

The ethical problem with research into geoengineering

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Many arguments against the varieties of geoengineering—including a wide range of solar radiation management (SRM) and carbon dioxide removal (CDR) schemes—are waged primarily on "consequentialist" grounds, accentuating the risks and uncertainties associated with geoengineering but downplaying rights and justice considerations. An unintended consequence of this line of reasoning is that more information, better science, and careful engineering might avoid the alleged ethical pitfalls of geoengineering. In short, consequentialist arguments against geoengineering seem to make a prima facie case for conducting more research into improving the knowledge and expert base that might eventually make geoengineering less risky and more certain. Consequentialists who oppose geoengineering thus face a crossroads on the question of research: either they must bite the bullet and accept that their arguments call for widespread research, or they must also argue that research into geoengineering will somehow increase the likelihood that geoengineering will be deployed. Recently, I have argued against geoengineering on nonconsequentialist grounds, suggesting that geoengineering projects are best evaluated in terms of moral trespass. Extending this, in this poster I present an argument that geoengineering research is, unlike research into many other controversial engineering technologies, far more ethically complicated than it first seems. Responding in part to a recent paper by David Morrow, Michael Kopp, and Robert Oppenheimer, I conclude that inasmuch as geoengineering can be said to be ethically impermissible, so too can geoengineering research be said to be impermissible. Such a conclusion thus includes full-scale climatic research, smaller-scale engineering research, and even geoengineering modeling. My conclusion turns on a distinction between research that aims at geoengineering versus research that has secondary, dual-use implications. Unlike other dual-use arguments for controversial technologies—and here I examine cases of genetic modification and nuclear fission—geoengineering technologies generally do not admit of such dual uses. However, much like these other technologies, there are binding international agreements in place that regulate research activity, presumably on moral grounds. In this case, after exploring the differences between the various dual-use technologies, I briefly examine the normative presuppositions of the 1977 Environmental Modification Treaty (ENMOD) to suggest that research into geoengineering is not only ethically impermissible, but may also be legally so as well.