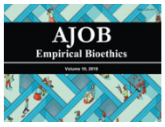

AJOB Empirical Bioethics

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Experimental Philosophical Bioethics

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Introduction

There is a rich tradition in bioethics of gathering empirical data to inform, supplement, or test the implications of normative ethical analysis. To this end, bioethicists have drawn on diverse methods, including qualitative interviews, focus groups, ethnographic studies, and opinion surveys to advance understanding of key issues in bioethics. In so doing, they have developed strong ties with neighboring disciplines such as anthropology, history, law, and sociology. Collectively, these lines of research have flourished in the broader field of "empirical bioethics" for more than 30 years (Sugarman & Sulmasy 2010).

More recently, philosophers from outside the field of bioethics have similarly employed empirical methods—drawn primarily from psychology, the cognitive sciences, economics, and related disciplines—to advance theoretical debates. This approach, which has come to be called *experimental philosophy* (or x-phi), relies primarily on controlled experiments to interrogate the concepts, intuitions, reasoning, implicit mental processes, and empirical assumptions about the mind that play a role in traditional philosophical arguments (Knobe et al. 2012). Within the moral domain, for example, experimental philosophy has begun to contribute to long-standing debates about the nature of moral judgment and reasoning; the sources of our moral emotions and biases; the qualities of a good person or a good life; and the psychological basis of moral theory itself (Alfano, Loeb, & Plakias 2018).

We believe that *experimental philosophical bioethics*—or "bioxphi"—can similarly contribute to bioethical scholarship and debate.[1] Here, we introduce this emerging discipline, explain how it is distinct from empirical bioethics more broadly construed, and attempt to characterize how it might advance theory and practice in this area.

[1] On October 4th and 5th, 2019, an international, interdisciplinary workshop on "experimental philosophical bioethics" was held at Yale University. One aim of the workshop was to produce a short position statement outlining the distinctive features of this emerging field (the meeting schedule and presentation abstracts showing representative new work are available at www.bioxphi.org). We are the workshop organizers and presenters, including experimental philosophers and moral psychologists engaged in research on bioethical topics, and (empirical) bioethicists interested in experimental philosophy and moral psychology. Some of the material in this statement has been adapted from Earp, B. D. (2019, August 2). Introducing bioxphi. *The New Experimental Philosophy Blog*, available at https://xphiblog.com/introducing-bioxphi/.

What is experimental philosophical bioethics?

In simplest terms, bioxphi is experimental moral philosophy as applied to topics in bioethics. It is thus a species of experimental philosophy. It is also a species of empirical bioethics: one which relies primarily on controlled experiments rather than descriptive studies to make sense of normatively charged phenomena of interest to bioethicists, with the aim of contributing to associated substantive debates. In this way, bioxphi aims not only to establish *what* people believe about matters of bioethical concern (for example, how various opinions, attitudes, or preferences are distributed in the general population or among specific stakeholders), but to uncover and explain *why* or *how* people arrive at certain normative beliefs, judgments, or decisions, largely by probing the relevant situational factors and proximate psychological mechanisms.

For example, what do ordinary people take informed consent to require—and what cognitive processes and contextual cues contribute to judgments about whether such consent has in fact been given (Sommers forthcoming)? How do doctors determine what constitutes a harm or benefit when conflicting values are at stake, and what factors affect the weights they assign to each in terms of magnitude or importance (Earp and Shaw 2017)? When policymakers decide about fair distribution of resources, what shapes their intuitions about what justice demands? And how do proxy decision-makers characterize respect for persons in the face of contested intuitions about personhood, as in cases of fetuses or individuals with advanced dementia?

By attempting to empirically address these and other similar questions, the long-term goal of bioxphi is to build cumulative, explanatory models of moral attitudes and behavior as these relate to bioethical issues, ideally grounded in nuanced, real-life examples. Insofar as abstract, theoretical principles or normative arguments emerge from bioxphi, they will hopefully be enriched by having been formulated or tested in a manner that takes into account the moral psychology of ordinary people.

Some illustrative examples

A common method in experimental philosophy is the so-called *contrastive vignette technique* (CVT), wherein certain stimuli or aspects of a situation are systematically manipulated to identify the particular factors and processes that shape moral concepts, intuitions, judgments, and decisions (Reiner 2019). Here, we share some illustrative examples of this technique in bioxphi, leaving questions about potential normative implications to the following section.

Consider an early bioxphi study by Jansen, Fogel, and Brubaker (2013). They asked a group of physicians to judge the intentions of a doctor who, depending on the experimental condition, was described as bringing about either a harmful or a helpful patient outcome as a consequence of enrolling them in a pharmaceutical trial. Consistent with classic work on the "side-effect effect" in experimental philosophy (Knobe 2003), participants judged the doctor to have behaved more intentionally with respect to the outcome when patients were harmed than when they were helped as a side-effect of participating in the study.

More recently, Earp and colleagues (2019) used the CVT to study folk intuitions about perceived discontinuity in personal identity as a consequence of addiction. In this study, the characteristics of an agent and their drug of addiction were systematically manipulated across a set of vignettes. Participants were then asked to judge the extent to which the addicted agent was the "same person as" the agent prior to addiction. The researchers found that becoming addicted to a drug can lead to the strong impression that one is not the same person as before, and that this perception may be driven by perceived negative changes in the drug user's moral character. This work builds on previous studies exploring the intuitive basis for judgments about altered identity in the context of neurodegeneration (Strohminger & Nichols, 2014; Tobia, 2016). Such studies in turn may be relevant to debates about, for example, the validity of advance directives.

As a final example, Mihailov, Hannikainen and Rodríguez López (under review) described a series of agents who take cognitive enhancing medications while engaged in various competitive and non-competitive activities. Through the combined effects of effort and enhancement, each agent succeeds in their activity. Even though procedural fairness was stipulated across all cases, only participants who scored high on a baseline psychological measure of personal investment in fairness attributed the agent's success more to the "pill" than to "skill" and judged the enhancement to be impermissible. These findings might suggest that concerns about fairness in the cognitive enhancement debate could depend in part upon the psychological attributes of the debater.

Normative implications

Given that bioxophi—in contrast to, say, moral psychology—is situated within bioethics, one might ask whether or how the *descriptive* empirical evidence generated by bioxphi studies

can help in drawing *normative* moral conclusions. Within the broader field of empirical bioethics, a large number of complex methods have been employed toward this end. These include normative-empirical reflective equilibrium, grounded moral analysis, reflexive balancing (Davies, Ives, and Dunn 2015) and practical reflective equilibrium (Savulescu, Kahane and Gyngell 2019).

Such strategies often take the context-specific moral judgments of stakeholders at face value to shape normative arguments or inform the future development of practice. A different approach, based on insights from experimental philosophy, is to trace the underlying sources of such moral judgments, treating them as objects of investigation in their own right. Depending on what is discovered about the situational factors or psychological processes involved in producing such judgments, their role in a given normative argument might be affirmed or called into question.

In debates about palliative care for terminally ill patients, for example, it is sometimes argued that a high dose of pain medication that will foreseeably cause the patient's death may nevertheless permissibly be administered if the doctor's *intention* is to relieve suffering, but not if their intention is to cause death. Yet if judgments about what a doctor actually intended may be influenced by such factors as whether their actions led to a positive or negative outcome—as the study by Jansen et al. (2013) described earlier seems to suggest—this may require fresh thinking about how to determine whether such actions are indeed permissible on standard models.

As another example, consider that a recurring objection to cognitive bioenhancement is that it is, in one way or another, unfair. In the previously mentioned study by Mihailov et al. (under review), it turned out that judgments about fairness were strongly influenced by participants' individual psychological attributes, even when procedural fairness was explicitly not at issue in the vignettes used. One might think, then, that the normative force of such judgments, at least when procedural fairness has been accounted for, may deserve a more skeptical look in the context of objections to cognitive bioenhancement.

In essence, the approach we are describing asks whether a given influence *debunks* or *vindicates* the relevant judgments, or their role in a normative argument (Kumar & May 2019). Consider the following simplified schema for such debunking (or vindicating):

1. Moral judgment M is mainly influenced by factor/process F/P. [empirical premise]
2. F/P is an unreliable (reliable) or morally irrelevant (relevant) factor/process. [normative premise]
3. So, moral judgment M is unjustified (vindicated/not defeated).

Such a schema makes clear that a normative premise is still required to reach a normative conclusion. Yet experimental results derived from bioxphi studies, we claim, can provide crucial support for the empirical premise.

Concluding thoughts

A flourishing bioxphi movement envisages empirically-oriented philosophers and ethicists and normatively-minded clinicians and cognitive scientists coming together to study deep questions in bioethics. This is at heart, then, a collaborative project, which aims to integrate experimental study and normative analysis. In particular, the experimental approach can illuminate factors and processes underlying real-life bioethical judgments, which can in turn be assessed for their normative significance. By helping us understand *why* and *how* people make certain moral judgments, bioxphi aims to encourage a new perspective on traditional bioethical questions, affecting how these questions are studied, taught, and perhaps ultimately, addressed in public policy.

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