

Disclaimer

- This paper does not promote experimentation with food aid
- Nor it argues that experimentation on human-beings should be promoted
- It merely argues that current emergency food aid practice raise several ethical concern
- We have every reasons to reconsider these ethical criteria
 - Which we will by considering it through the lens of social experimentations



Overview

- The need for clear ethical criteria in emergency food aid
- Approaching food aid through lens of social experimentation
 - Following the literature on technology as social experimentation
- Ethical criteria stemming from principles of biomedical ethics
- What is relevant for food aid
 - Autonomy & sovereignty
 - Non-maleficence & long-term monitoring
 - Justice and distribution patterns



Zambia & GMO

- In 2002, Zambia, faced with severe droughts and an imminent famine, refused food aid from the US both as whole kernels and milled maize because it was genetically modified
- Following the Zambia crisis, the Nuffield Council on Bioethics recommended that countries should be free to choose what kind of food aid they want
- 'UN statement regarding the use of GMO Foods as Food Aid in Southern Africa': "[...] in the current crisis governments in Southern Africa must consider carefully the severe and immediate consequences of limiting the food aid available for millions so desperately in need".



Ethical criteria in food aid

- UN Committee on Economic, Social and Cultural Rights states that food aid is to be distributed according to the principles of
 - Impartiality: particularly relevant in conflict situations,
 - *Non-discrimination:* all affected humans are equally entitled to food aid, regardless of gender, religion, etc.
- This does not sufficiently address all relevant ethical issues of food aid
- We propose to consider food aid as social experimentation
 - In order to subject food aid to a set of ethical criteria
 - We follow the literature on technology as a social experiment



The challenges of new technology

- How are we to deal with the future effects (both positive and negative) of new technologies?
- Current 'paradigm'
 - Try to reduce uncertainty beforehand
 - Anticipatory measures to make harm less probable
 - Often: one-off decision
- Cannot deal with ignorance ('unknown unknowns')





Social experiments

- Social experiments are usually like natural experiments
- Social scientists and economists often rely on quasiexperiments
 - Use existing variation to establish effects of different variables
- Therefore we need to move from doing a de facto experiment to a deliberate one
 - not in the sense that we want to see what works and what doesn't work,
 - but in the sense that we want to insure the greatest safety possible to vulnerable populations



Primary Principle	Conditions
Non-maleficence	1. Absence of other reasonable means for gaining knowledge about hazards.
	2. Monitoring.
	3. Possibility to stop the experiment.
	4. Consciously scaling up.
	5. Flexible set-up.
	6. Avoid experiments that undermine resilience of receiving 'system'.
	7. Containment of hazards as far as reasonably possible.
Beneficence	8. Reasonable to expect social benefits from the experiment.
Autonomy	9. Experimental subjects are informed.
	10. Approved by democratically legitimized bodies.
	11. Experimental subjects can influence the set-up, carrying out and stopping of the experiment.
Justice	12. Vulnerable experimental subjects are either not subject to the experiment or are additionally protected.
	13. A fair distribution of potential hazards and benefits.

Source: (Van de Poel 2011)



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Responsible experimentation

- Rather than focusing on whether new technology is acceptable, we should focus on whether the experiment is acceptable
- GMO is new technology; some consequences are known
 - There are still uncertainties, particularly with regards to longterm impacts such as allergenicities or impacts on biodiversity
- Assumption: it is likely that GMO food aid increases
- By approaching emergency food aid as a social experiment
 - We extend moral evaluation into a continuous process
 - And we can subject it to several ethical criteria



Autonomy 1/3

- Two facets to autonomy
 - At the individual level
 - At the country level, which can then be called sovereignty.
- International law comments on sovereignty
 - According to the UN Charter, sovereignty entails that countries need to request assistance, or give their consent for assistance
- There do not seem to be provisions with respect to individuals in the sense that autonomy presents



Autonomy 2/3

- When confronted with potential risks at the societal level, respecting autonomy of individual citizens becomes difficult
 - In medical practice, informed consent for individual autonomy
 - This individual consent cannot straightforwardly be translated to whole societies or communities: no individual veto rights
- In the particular case of food aid, individual autonomy may also be strengthened by making sure that the individual person can choose between different types of food
 - An emergency situation does not in itself legitimize withholding people a choice in the selection of their food. Labelling is in itself insufficient if an individual has no choice but to eat GM food



Autonomy 3/3

- Sovereignty versus individual autonomy
 - Individual people's attitude towards risks must be respected
- Situation 1: the country accepts GMO
 - But individuals might reject it based on individual assessments
 - Labeling and offering free choice could help
- Situation 2: the country rejects GMO (more problematic)
 - Individuals will then not have access to GMO
 - Comparable with clinical trials where people are not allowed to enter medical experiments because (well-intended) protection
 - What if the alternative would be no food



Non-maleficence 1/2

- Non-maleficence is connected to beneficence
 - But it has been added later to emphasize its moral relevance
 - We need mechanisms to avoid harm
- Harm to the environment
 - There are no provisions for environmental impact assessments in emergency situations due to time constrains.
 - But many countries are signatories to the Convention on Biological Diversity
 - Van de Poel's criterion "Avoid experiments that undermine resilience of receiving system" could be helpful
- How about harm to human health?



Non-maleficence 2/2

- Monitoring allows for learning about system and creating feedback looks for the experimenters to stop, scale-up and modify the set-up (Van de Poel's conditions)
- In emergency food aid with GMO, monitoring allows to
 - Keep track of possible long-term consequences
 - Alleviate possible negative consequences, by 'repair' or compensation
 - Stop the experiment if needed
 - Better set-up of food aid in the future
- Indeed, in monitoring individual autonomy must be respected
 - Monitoring difficult when a small nr. of individuals take GMO



Justice 1/3

- Justice in biomedical ethics usually relates to allocation of healthcare resources
 - In social experimentation approach, justice more relates to the distribution of benefits and burdens
- In distributive justice discussions, we make a distinction between the *unit* and the *pattern* of benefits
- As we have seen the unit or the currency (i.e. GMO) could very well determine the level of acceptability
- How about the pattern of benefit?



Justice 2/3

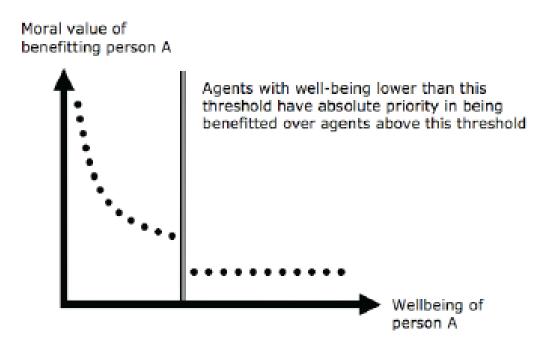
- International agreements seem to emphasize that "priority in food aid should be given to the most vulnerable populations"
 - (UN Committee on Economic, Social and Cultural Rights, para. 38)
- Yet, it has been observed that the operating principle behind many current disaster responses is the "Save the Greatest Number" (e.g. Zack 2009)
- The utilitarian doctrine seem to be morally appealing
 - Hypothetical situation after a natural disaster
 - Town A is easily accessible and it has 1000 inhabitants
 - Town B in remote area with 100 inhabitants, who are worse off
 - Note: the unit of distribution is not only food, but also number of first responders and available equipment etc.



Justice 3/3

- Alternatively egalitarian approaches should be considered
 - Indeed, utilitarianism is in essence an egalitarian approach, but its focus is not on reducing inequality
- Egalitarian approaches
 - In order to reduce inequality
 - Unequal distribution only justified if it benefits the least well-off
- At least two approaches worth mentioning
 - Sufficientarianism
 - Prioritarianism

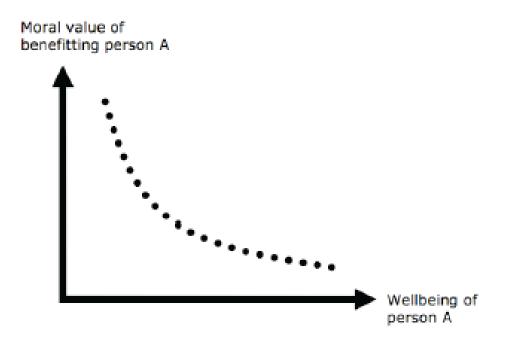




A sufficientarian approach

Source: (Meyer and Roser 2006)





A prioritarian approach to assigning emission rights

Source: (Meyer and Roser 2006)



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Conclusions

- GMO is likely to be used more often in emergency food aid
 - It should be subjected to clear ethical criteria for application
- Autonomy and sovereignty
 - We are not arguing against using GMO food in the disaster context. Instead, we look for criteria under which it is acceptable. In some situations, higher risks might be acceptable
- Non-maleficence
 - Monitoring the consequences and stopping/adjusting the aid
- Justice
 - Utilitarianism is not necessarily the best scheme

