented, decisions can be biased, and stereotypes can be reinforced.
  - Example: Think about how often you see certain groups represented in movies. If we mostly see women in non-STEM roles, it can reinforce outdated stereotypes about gender and career choices
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# Women in STEM: Media Representation & Impact

- Representation Gap: Women in STEM are rarely shown in media, which can influence how young girls view these fields as career options.
  - Stereotypes: Only about 12% of STEM roles in media are played by women, and they're often side characters.
  - Impact: This can discourage young girls from STEM careers. But when we show diverse role models, we can inspire a broader range of people to pursue these fields.
  - Positive Change: Organizations are working with media to change this, ensuring diverse and accurate representations.
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# Principles of Distributive Fairness

- Fair Distribution: It's about making sure everyone has what they need—whether that's access to jobs, healthcare, or technology.
  - Social Justice: Distributive fairness is essential for social justice; it challenges existing inequalities and promotes equity.
  - Real-World Example: Think about access to the internet. It's so essential today, but not everyone has it equally. A fair distribution would ensure everyone can get online and access resources and opportunities.
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# CONCLUSION

- **Takeaway:** Balancing privacy and fairness in AI is complex. We need to be mindful of privacy but also ensure we aren't leaving anyone behind.
  - **Final Thought:** Encouraging fairness means recognizing where inequalities or differences exist and working actively to close those gaps. As we move forward in future with AI, our goal should be to create systems that are fair and respectful of everyone's rights.
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