

Are health and income similar when thinking about Equality of Opportunity (EOP)?

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14th Winter School on Inequality and Welfare

January 8 2019

Criticism about inequality of outcomes

- An equal society is unrealistic
- The same criticism for EOP?
- Norm-based approach towards inequality measurement (Cowell, 1985; Almas et al., 2011; Magdalou and Nock, 2011)
- Distance between a fair society and the actual society.
- Does the criticism hold also for EOP? A realistic norm?

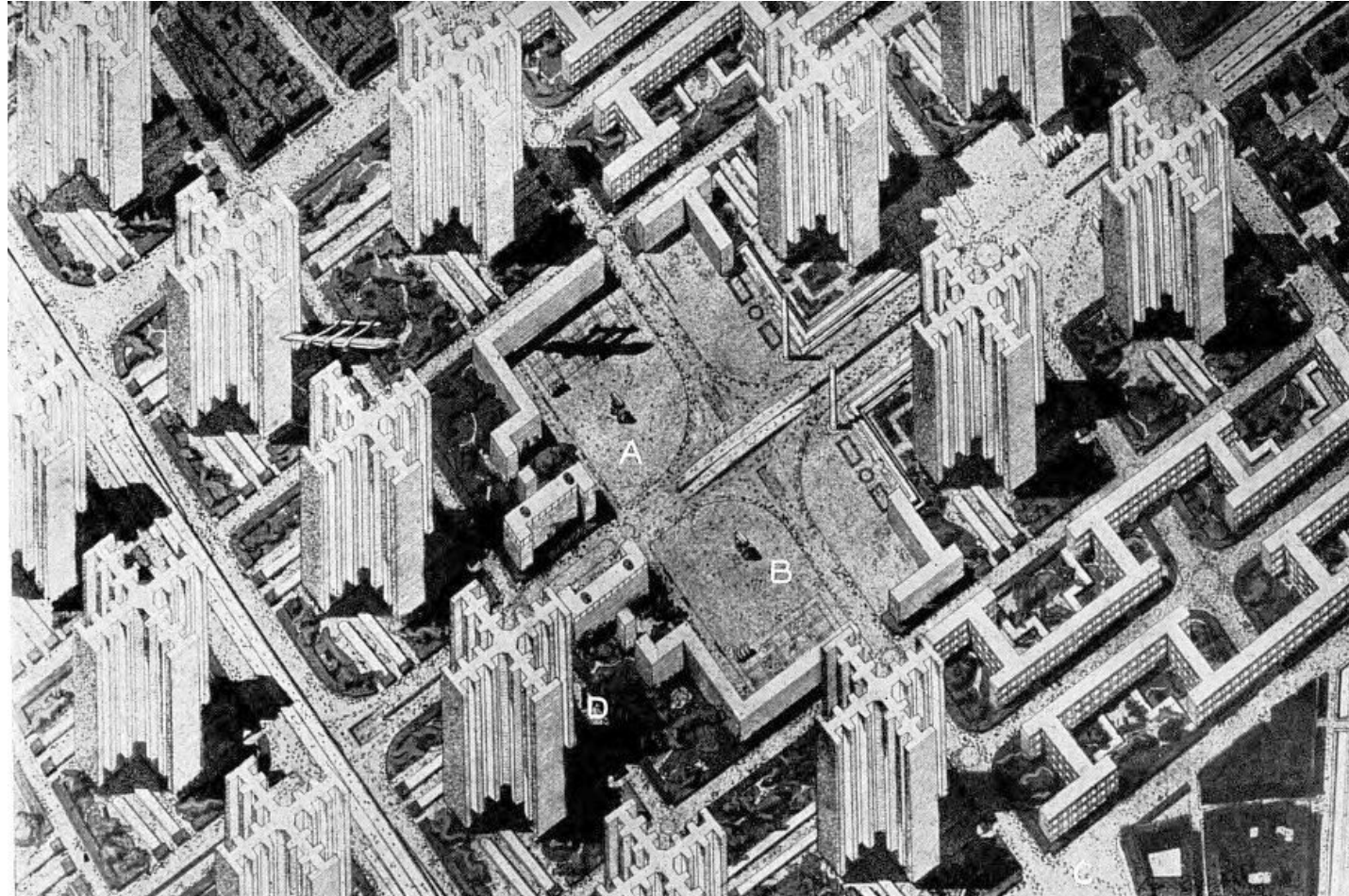
Is an equal opportunity society realistic objective?

- Can we imagine such a society? What are the levers?
- Can we build a counterfactual society through a thought experiment (model)?
- A parallel world à la David Lewis.
- More or less YES in Health.
 - We can foresee a society with combination of the features of actual societies where equality of opportunity will hold
 - Qualifications
- Very difficult for income acquisition
- The parallel world that we have to construct is closer to our world in the health case than in the income case

Nutshell: the reasoning for income acquisition

- Competition for jobs
- Advanced societies: cognitive and non cognitive skills
- Cognitive skills developed through education
- Competition to go to the best schools. Competition to go the best neighborhoods.
- If land is private, auction for lands and the winner of the competition for jobs at the previous generation will live in the same neighborhoods.
- Segregated city and public education school create IOP in education, occupation and earnings.
- The only way to counteract would be to socialize land and housing. (Walras, Henry George). Collective Housing

Paris Le Corbusier 1937 (like Singapour 2019?)



Bonnet, Bono, Chapelle, Trannoy, Wasmer

Outline

1. Definition of Equality of Opportunity
2. A static model for health
3. Assumptions and statement of the conjecture for health
4. Discussion

1. Definition of equality of opportunity

- Notations
- H: Health.
- G: Genes
- L : Accidental Luck (during life)
- B: Background (before the age of consent)
- E: Effort (lifestyle)
- A: Access to health care system (visits, cost, information)
- O: Occupation

Distinction luck/circumstances

- Jusot (Canazei). Explained part < 20%. Residual is > 80%
- Luck is Nature. Random draw
- Luck cannot not always be compensated: death by accident
- Social circumstances: how society is organized. In principle, can be compensated.

Distribution-wise Principle of Compensation

- Ex ante after effort but before the realization of luck
- Ex post the policy.
- Lefranc et al. (2009), Lefranc and Trannoy (2017)
- The distribution of outcome (health, disposable income) conditional of effort should be the same for every background condition
- $F(H|B, E) = F(H|E)$ for any B, any E
- $F = F$ for any B, any E

Distribution-wise principle of minimal natural reward

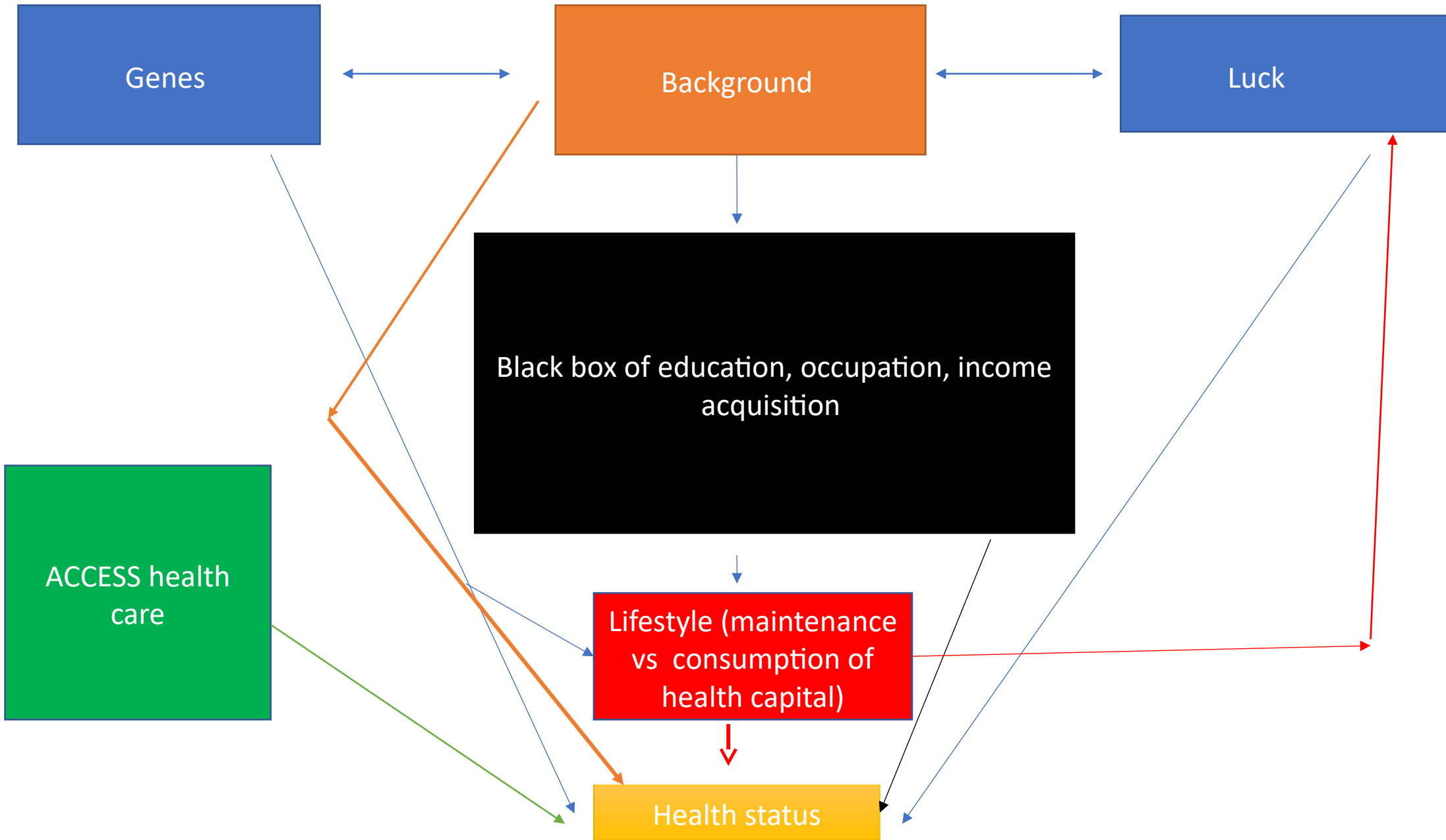
- Ex ante: after effort but before the realization of luck
- Ex post the policy.
- Lefranc and Trahanoy (2017)
- Let us compare two distributions of outcome corresponding to two effort levels. The distribution of outcome corresponding to the higher effort should dominate for the FSD the distribution of outcome corresponding to the smaller effort.
- If $E' > E$, then $F(H|B, E) >_{FSB} F(H|B, E')$ for any B, any E, E'

2. A static model of generating health

- Age and sex fixed

$$H = f(G, L, B, E, A, O)$$

- *A lot of interactions*



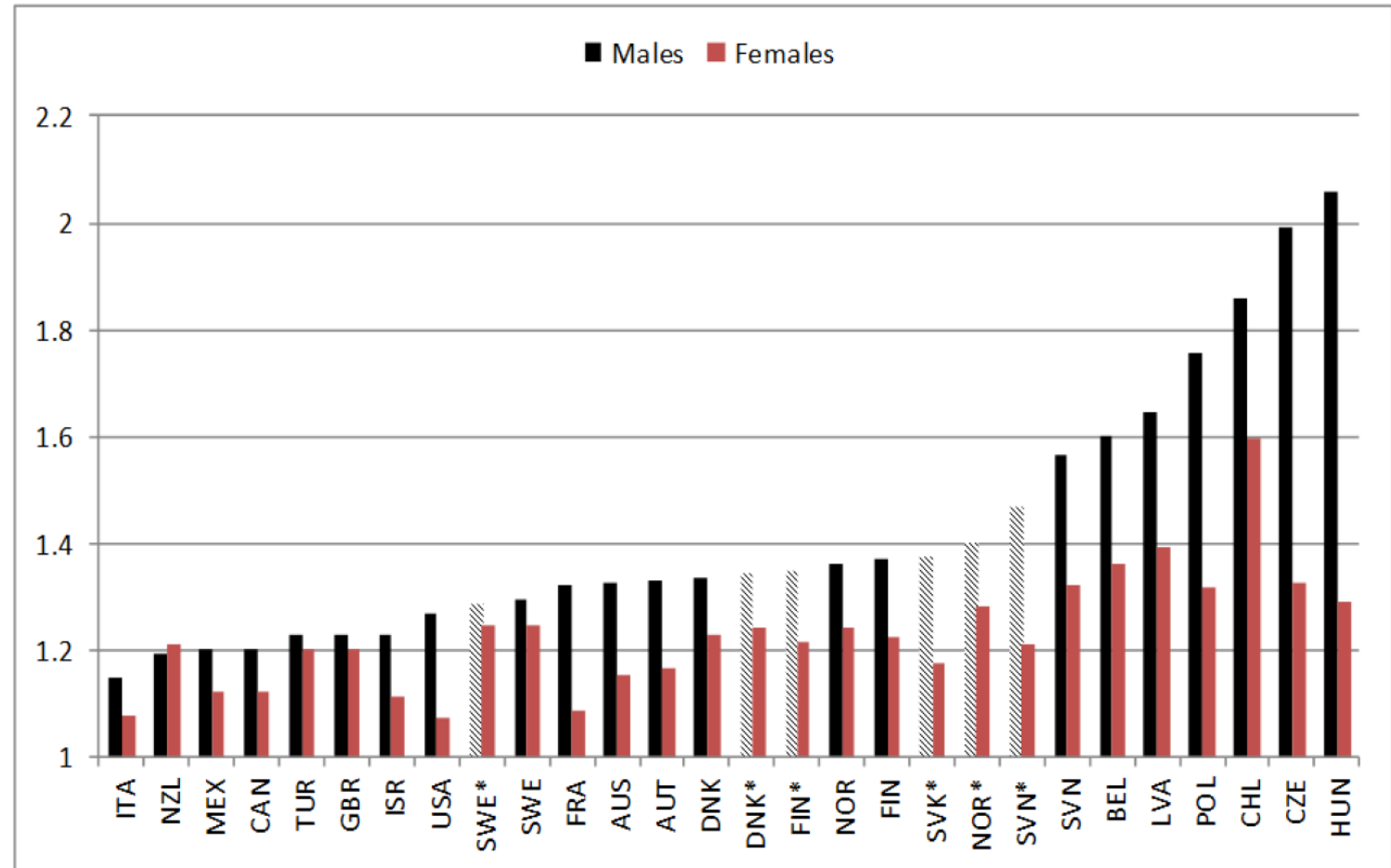
Statement regarding the proposition of natural reward

- The distribution-wide principle of natural reward is always satisfied
- The health care system will repair. But it is only exceptional that you do not have after-effects
- Bad life style + health care cannot be better than good life style.
- Good for incentives

3. Conjectures and Proposition

OECD (Murtin et al
2017)

Figure 8. Ratios of age-standardised mortality rates between high and low education groups



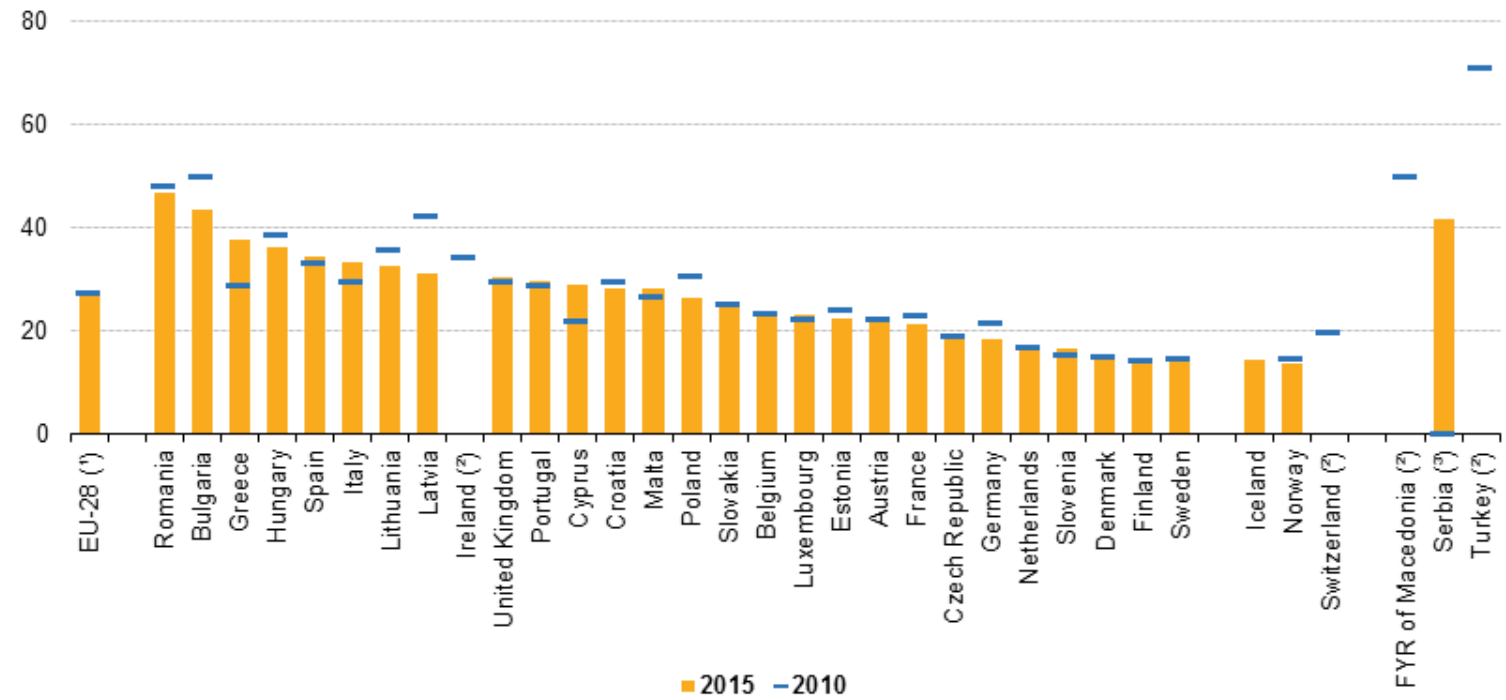
Conjecture 2: Accidental Luck and Background

- Accidental luck is independently distributed from background once controlling from lifestyle.
- Less confident
- Car accident: untrue because older cars (US)
- But public transportation is more used by people who do not have cars.

Policy 1: Effective policy against children in poverty

- Bad housing/living conditions during childhood have impact on health when adult.
- Dedicated action can remove the bulk of the effect.
- If sanitary conditions of housing of poor are “correct” and with free canteens at school, the direct long-term effect health effect of poor background is low
- Social housing, housing vouchers that get rid on heating pbs, lead, polluted water etc.
- Compulsory school. Balanced diet at lunch.
+ Food stamps. (*Restau du coeur in Fr*)

Children in poverty 2010-2015 Eurostats



(*) 2015: estimate.

(²) 2015: not available.

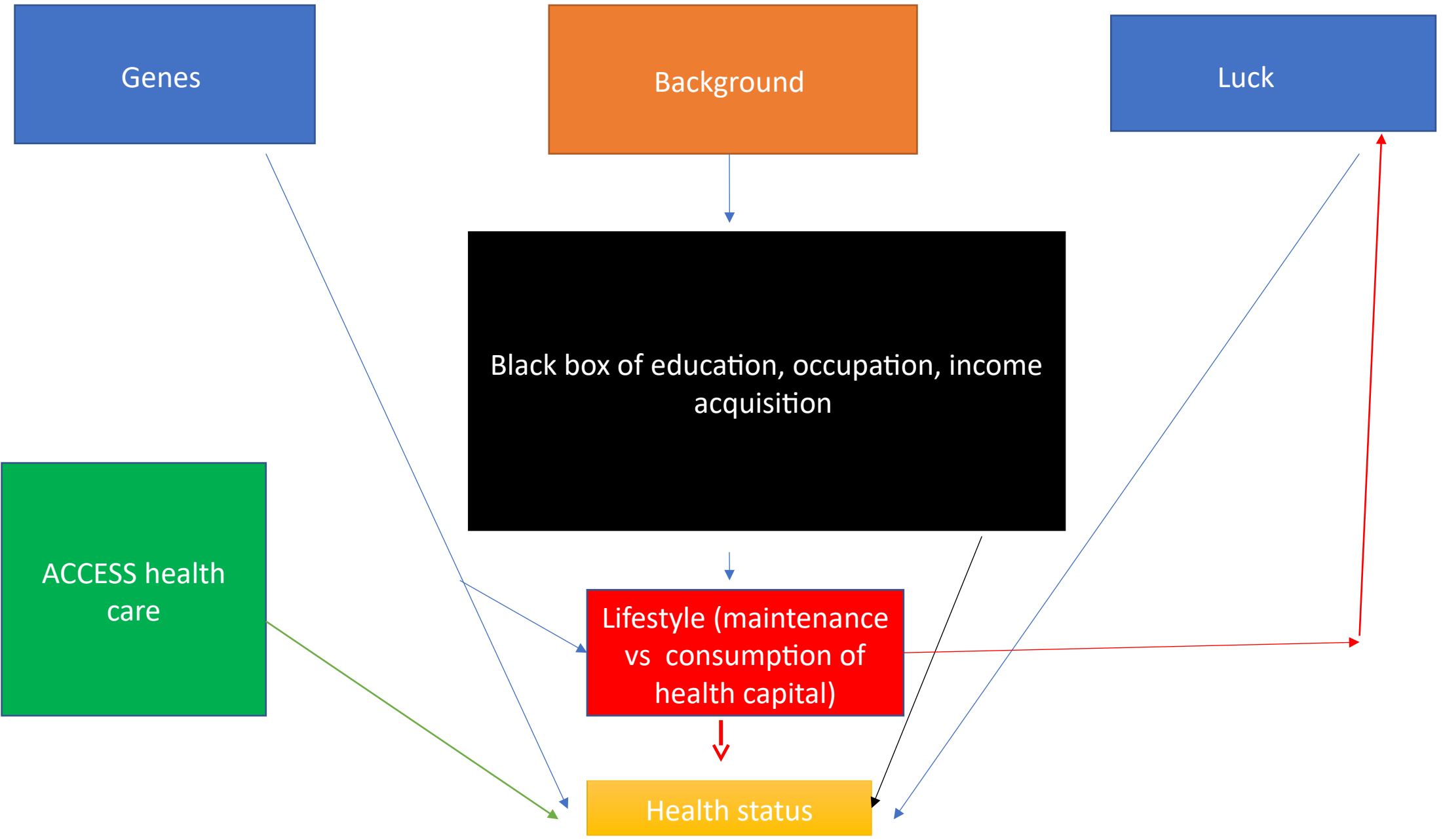
(³) 2010: not available.

Policy 2: Equal Access to health care

1. Universal health care.
2. Out of the pocket expenses = 0
3. Strict Gate keeping
4. Evenly distributed on the territory. Equal density of practitioner
5. The degree of reception of information is not showing a social gradient

Ethical stance: Respect of preference/of transmission of preference

- Fleurbaey: respect preference.
 - You should respect preference, whatever they come from
 - Drinking alcohol, smoking during pregnancy? Conflict between respect of lack of effort at generation t and circumstances at generation $t+1$.
- Roemer (2004)
 - The provision of social connections,
 - The formation of beliefs and skills in children through family culture and investment,
 - The genetic transmission of ability,
 - The formation of preferences and aspirations



Statement of the proposition regarding compensation

- Under conjectures 1 and 2, If the decision maker endorses the Roemer-Fleurbaey stance regarding transmission of preference, and follows policy recommendations 1 & 2,
- then the **distribution-wise principle of compensation is satisfied**, except for any contamination from any violation of the EOP compensation principle regarding the income-acquisition sphere (occupation-education).

Proof



- $H = f(G, L, B, E, A, O)$
- Because Policy 1, B no direct effect on H
- Because Policy 2, A not correlated to B
- Because Conjectures 1 and 2, G and L B B
- Because Ethical Stance, the link between B and E is OK
- Then, the only problematic link is between B and O iff O influences H or E. Q.E.D

4. Discussion

EOP policy in health = Equal Access + Low poverty rates

- An hypothetical country with the poverty rate of Nordic country and the strict equality imbedded in the NHS will reach a fair situation according to EOP in health, **proviso a fair situation is also provided for education and occupation acquisition.**

Difference between EOP and Equality of outcome

- What remains problematic for EOP is the first link of the causal chain:
- Background  Education, Occupation  Lifestyle
- Absent the first link, the second link is not problematic at all for EOP, whereas it is the central focus of the literature on social inequality in health.

Occupation Disease & Lifestyle

- Studies (Marmot et al. (1997), Kuper and Marmot (2003) Whitehall Cohort II
- People down the pecking order: worse lifestyle
- But even controlling for that, job strain (High demand and low decision latitude): More coronary heart diseases
- Subordination in non-human species is associated to worse health conditions
- **“Of Baboons and Men: Social Circumstances, Biology, and the Social Gradient in Health”**
Michael G. Marmot and Robert Sapolsky. 2014.

Lifestyles and social class (SES)

“And the peculiar evil is this, that the less money you have, the less inclined you feel to spend it on wholesome food. A millionaire may enjoy breakfasting off orange juice and Ryvita biscuits; an unemployed man doesn't.

When you are unemployed, which is to say when you are underfed, harassed, bored, and miserable, you don't want to eat dull wholesome food. You want something a little bit 'tasty'.”

The Road to Wigan Pier, George Orwell (1937)

http://www.george-orwell.org/The_Road_to_Wigan_Pier/5.html

Is an asymmetric distribution of status avoidable?

- Distribution of statuses (hierarchy, responsibility) in a team to do a particular task
- The number of low profile jobs in a team depends on the accessible technology.
- At home, household appliance has greatly reduce the part of low profile job
- Only robots will remove low profile jobs.

Future in this parallel world

- Interaction between genes and lifestyle is unknown today whereas apparently it may be key.
- Today: Choice under ignorance.
- Tomorrow: knowledge of your risk associated to each life style.
- The case for natural reward will get stronger. Responsible for your choice because you are aware of the consequences.
- You want to take risk. OK but you will pay for it. (Like today for avalanche)

Conclusions

- EOP admissible norm for fairness in health. Unfair EOP can be fixed in a society and economy not too far from some of the most advanced European society.
- Optimistic.
- Even a brighter future for the principle of natural reward in health
- Caveat: The empirical conjectures should be verified, endorsement of some ethical stance may be viewed as problematic.