

Analyzing the legalization of GMO foods through the contractarian lens

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1 TLDR

The aversion from GMO largely grew in the 90s. CRISPR is now the new thing, but GMOs is not so new. The 90s however was not a good time for trust in government health regulations. You had BSE epidemic, dioxin affair, sprinkle on top the MMR autism fraud, the Pusztai affair and everybody that would read a newspaper would not trust the government with health regulations anymore (and 3 out the 4 mentioned here had to do with food). And, yes the last two cases where a case of bad science, but that does not help the general publics opinion anyway. (And Monsanto in general had not very good public outreach on top of that as well.)

In short, there was a lack of trust if in these companies there was enough care for our health (and the environment). And in some lesser extent the same is still true in our current day. In the Netherlands the debacles around TATA Steel and Chemours show that we still cannot trust that these health regulations set up by the government protect us. Without the trust and our lack of control in these matters, the tendencies will be to remain restrictive on these kind of subjects.

And although a two-conversation can help restoring this trust, ultimately a much larger growth of the democratic process surrounding these technologies (further than what individual researchers can do) is required to regain this trust, and also with this to limit the power these companies can exert. (As well that of course that these companies also have a lot of control over the research budgets, which you also mentioned "demarcated responsibilities" of the people involved.)

Therefore, you can inform as many as you like, but if trust is not won and the social contract not restored, a tendency to remain conservative and restrictive will be present among the general public.

2 Introduction

This essay explores the moral issues arising from legalizing GMO foods using the framework of social contract theory. The GMO food debate is usually framed by opposing the more progressive scientists against a more religious conservative public. The more scientific group uses utilitarian arguments and bring points forwards such as improved crop yield, while the more conservative public thinks in a more deontological way and likes to put more emphasis on descriptions such as naturalness. I think those two opposing groups really do exist, but they remove a lot of nuance in the debate. There are also a lot of people in between. I think this nuance can be better analyzed by using social contract theory to see what the bigger picture is here. But also what roles companies and government play in keeping this social contract in place and bring updates to it when needed.

3 An explanation on social contract theory

Under social contract theory our moral stance is largely determined by the fact that we cooperate in a society. It is different from other theories in the fact that it tries to contextualize the circumstances humans cooperate rather than performing far-reaching abstractions that try to judge our individual actions in some hypothetical isolation. With social contract theory we don't concern ourselves if an action is good in itself, but rather if it is good by an explicit or implicit agreement we made when we were building our societies. We must justify our actions to others and not just towards ourselves. Within this framework what we consider good can change based on changes in our society.

Social contract theory finds its origin in the ideas of Hobbes. Hobbes believed that our natural human condition consists of constant conflicts. Only within society we can construct a peaceful cooperation. The social contract therefore is mostly to give the rulers of society the power to rule over its citizens in an attempt to prevent this conflict. For Hobbes the social contract justifies these power structures.

Locke spins the social contract theory slightly different. Whereas Hobbes believes society needs rulers with almost absolute power, Locke believes the citizens of society act within a society mostly from self-interest. The rules that come from the social contract are mutual beneficial for the people and the people will realize this by themselves and act accordingly. There is therefore no need for almost absolute power by society's rulers.

Rousseau's version of the social contract turns Hobbes's ideas around. Instead of believing that man's natural condition is that of conflict, Rousseau believes that the natural condition is much more timid. Instead society is by itself the catalyst for conflict. Living together in a society is the main cause of conflict and rules for society should be made to prevent that. These rules should be willingly made by the people to sacrifice some of its freedom in exchange for safety. These rules are thus made from a consensus between people. Its rulers should conform according to the people's consensus and the government's power is not justified by conflict prevention as in Hobbes's model. In Rousseau's model, the government is ought to work with the people rather than against its people as it would in Hobbes's model.

4 Comparing contractarianism with other moral views

Since utilitarianism is a consequentialist moral theory it has to deal with the consequences of our actions. This makes it somewhat limiting in the considerations it can have for an action. Utilitarianism needs to define some sort of goal it wants to fulfill. It describes this goal to be the overall well-being. For a contractarian such a goal does not exist, but it considers the variety of reasons other people could judge the actions people can take. These viewpoints are not aggregated into one optimized metric, but can be considered separately.

For a deontologist, actions are completely judged in isolation and will always have the same outcome. This is a very strict way to deal with moral issues. The contractarian view has similar deontological elements as it also tries to make universal laws, however a contractarian can update its laws accordingly if there are changes in the agreement people have or if circumstances in which the society operates, changes [1, 2].

5 New technologies require updating the contract according to the new risks

Social contract theory tries to define desired behavior that reduces risks between its members in society. It is not a consequentialist analyzes of the behaviour, but rather tries to give a consensual assessment of what the behaviour will do to the other members of society. The main difference between the consequentialist analysis of this risk is that the consequentialist requires a certain absolute source of truth to analyze the benefits for the action. Utilitarianists will find themselves in a problematic situation when they realize such an absolute source of truth cannot be established. Contractarianist can go beyond this by pointing out that risk assessment is not just a pure scientific endeavour, but comes with a second step. The general people need to be able to trust and be able to rely on these assessment before it can take them into account in their social contract. Only when it can reach a consensus on these risk it can update its social contract accordingly [7].

6 On GMO food

GMO food is food that has been grown with crops that have modified DNA. The modifications in the DNA can help the crops to have higher yields, be more nutritional, or have higher resistant against disease and droughts [6]. This will all help food producers make a larger profit by being able to produce more food or sell it against a larger price [8]. While the scientific community considers the food safe, or even more beneficial than conventional food [9], there is still a lot of debate among the general public if GMO food can be legal [3].

The difference in opinion between scientist and general public is more common, but is much more significant for the topic of GMO food. Food is of course a very important topic as we consume it everyday and the art of food producing goes back a long way, but I believe there are also some historical reasons why this difference in opinion is so big on the topic of GMO food.

GMO foods appeared in a period we had large scandals in the food industry. Among others these where BSE that made consumption of beef run the risk of getting a prion disease, and dioxines in food that increased the chance of cancer when consumed. This in turn reduced public trust in the government and industry to safeguard the risks in safe food production, and made the public more sceptical when accepting GMO foods. The fact that the largest driver behind GMO foods, Monsanto, was involved in several other scandals made this worse [5].

7 The role companies and governments play

The social contract is largely formed by democracy. The voting power on politicians of general public can help in determining what new laws will be passed to reflect the people's general consensus on what actions should be considered good. However, with companies gaining more and more power, the balance has shifted and companies as well need to adopt to this social contract. Government can still help in providing laws that keep companies in check with the social contract, but people can take action as well to correct companies when they violate something they don't agree on. The people are the consumers that can decide whether or not they want to buy from the company depending on whether they agree or not on the moral actions taken by those companies. Boycotting products from companies can make those companies reconsider their actions.

Companies tend to use a utilitarian viewpoint when dealing with those issues. They believe that when crop yield gets bigger or nutritional value increases by scientific proof with not other risks at

all that the public will automatically be convinced that their consumption is good. The public however is more conservative regarding changes with their food. They not only view the direct benefit of this change, but also consider that there might be other risks in its use, and not only consider the positive improvement. The statement that this change would involve zero risks is considered untrustworthy and makes the public disconcerting. A realistic assessment would be more helpful in the consideration if it can be adopted [5].

When dealing with introducing new risks to society, governments and companies should find a way to mitigate these risks as much as possible for the public to accept these new risks. Government can pass laws that help to mitigate those risks and companies can show the general public that they can handle the risks with care. Dealing with those risks within the social contract is the most important challenge when introducing new technologies.

When companies and government slack on regulating these risks the social contract deteriorates. These effects it has on the social contract are cumulative. Previous scandals will make the general public distrust the regulators and the companies and thus being more on the safe side regarding accepting new risks. It is an continuous power balance that only moves the social contract slowly in accepting new risks only if there is enough trust that these risks can be managed [7].

8 Requirements we establish on our food

The power balance is important to maintain when introducing new technologies to society. The general public wants to keep asserting if it wants to accept those risks or not. It will have trouble with new risks if it cannot keep them in check if desired. Therefore certain regulations must be in place for those risks to be accepted.

As GMO food is relatively new government institutions must keep an eye on any new products to see if there are not obvious toxic effects. Genetic modifications can introduce a lot of new products very fast and with many new different products the risk that one of them is not safe increases. Thus special care is needed for any new GMO food.

Last but not least the final choice must still be available for the consumer. If there is no way to tell when the product is in the supermarket if the food is GMO or not, consumers cannot use their own power to judge whether or not they consider a certain product safe for consumption. Taking this option out would make people disconcerting about what they eat, because they don't have the power over it anymore. GMO food labelling therefore helps in establishing that the consumer still has to finally say if he or she consumes GMO foods [4].

9 Restoring the social contract on GMO foods

Within our society we established a social contract that helps us to decide how we should cooperate with each other without causing undesired outcomes as considered by the general public. This social contract is what mostly determines our moral compass and needs to be updated constantly when changes arrive in our society. A part of the social contract not only relies on risk assessment but also on the reliability of this risk assessment. A part of the social contract relies on the trust we have in government and industry. When GMO food entered the market there were several food scandals that deteriorated this trust. There needs to be a rebuild in trust before we can give this amount of power to the industry. Introducing GMO food therefore requires that there is more control needed to manage the risks involved.

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