Algorithmic Fairness – Equality

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Our goal today is to examine how contemporary political philosophy, within the analytic tradition, has examined the question of equality in distributive justice. In particular, we will look at the work of Elizabeth Anderson who defends *democratic equality*. We will also consider another theory of distributive justice, *luck egalitarianism*.

The goal is to see if ideas from political philosophy can be used to inform our examination of algorithmic fairness. On the other hand, we should ask whether political philosophy has something to learn here. Does algorithmic fairness pose a distinctive challenge to our philosophical theorizing about equality and distributive justice? In other words, is there something distinctive and novel about adding the qualification 'algorithmic' to the concept of fairness?

A distinction might be useful here. We can think of algorithmic fairness as part of a theory of discrimination, but also as part of a theory of distributive justice. In the former sense, algorithmic fairness amoutns to algorithmic non-discrimination. Today we explore theories of distributive justice and ask whether they can be relevant for understanding algorithmic fairness. See Binns (2018), Fairness in Machine Learning: Lessons from Political Philosophy, Proceedings of Machine Learning Research 81:1–11.

Anderson's paper[1] begins with an outline of luck egalitarianism. She then proceeds to criticize this view and propose her own theory, democratic equality.

[1] Anderson (1999), What is the Point of Equality? *Ethics*, 109(2): 287-337

Luck egalitarianism

> "The concern of distributive justice is to compensate individuals for misfortune. Some people are blessed with good luck, some are cursed with bad luck, and it is the responsibility of society–all of us regarded collectively–to alter the distribution of goods and evils that arises from the jumble of lotteries that constitutes human life ... Distributive justice stipulates that the lucky should transfer some or all of their gains due to luck to the unlucky"[2]

[2] Arneson, Rawls, Responsibility, and Distributive Justice. In *Injustice, Political Liberalism, and Utilitarianism: Themes from Harsanyi* (ed. Salles and Weymark), Cambridge UP, 2010.

Two key points are worth stressing:

a. The redistribution of goods does not apply to deserved gains, only to those gains that are the result of luck (i.e. undeserved gains).

b. The redistribution of resources does not amount to equality of outcomes, but only equality of opportunities. Luck egalitarianism aims to ensure equality *ex ante*. It is a "starting-gate theory" (p. 308).

The redistribution of goods should only apply to gains due to so-called 'brute luck'. No compensation should be given for losses that people incur as a result of bad choices or risks they could foresee.

The other kind of luck is bad option luck for which luck egaliatarians envision no redressing.

Criticism 1: victims of "bad" choices

Anderson lists several cases that are problematic for luck egalitarianism on pp. 296-298. Here are a couple of examples:

- *The problem of dependent caretakers*. Consider those people, often women, who decide to take care of children or the elderly. They receive no compensation for their services and thus have to depend on the salaries of others. According to luck egalitarianism (the most intransigent version, at least), claims of distributive justice do not apply to them. This seems unjust.

Luck egalitarianism seems to foster egoism here. Should caretakers prefer to take care only of themselves?

- *The problem of paternalism*. Luck egalitarians admit that some are going to make bad choices—say, instead of saving money, they blow it away in the latest trend in fashion, technology, etc. Luck egalitarians have *pity* for these people and call them the *imprudent*. They recommend that the state make decisions for the imprudent.

So, when it comes to losses that result from "bad" choices, luck egalitarians fail to redress unjust inequalities (caretaker example), and when they do redress them, they often do it from a paternalist standpoint (imprudent example).

Criticism 2: victims of brute luck

Luck egalitarianism–Anderson argues–also face difficulties in addressing inequalities that result from brute luck, i.e. inequalities that results from differences in talents, natural endowments, intelligence, physical appearance, etc. Here is what a society run by luck egalitarians would say:

> "To the ugly and socially awkward: How sad that you are so repulsive to people around you that no one wants to be your friend or lifetime companion ... you can console yourself in your miserable loneliness by consuming these material goods that we, the beautiful and charming ones, will provide. And who knows? Maybe you won't be such a loser in love once potential dates see how rich you are." (p. 305)

According to Anderson, p. 307, envy toward those who are superior and pity toward those who are inferior are the attitudes that regulate luck egalitarianism.

This seems a caricature, but also a consequence of luck egalitarianism. The message is disrespectful. Luck egalitarianism–Anderson argues–fails to express equal concern and respect for people.

See list of five desiderata for a good theory of equality on page 314.

Diagnosis

What has gone wrong in luck egalitarianism? At first, it looked like a promising theory, combining the best of capitalism and socialism:

> "Equality of fortune can thus be seen as an attempt to combine the best of capitalism and socialism. Its free market aspects promote efficiency

> ... individual responsibility. Its socialist aspects give everyone a fair start in life and protect the innocent against bad brute luck." (p. 308)

But luck egalitarianism seems to combines the worse of capitalism (=ruthless individualism) and socialism (=intrusive paternalism):

> "equality of fortune appears to give us some of the worst aspects of capitalism and socialism ... It offers no aid to those it labels irresponsible, and humiliating aid to those it labels innately inferior." (p. 308)

Anderson's proposal: democratic equality

Egalitarianism, as Anderson sees it, has two main parts: a negative one that consists in the elimination of oppression (i.e. the fact that some people dominate, exploit, marginalize others), and a positive one that consists in ensuring that people relate to one another as equal (in a sense to be specified).

This point has two important consequences:

(a) "The basis for people's claims to distributed goods is that they are equals, not inferiors, to others." (p. 314)

(b) "the social condition of living a free life is that one stand in relations of equality with others." (p. 315)

In other words, first, the aim of egalitarianism is to ensure that the hierarchy is no longer the basis for decisions about distributive justice; and second, if asymmetries in power (=oppression) are eliminated, people can truly be free because they relate to one another as equals. So freedom requires equality. They are not in conflict.

Is Anderson here too optimistic about the synergy of freedom and equality?

The capability approach

What does it mean for people to relate to one another as equals? The key for Anderson is to ensure that people have equal access to neutral good such as capabilities (=freedom to achieve valued functionings) sufficient for them to be equal in different respects: as human beings; as participants in a system of cooperative production; and as citizens.

Inequality in the distributions of goods are allowed:

> "Once all citizens enjoy a decent set of freedoms, sufficient for functioning as an equal in society, income inequalities beyond that point do not seem so troubling in themselves. The degree of acceptable income inequality would depend in part on how easy it was to convert income into status inequality ... The stronger the barriers against commodifying social status, political influence, and the like, the more acceptable are significant income inequalities." (p. 326)

No one is higher up in the food chain. As Anderson puts it on p. 322: Michael Jordan could not make so many baskets if no one kept the basketball court swept clean.

Respecting the disabled and the ugly

Luck egalitarians classify the disabled (or the ugly) as inferior and this inferiority is the justification for distributive justice:

> "[the] criterion of undominated diversity allows the disabled to make claims of justice regarding their disability only if everyone regards their condition as so wretched that everyone would prefer being someone else." (p. 333)

Recall the definition of undominated diversity on page 303.

But this approach get things backwards:

> "[W]hat the disabled are actually complaining about ... They do not ask that they be compensated for the disability itself. Rather, they ask that the social disadvantages others impose on them for having the disability be removed." (p. 334)

How does Anderson's conception of egalitarianism escape the objection that she levels against luck egalitarianism in the case of the disabled or the ugly? Here is her answer:

> "the injustice lies not in the natural misfortune of the ugly but in the social fact that people shun others on account of their appearance. To change the person rather than the norm insultingly suggests that the defect lies in the person rather than in society. ... democratic equality prefers altering social norms to redistributing material resources in response to the disadvantages faced by the unsightly." (p. 336)

The aim need not be to give goods to the disabled or the ugly to compensate for their inferiority, but to ensure they can participate as equals to society. Egalitarianism may require reshaping social norms, not necessarily redistributing material goods.

Applications to algorithmic decision-making

Can we apply these theories—luck egalitarianism and democratic equality—to algorithmic fairness?

According to luck egalitarianism, algorithmic decisions should equalize the benefits and burdens they allocate to *equally deserving* people. Inequalities due to mere luck should be removed, and classification parity might be well suited to his end.

The problem is, however, what it means to be equally deserving.

On the other hand, Anderson's key idea is that egalitarianism should make hierarchies – rankings of superior and inferior people – morally irrelevant. Luck egalitarianism reinforces hierarchies because it makes them the very foundation of distributive justice. If this is right, one question to explore is whether or not algorithms – as they are used to guide decisions in criminal justice, health care, welfare benefits, bank loans, etc. – reinforce or create hierarchies, even when they allocate non-punitive goods.

On this point, see Accominotti and Tadmon (2020), How the Reification of Merit Breeds Inequality: Theory and Experimental Evidence. Working Paper (42). International Inequalities Institute, London School of Economics and Political Science.