Published on *The Parliament Magazine* (https://www.theparliamentmagazine.eu)

Respecting science and ethics: the case of GMOs

Written by Andreas Christiansen on 14 May 2019 in Opinion Plus
Opinion Plus

Reasoned policymaking on GM crops requires a philosophical, as well as scientific analysis, argues Andreas Christiansen [1].

Photo Credit: Adobe Stock

This argument may sound controversial; after all, shouldn't GM policymaking be based on science?

However, there is no such thing as "policy based on science", at least in the sense that no policy is justified by reference to science alone.

We always also need to make normative assumptions about what is valuable, just, right, or good. Of course, policies can - and should - be science-based in the sense that scientific findings are respected when considering which policies to implement.

The value of philosophical analysis lies in making explicit normative assumptions, and critically asking whether those assumptions - along with the scientific facts - justify certain policy conclusions.

RELATED CONTENT

- **Innovation happens where it's welcome** [2]
- **How Europe has priced out innovation: the example of plants** [3]
- **EU legislation must safeguard precision plant breeding technologies** [4]
- CAP reform: A new delivery model? [5]
- Peter Jahr: CAP reform: There is an opportunity in every crisis [6]

In this article I will illustrate how this is important in EU GM crop regulation. The full analysis has recently been published in the journal Transgenic Research.

The aim is to assist stakeholders and policymakers by uncovering the tacit and often invalid ways of reasoning that shape opinions on controversial issues such as GM crops.

For example, the analysis formed part of the background material for a **recent statement by the Danish Council for Ethics** **[7]**, arguing in favour of using GM crops to solve serious problems.

None of the best arguments for being against GM crops justify restrictive policies like those in place in the EU.

The background is a presumption in favour of GM crops, based on their benefits, e.g. in terms of sustainability or food security; the principle that people should be free to do what they want, provided that they do not (in a broad sense) harm others or disproportionately harm the environment.

Both presumptions can be overridden by other considerations -but, not in this case.

Here are three examples of why prominent anti-GM arguments do not work.

> "A logical and critical analysis of arguments aimed at restricting GM crops shows that plausible normative assumptions, which may also be shaping public opinion, do not justify certain policy conclusions"

Risk

Let us assume that we should be relatively averse to taking risks, and that (at least some) GM crops may have sufficiently adverse effects.

Even so, the current process-based authorisation procedure is not justified, only a trait- or product-based one is. The reason is that trait-based authorisation already entails more testing of GM crops, to the extent that this is warranted.

Because all risks are due to a crop's novel traits, only regulation on this basis can be warranted. Trait-based regulation is, essentially, equality before the law: Under such a regime, all novel plants will be treated equally, and all novel plants with potentially risky traits will be tested.

Naturalness

There are several ways of defining the terms *'nature'* or *'natural'*, and equally many ways of arguing that they have value.

The putatively anti-GM view I assume here is that biological entities are natural when they are independent of human intervention, and this independence means that they have a certain value in themselves.

In this view, we have good reasons not to replace natural things with non-natural things, like GM crops. But since GM crops will replace other things that are not natural in this definition—namely highly cultivated crops, which are far from independent of human interventions—the view cannot justify restrictions on GM crops.

Organic farming

In many countries, including Denmark, it is a widespread view that organic farming is superior to both conventional and GM farming.

Let us assume this is true. Still, we must ask: In virtue of what is organic farming superior?

A moderate view would argue that organic farming is good because it is seen as a more sustainable and environmentally friendly approach, while a radical view would propose that organic farming is good because it represents working "with nature" rather than against it.

Restricting GM crops based on the value of organic farming now presents us with a dilemma: The moderate view is normatively plausible (and popular); but it does not work as an anti-GM argument, since many GM crops are compatible with the normative aim of sustainability such as , improved insect resistance or drought tolerance.

> "Reasoned policymaking on GM crops requires a philosophical, as well as scientific analysis"

In the radical view, GM crops are incompatible with the normative aim since the very technique of GM can be considered as not working "with nature" - but that normative aim is much less attractive and popular.

I suspect that organics-based arguments for restricting GM crops typically combine the attractive normative account of the moderate view and the clear incompatibility between GM and the aims of organic farming of the radical view. This is a fallacy and should be avoided.

As the examples illustrate, a logical and critical analysis of arguments aimed at restricting GM crops shows that plausible normative assumptions, which may also be shaping public opinion, do not justify certain policy conclusions.

Indeed, I believe that no arguments that both represent cogent reasoning and respect scientific facts support these policies.

So there are no good reasons not to allow and even promote the use of GM crops under a suitable trait-based risk regulation scheme.

And to the extent that GM crops can aid in solving serious problems, such as the effects of climate

change and food security in a growing world, it is imperative to do so.

About the author

Andreas Christiansen [1] is a postdoc in philosophy at the University of Copenhagen.

He works on democratic regulation of controversial science and technology, as part of the project Convergent Ethics and the Ethics of Controversy [8], funded by a grant from the Novo Nordisk Foundation. You can read his fuller analysis for free here [9].

Tags
Agriculture [10]
Environment [11]
Food [12]
Categories
Agriculture and rural affairs [13]
Science, technology and research [14]
Twitter Link

Read more on:

Facebook [15]

Twitter [16]

Website [17]

Site Sections

- Home
- Content
- Policy
- Magazines
- PM+
- Thought Leader
- Climate Crisis
- Editorial Calendar
- Policy Events
- Event Coverage
- MEP Awards 2020
- Contact Us

Services

Dods PeopleDods MonitoringDods ResearchDods EventsDods Training

Media & publishing titles

Politics HomeThe HouseThe Parliament MagazineHolyrood Total PoliticsPublic Affairs NewsCivil Service World PublicTechnology Training JournalDods Parliamentary CompanionVacher's Quarterly The

European Union and Public Affairs Directory

Dods events

Westminster BriefingDigital Health & Care ScotlandMEP AwardsThe Skills SummitScottish Public Service AwardsPublic Sector Procurement SummitPublic Sector ICT SummitCyber Security SummitCyber Security 2017Training Journal Awards

Partnership events

The Health and Care Innovation ExpoCivil Service LiveCivil Service AwardsChief Nursing Officer for England's SummitWomen into LeadershipThe Youth Justice ConventionSocitm Spring ConferenceNHSCC Annual Members' EventDods at Party Conference

---

Source URL: https://www.theparliamentmagazine.eu/articles/partner_article/respecting-science-and-ethics-case-gmos

Links
[1] https://mcc.ku.dk/staff/philosophy/?pure=en/persons/291317
[2] https://www.theparliamentmagazine.eu/articles/partner_article/europabio/innovation-happens-whe-e-it%E2%80%99s-welcome
[3] https://www.theparliamentmagazine.eu/articles/partner_article/europabio/how-europe-has-priced-out-innov-tion-example-plants
[4] https://www.theparliamentmagazine.eu/articles/partner_article/eu-legislation-must-safeguard-precision--lant-breeding-technologies
[5] https://www.theparliamentmagazine.eu/articles/event-coverage/cap-reform-new-delivery-model
[6] https://www.theparliamentmagazine.eu/articles/opinion/cap-reform-there-opportunity-every-crisis
[7] http://www.etiskraad.dk/etiske-temaer/natur-klima-og-foedevarer/publikationer/gmo-og-etik-i-en-ny-tid-2019
[8] https://mcc.ku.dk/research/focus-areas/ceec/
[9] https://link.springer.com/epdf/10.1007/s11248-019-001-0-x?author_access_token=gR69hcwQIKpztj2w1LDaYPe4RwlQNchNByi7wbcMAY677vMXAJpHz4fms8MnVtxunHpQCpx6IP3PWADaSA9teKpT4SaZmZL7tbsNoQcdDBficZonHL3KGL7kBAiWjK73-4hVL3IdPrxqcwhwYXTdug%3D%3D
[10] https://www.theparliamentmagazine.eu/tags/agriculture
[11] https://www.theparliamentmagazine.eu/tags/environment
[12] https://www.theparliamentmagazine.eu/tags/food
[13] https://www.theparliamentmagazine.eu/categories/agriculture-and-rural-affairs
[14] https://www.theparliamentmagazine.eu/categories/science-technology-and-research
[15] https://www.facebook.com/TheParliamentMagazine/
[16] https://twitter.com/parlimag
[17] http://www.theparliamentmagazine.eu/