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ARTICLE

Pragmatism and Experimental Bioethics

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Abstract

Pragmatism gained considerable attention in bioethical discussions in the early 21st century. However, some dimensions and contributions of pragmatism to bioethics remain underexplored in both research and practice. It is argued that pragmatism can make a distinctive contribution to bioethics through its concept, developed by Charles S. Peirce and John Dewey, that ethical issues can be resolved through experimental inquiry. Dewey's proposal that policies can be confirmed or disconfirmed through experimentation is developed by comparing it to the confirmation of scientific hypotheses, with a focus on the objection that the consequences of following a moral view or policy do not provide guidance on choosing among competing ethical perspectives. As confirmation of scientific hypotheses typically relies on evidence gathered from observation, the possibility of ethically relevant observation is then explored based on Peirce's views on feelings as emotional interpretants. Finally, the connection between Dewey's experimental ethics and democracy is outlined and compared to unfettered ethical progressivism.

Keywords: Pragmatism; experimental ethics; confirmation; moral progress; observation

Introduction

Pragmatism experienced a significant surge in bioethical discussions around the turn of the 21st century, as researchers demonstrated considerable interest in the potential contributions of this philosophical tradition to the field. This occurred during a period when many were actively exploring alternatives to both the application of traditional ethical frameworks to medical questions and the "principlism" espoused in Tom L. Beauchamp and James F. Childress's seminal work, *The Principles of Biomedical Ethics*.[1] Nevertheless, the enthusiasm for pragmatism in bioethics was relatively short-lived, and it appears that pragmatism failed to make a substantial impact on the state of the art in bioethics.

Two factors can be identified as underlying the decline in the popularity of pragmatism in bioethics. First, at the early stages of the discussion, pragmatism was promoted as an alternative to the rigidity of a fixed set of universally applicable principles in bioethical practice.[2,3] However, "principlism" had already evolved toward the understanding that principles and their application are not detached from specific cases but influenced by them.[4,5] Beauchamp and Childress acknowledge that the justification of particular courses of action is not a mere application of the principles, even suggesting that their proposed principles might be revisable, however improbable such revision may seem.[6,7] Since pragmatism does not raise a principled objection against principles—nor entail a commitment to moral particularism—it did not seem to provide a compelling alternative path for bioethical discourse. A second reason lies in the fact that proponents of the pragmatist perspective typically argued that bioethical issues should be approached not from a purely theoretical standpoint but as already embedded in practice. The pragmatist emphasis on engagement with practice aligned well with the role of bioethics and its practitioners in their practical and interdisciplinary capacities.[8,9,10] Consequently, many bioethicists had already adopted this starting point, and the remaining researchers and practitioners were not inclined to reject it.

Bioethics appeared to be primed for pragmatism. Indeed, one of the papers that initiated the discussion argued that bioethics possessed a natural affinity for pragmatism.[11] This affinity is not merely coincidental; it also attests to the influence of pragmatism on ethical, legal, and medical thought, particularly in the United States. Accordingly, it could be argued that bioethics had integrated the pragmatist agenda and could no longer be significantly enhanced by it.

However, several dimensions and contributions of pragmatism to bioethics identified in this debate seem far from being taken for granted in both research and practice. While in the 2001 edition of the *Principles*, Beauchamp and Childress refer to the need for "testing" moral views, they develop a coherentist account of justification where "[m]any different considerations provide reciprocal support in the attempt to fit moral beliefs into a coherent whole."[12] By contrast, pragmatism suggests an experimental approach to ethical inquiry—that the policies governing our practices can be confirmed or disconfirmed through empirical means. This notion was present in the bioethical discussion from the outset, where experimental aspects of John Dewey's views of value and valuation were considered and debated.[13] Similar to other potential contributions to bioethics, this aspect of pragmatism appears to have faded into obscurity. With a couple of more recent exceptions,[14 15] it has not been pursued in subsequent discussions in bioethics.

This was not, however, because bioethics was prepared to assimilate the experimentalist idea. Indeed, the opposite seems to be the case, as evidenced by the short-lived debate. Some of those promoting pragmatist ideas in the discussion appeared to reject the experimental approach,[16,17] while others (as we will presently see) did not succeed in presenting a plausible formulation of the notion of experimental inquiry in bioethics. This reflects the overall development of pragmatist thought in recent decades, where the concept of experimental-yet-normative inquiry has either been largely overlooked or been interpreted in a manner that seems far less radical than the proposals put forth by the tradition's classics. The challenge of providing an account of these proposals is all the more formidable because the criteria for what constitutes experimental or empirical inquiry are not immediately evident. In part, this ambiguity is to be expected: As the pragmatists contended, the specifics of the methods of such inquiry cannot be predetermined but, rather, emerge as its outcomes.

The starting point of the following discussion is that bioethics is a field engaging experts, practitioners, and laypeople as well as new technologies and scientific findings; it could provide a context where experimental inquiry (properly understood) into ethical issues could fruitfully be developed.[18] In the next section, I will provide a characterization of pragmatism in terms of central commitments shared by most classical and contemporary pragmatists (although not without exception), and then introduce the experimental dimension of the pragmatist approach to ethics. The following section examines Dewey's proposal regarding the confirmation of scientific hypotheses, focusing on the standard objection to pragmatism that the consequences of following a moral view or policy do not provide guidance on choosing among competing ethical perspectives. As confirmation of scientific hypotheses typically relies on evidence gathered from observation, the possibility of ethically relevant observation is then explored. Finally, the connection between Dewey's experimental ethics and democracy is outlined, and pragmatist experimentalism and unfettered progressivism in ethics are compared and contrasted.

Pragmatism and Ethical Inquiry

The origins of pragmatism are in Charles Sanders Peirce's claim that beliefs are embodied in practices as habits of action, resulting in the notion that meaningful claims must yield conceivable practical consequences. From his earliest philosophical works, Peirce repudiated the Cartesian concept of ideas representing (external) objects to the mind and the notion that we could have instantaneous, self-evident, and infallible knowledge (or "intuitions") concerning our mental states and their contents. The pragmatists also rejected the Kantian notion of a priori knowledge that would provide—or be needed to provide—a stable foundation for science. Appropriating the insights of the theory of evolution in philosophy, they emphasized continuity and the gradual and iterative development of habits and purposes. Much of the rest stems from these foundational critiques. Pragmatists such as Peirce, William

James, and Dewey promoted an empiricist approach to truth, knowledge, and inquiry. In contrast to a quest for certainties, inquiry is characterized by fallibilism, the tenet that anyone's views may be mistaken. They advocated for holism concerning meaning, maintaining that the practical consequences of our beliefs should be examined by connecting them with our many other practical commitments. Pragmatists resisted the reduction of normativity—in logic, ethics, or aesthetics—into descriptions of our practices, abilities, and commitments studied in social sciences, psychology, or other fields. Nevertheless, they maintained support for a naturalistic worldview.

Because of long-standing misconceptions and misrepresentations by critics and the assimilation of pragmatism with perspectives and approaches that are referred to as "pragmatic," it is appropriate to clarify what pragmatism (with few exceptions) does *not* entail: a disregard for theoretical research, relativism or subjectivism, a dismissal of truth or knowledge, or a crude instrumentalism that conflates or supplants truth or goodness with efficiency or "cash-value."

While the majority of pragmatists in recent decades fundamentally concur with these characterizations, they diverge in terms of their implications for ethics. Peirce, James, and Dewey each, in their distinct ways, maintained that ethics can evolve into an inquiry akin to physical science. Highlighting the connection Dewey established between ethical inquiry and democracy, many contemporary pragmatists associate such inquiry with democratic processes of informed and reasoned discussion and debate,[19] with some proposing that a consensus reached after rational deliberation represents the objective of inquiry in bioethics.[20] The ensuing perspective closely aligns with a variant of the epistemic notion of the validity of ethical claims, as advocated by Jürgen Habermas.[21,22]

However, this interpretation tends to conflict with Peirce's and Dewey's proposals of a scientific inquiry into values, purposes, and norms.[23] Peirce maintained that normative issues are to be examined within a triad of normative sciences, comprising logic, ethics, and aesthetics, which constitute the part of philosophy concerned with inquiries into right and wrong. Logic, Peirce's primary focus, was defined as the science of the norms of inference, which are revised according to a purpose. As inference constitutes a form of deliberate action, logic necessitates support from an account of the rules that we should adopt in conduct. This constitutes the subject of the normative science of ethics. As this inquiry, in turn, demands a perspective on the ultimate ideals or purposes of conduct, normative science rests on (what Peirce called) esthetics, the study of what is admirable in itself.

Although Peirce maintained that scientific inquiry is an experimental process undertaken by a community, his descriptions of the revision of norms and ideals typically rely on accounts of individual reflection. Instead, the most extensive statements of the experimental approach to ethics are due to Dewey, who explored the issue in numerous ways, especially in his writings in the 1920s and 1930s on ethics and logic, including what contemporary philosophers refer to as epistemology and philosophy of science. As already noted in comparisons between bioethical "principlism" and pragmatism, Dewey did not object to the existence and use of moral principles.[24] However, in Dewey's view, such principles are fallible, and their ultimate test is to be found in experience rather than in reason, a priori considerations, or authority. Because of the social nature of both inquiry itself as well as of ethical (and more broadly normative) problems and solutions, this testing occurs within and by a community. Indeed, one of Dewey's central concerns revolved around the development of social policy during a period when, in social management and administration, inquiry was driven by predetermined goals that had not been rigorously examined; meanwhile, evaluations in social sciences were predominantly avoided, resulting in purely descriptive results and recommendations.[25] Neither approach led to a reflective investigation into normative, including ethical, issues. Dewey himself contended that democracy could offer the means for social inquiry into normative matters.[26] However, such a proposal is often met with confusion and objections, partly due to the complexity of Dewey's writings on the subject.

Consequences and Pragmatism

Bioethics is rife with cases where the rapid development of technologies and treatments results in, in Dewey's language, a problematic situation: The consequences of different courses of action and policies are unclear, incurring genuine doubt about the right course of action. For instance, consider the current

controversy surrounding puberty blockers that are occasionally prescribed to young transgender individuals to provide them additional time to consolidate their gender identity without the development of secondary sex characteristics, facilitating a smoother transition into their desired gender identity as adults. Studies conducted generally suggest that these treatments are reasonably safe and can enhance psychological well-being of these individuals. However, recent years have witnessed both criticism and reduced availability of these treatments on the grounds that there is limited research available regarding long-term effects and that underaged children (especially those under 16) are unable to give informed consent to the treatment. The ethical dimensions of the problematic situation are intertwined with apparently descriptive issues such as questions about safety and long-term effects. Meanwhile, long-entrenched moral principles—such as "do no harm"—provide limited guidance or conflict with one another.

Dewey's account recommends formulating concrete policies, such as the proposal that underaged individuals should be provided puberty blockers to enable the consolidation of their gender identity prior to or without developing secondary sex characteristics. While abstract principles with universal aspirations may be of aid in formulating such policies, the objective of inquiry is a policy to resolve a problematic situation. This approach is rooted in his theory of valuation, where he challenged the emotivist view that valuation is (reducible to) feeling or emotion, and that value judgments (or what Dewey sometimes referred to as *evaluative* judgments) are expressions of feelings or other emotional states that can only be accessed introspectively. Instead, he contended that valuation is behavioral and observable: "It is by observations of behavior [. . .] that the existence and description of valuations have to be determined."[27] For this reason, Dewey associated valuing with desires and interests. When desires and interests are present, we are (other things being equal) prepared to deploy the means for an outcome; this distinguishes desires from mere wishes and fancies. This aspect of valuation also differentiates desires and interests from the organic and biological tendencies that form their background: Unlike such "vital impulses," desires and interests "include foreseen consequences along with ideas in the form of signs of the measures (involving the expenditure of energy) required to bring the ends into existence."[28] In making value judgments, we render these desires and interests explicit.

The central contention in Dewey's vision could be framed as the claim that the policies guiding our practices can be confirmed or disconfirmed through experimental means. Contentious issues surround the most central contemporary candidates for plausible accounts of such confirmation; however, these issues need not concern us here. According to a popular account of confirmation, the hypothetico-deductive view, evidence confirms a hypothesis that it entails with the aid of assumptions and auxiliary hypotheses. Peirce was among the first to explicitly formulate this account that involves the holism central to pragmatism. In an experimental setting, the evidence typically consists of observations.

The experimentalist notion of ethics was discussed in the debate concerning the impact of pragmatism on bioethics. One of the central figures in this conversation, John D. Arras dismissed Dewey's experimental notion of ethics as an "interesting but misguided attempt to recast ethics as a kind of scientific enterprise with all the trappings and vocabulary of experimental methodology."[29] In Arras's reconstruction of Dewey's account, moral views "are essentially predictions (if P, then Q) of what will happen if we uphold certain values."[30] Experimental confirmation depends on whether the predicted consequences are (or would be) realized. The issue that arises is that predictive success of this nature does not provide guidance on how to choose among competing normative visions of "what our characters and society should look like"; instead, if we "act on a certain set of values," we "will get a corresponding moral character or social structure."[31] There is, instead, a dichotomy between experiments in science and ethical experiments: "[u]nlike experiments in science, it is unclear what would count as a successful or fruitful result that would validate, post hoc, an ethical experiment."[32]

This could be called the standard objection against the pragmatist approach to experimental ethical inquiry. Put in terms of the hypothetico-deductive account, when a moral view is treated as a hypothesis and, in conjunction with auxiliary assumptions, predicts that a particular outcome (Q) will follow from a given action (P), the observation that Q does indeed follow from P does not constitute evidence that confirms the hypothesis. For example, following a policy that recommends treating underaged children with puberty blockers (to prevent the unwelcome development of secondary sex characteristics) will

predictably result in observations of the lack of secondary sex characteristics in children who have received the treatment. But such observations do not furnish evidence that confirms or disconfirms the claim that the treatment *ought* to be provided in order to achieve those ends.

The association of valuation with desires and interests, and further with the means to achieve the relevant ends (or objects of those desires and interests), forms the basis for the standard objection. Even those who have attempted to defend Dewey from misconceptions and criticisms have often failed to provide an account that would circumvent the objection. For instance, in the recent discussion on pragmatism in bioethics, it was suggested that "we can evaluate the chosen end-in-view with respect to how well or poorly it achieved the Good of the situation," for example, as a surgeon "can examine how well the patient recovers, go over video of the surgery, and so on."[33] However, the example assumes that the "good of the situation" is the patient's "recovery"—an assumption that cannot be *confirmed* by whether or not the surgeon's actions were successful in attaining that end—at least unless by the normatively loaded term "recovery" we mean whatever indeed turns out to be the "good" of the situation.

However, Dewey's account is more nuanced than that attributed to him by critics and some proponents alike. Dewey's proposal resembles the hypothetico-deductive account, namely that "[a]greement between what is wanted and anticipated and what is actually obtained confirms the selection of conditions which operate as means to the desired end."[34] But the confirmation of moral views as hypotheses extends not only to the connection between means and ends but also to the selection of means and the very ends themselves: "[o]bservation of results obtained, of actual consequences in their agreement with and difference from ends anticipated or held in view, […] provides the conditions by which desires and interests (and hence valuations) are matured and tested."[35] Although Dewey conceptualizes desires and interests as involving the adoption of means, it is not only the viability of the means to the desired ends that is confirmed or disconfirmed by acting on the hypothesis but also the viability of the desires and interests themselves. Dewey considered this to be self-evident, arguing that "[n]othing more contrary to common sense can be imagined than the notion that we are incapable of changing our desires and interests by means of learning what the consequences of acting upon them are, or, as it is sometimes put, of indulging them."[36]

This forms the basis of the experimental confirmation and disconfirmation of moral policies understood as hypotheses. The observed consequences of acting on policy can reveal that the sought-after ends were not ultimately worthwhile, or that they were not worth the means. Observations of the consequences of following the policy allowing the treatment of underaged individuals with puberty blockers not only show whether the intended consequences were achieved but also attest to whether the ends sought were indeed desirable and whether the means were worthwhile.

Despite Dewey's discussion of consequences and ends, pragmatism is not classifiable as a consequentialism, insofar as that means that the rightness of moral policies is assessed in terms of their outcomes. This is in part because pragmatism offers no fixed conception of good or desirable ends. Dewey argued that the experimental revision of policies does not terminate with the achievement of desirable ends; rather, means and ends form a continuous chain, where an "end actually reached is a means to future ends as well as a test of valuations previously made."[37] Ends are not only tested by experience concerning their attainment, but their achievement may also suggest new ends. As value judgments express both means and ends, they can be articulated differently from the perspectives of various families of ethical theory. For instance, from a deontological viewpoint, the means taken to the ends may be conceptualized in terms of whether or not they accord with our ethical duties; from the perspective of virtue ethics, we may inquire whether adhering to a policy aligns with a moral character or the goal of the good life.

Observation and Emotion

Dewey's account relies on experience being able to attest not only to whether ends were attained but also to whether they were worthwhile given the means taken. We can easily foresee another criticism, connected to the standard objection, claiming that the relevance of experience to such judgments remains unclear. While we may observe whether or not the ends were achieved, what kind of experiences

could show that they were also desirable? A central contention of Western philosophy is that ethically relevant observation does not exist: "perceiving" something as desirable, valuable, right, and so on is understood as subjective, or perception itself is viewed as laden with the values we have already adopted. For the testing of policies to be experimental, however, a relevant kind of observation must be available.

Pragmatism does not immediately provide an account of such moral observation. Nevertheless, its building blocks can be drawn from Peirce and Dewey. Based on Dewey's remarks, Franklin G. Miller, Joseph J. Fins, and Matthew D. Bacchetta proposed that emotions can serve as a source of moral insight.[38] More recently, pragmatism has been argued to highlight the relevance of emotions and feelings in the development of moral opinion: as Gabriela Pavarini and Ilina Singh note, in neuroscientific research, it is a "remarkably consistent finding is that judgements of both moral violations and virtuous behavior engage brain areas involved in emotional processing."[39] While emotions and feelings are not the sole sources of moral views, it appears evident that ethical judgments interact with our emotional responses, such as when a feeling of indignation or the like results in the judgment that what is being witnessed is wrong.

A refined account of the potential role of emotions as the empirical basis for experimental inquiry can be constructed on Peirce's semiotics. In Peirce's terminology, *interpretants* are reactions or responses that interpret a sign. Peirce divided such interpretants into three classes based on the nature of the response itself: emotional interpretants are feelings, energetic interpretants are actions, and logical interpretants are thoughts.[40] Interpretants can become signs to further interpretants, such as when a feeling or emotion (an emotional interpretant) is subsequently interpreted in a judgment (a logical interpretant): We may judge something is wrong because of our emotional reaction to it. According to Peirce's semiotic account, feelings and emotions can stand as responses to signs. These responses can be more or less fitting to their objects. While feelings and emotions are, in one sense, incorrigible, they can lead to the generation of logical interpretants such as judgments that can be assessed in terms of truth and falsity. They do not necessitate those judgments, but they can contribute or even lead to them.

Connecting Peirce's semiotic notion of feelings as interpretants with Dewey's account of the experimental testing of policies, we can develop an approach utilizing emotional responses for cognitive purposes. We noted that observed consequences can testify to whether certain ends in view were attained by the introduction of a new policy. However, in addition, judgments drawing upon emotions and feelings can function as evidence regarding whether those ends were desirable or worth the means taken. In this way, emotions and feelings can provide a source—albeit naturally fallible—for the experimental confirmation and disconfirmation of policies as hypotheses.

This pragmatist perspective differentiates itself from alternative accounts of the relevance of emotions in ethics, such as emotivism and (many forms of) ethical sentimentalism. Dewey, as previously mentioned, argued against the view that moral judgments are mere expressions of emotions, while he maintained that emotions play a role in the development of desires and interests, and (through them) in the emergence of moral judgments. Furthermore, the suggestion at hand is not a reductive one that claims that moral judgments are judgments about emotions, as in the so-called response-dependent views that assert that moral language describes actual or prospective emotional responses. Finally, this pragmatist view does not imply that the actual revision of moral judgments is always based on emotions: We may, for instance, develop and justify moral views and policies based on a moral authority, such as a religious text. Instead, emotions can play this role—and could do so, in a systematic manner, in experimental inquiry.

In line with the prevalent contention that morally relevant observation—such as perceiving something as desirable or abhorrent—is subjective, emotional responses are often seen as stemming from our culturally developed ethical opinions, rather than the reverse. Pavarini and Singh note that cultural differences can even appear at a neurobiological level, with different brain areas activated in participants from different cultural backgrounds experiencing morally relevant emotions.[41] These facts might be taken to challenge the potential of emotional responses as a basis for ethically relevant observations. However, observations regarding attained consequences are also influenced by cultural factors. Yet the development of physical sciences has shown that it is possible to derive objective conclusions from subjectively and culturally influenced observation. At present, judgments based on emotions are

admittedly imprecise. The impediments to the development of measurements and instruments, however, are historical and practical rather than principled. As Dewey claims, "The practical difficulties in the way of scientific inquiry into valuations are great, so great that they are readily mistaken for inherent theoretical obstacles."[42]

Indeed, cultural and individual conditions and their influence merely underscore the necessity of holism in determining the relevance of emotional responses to experimental inquiry. Common experience clearly indicates that emotional responses can be modified—amplified and diminished—by various conditions such as medication and inebriation. Our ability to experience the relevant emotions may also be impaired, such as in the case of psychopaths who—despite making moral judgments—may lack the concomitant emotions. Existing emotional ties and the proximity of the people and issues under consideration, such as a family member compared to a distant stranger, may influence our emotional responses. Feelings and emotions may often be mainly due to already accepted moral perspectives and judgments.

In the case of allowing puberty blockers, for example, the deeply personal and individual nature of the feelings associated with the development of secondary sex characteristics may entail that the evidence cannot stand on observations made only by a limited number of individuals who wish for treatment. On the other hand, the variety of such emotional responses, especially on the part of transgender individuals, has historically been and continues to be repressed in social—and even suppressed in personal—contexts. This suggests that the relevant emotions and feelings have not been taken into account in the development of practices and principles that bear on gender and its connection with sex characteristics. Instead of serving as counterexamples to the role of emotions in ethically relevant observations, such cases and issues highlight the holistic approach necessary when employing emotional responses and subsequent judgments. If the pragmatist account at hand is right, emotional responses can serve as evidence to confirm or disconfirm a hypothesis, but only in the context of multiple and fallible background assumptions.

This holistic approach highlights the divergence of the pragmatist perspective from the coherentist, reflective equilibrium approach to justifying moral views proposed by Beauchamp and Childress. In the fifth edition of their *Principles*, Beauchamp and Childress align their approach with the scientific and experimental testing of hypotheses, maintaining that beliefs about specific cases, experiences, and moral sentiments are germane to the assessment of moral judgments and principles.[43] Nevertheless, these various factors are expected to provide reciprocal support in generating a coherent whole. In contrast, the pragmatist approach maintains that abstract moral principles and beliefs about specific cases function as background hypotheses and assumptions when devising and testing concrete policies. However, as in holistic empirical inquiry more generally, the pragmatist account of experimental testing and revision *extends* to these background assumptions, *including the abstract moral principles* that we may have initially resorted to. It may reflect this difference that, in more recent editions of the *Principles*, the analogy between the reflective equilibrium approach and the experimental testing of moral views as hypotheses appears to have been removed.

Deliberation and Experimentation

Pragmatists maintain that inquiry occurs within and through a community. Ethical and normative issues are inherently linked to our social lives and our practices of interaction with one another and our environment. Dewey's focus consistently centered on the development of actual social practices and the possibility of transforming that development into what he termed *social inquiry*. For these reasons, the systematic empirical investigation into the development of policy and practice must be connected to the public. As many have noted, there is a firm connection between Dewey's notions of democracy and social inquiry.[44]

Dewey's conception of democracy has often been associated with deliberative democracy and its ideal of citizens engaging in reasoned discussion and debate to identify problems and form consensus around solutions. However, this conflation of social inquiry with deliberation tends to obscure the experimental

aspects of Dewey's accounts of democracy and social inquiry alike. For example, Fins, Bacchetta, and Miller align their proposal for "clinical pragmatism" in moral problem solving in clinical practice with general clinical problem solving, arguing that it leads to "operative, but contingent, conclusions that require validation through experience."[45] Nevertheless, they also maintain that clinical pragmatism is a model of democratic problem solving that can "guide the process with the aim of reaching an ethically acceptable consensus" largely through communication and dialogue.[46] However, while dialogue may be necessary to identify problems and solutions, it amounts to a specific stage of experimental inquiry; the proposed solutions must also be tested via their consequences and resulting experiences. Moreover, experts are required to recognize and conceptualize problems and devise experiments to test potential solutions, and just because a consensus has been reached among the parties involved does not imply that the experimental inquiry has run its course. In the experimental contexts that comprise bioethics, the role of practitioners, patients, research subjects, members of medical ethics committees, and so on is, rather, to provide information that anchors problems and solutions, and to supplant data by putting proposed solutions to the test of actual and lived experience.

The notion of experimental moral philosophy and social inquiry has often been associated with a progressive moral outlook commonly attributed to Dewey.[47] If policies are hypotheses to be tested in practice, revising them seems to necessitate the continuous readjustment of our practices in order to discern which policies are correct. Such a focus on experimentation is prone to objections such as those raised in connection with puberty blockers, where the charge has been made that allowing the treatment amounts to "experimentation on children."

However, the pragmatist perspective, as developed here, mitigates the need for such experimentation on three counts. Firstly, as pragmatists emphasize, inquiry should begin with genuine doubt. There is no need for us to revise policies and moral views that are not called into question by the observations concerning the consequences. Secondly, experimental testing of policies can also occur within the imagination.[48] We do not always need to modify our social practices to experience the emotional responses that changes would or might evoke; instead, merely imagining the consequences of following a policy is often sufficient to invoke the relevant feelings and judgments.

Thirdly, and finally, although Dewey's articulation of experimental testing of policies tends to adopt a predictive tone, it can be argued that, at least in some cases, our existing moral views and perspectives—as well as desires and interests—have already been vetted by past experiences, including those of previous generations. Indeed, this was a reason for Peirce's more conservative view of the relevance of scientific inquiry to practical moral conduct and his argument (at one time) that instinct and sentiment, as opposed to inquiry, should remain as the root of moral views.[49] This perspective emerges also in *A Theory of Valuation*, where Dewey wrote explicitly about the import of his account of policies as hypotheses in connection with the concept of health: "While there is no a priori standard of health with which the actual state of human beings can be compared so as to determine whether they are well or ill, or in what respect they are ill, there have developed, out of past experience, certain criteria which are operatively applicable in new cases as they arise."[50] Although the concepts of health and illness themselves develop by experimental means, past experience in medical practice already provides considerable lessons concerning their deployment. In some instances, it can be argued that moral views receive confirmation from past observations. However, moral views and abstract principles cannot be justified by relying on authorities such as religious texts and tradition alone, exclusive of any attention to contemporary participants, cultures, and conditions. Caution is in order, Dewey suggests, arguing that "upon the whole, in the past values have been determined by customs, which are then commended because they favor some special interest, the commendation being attended with coercion or exhortation or with a mixture of both."[51] Puberty blockers may again serve as a case in point. Some objections to a permissive policy concerning treatment are founded on actual observations of consequences. However, in other cases, the motivations for such objections may lie solely with customs and tradition (including, e.g., medical, religious, familial), veiled in a concern for unknown and unforeseeable consequences.

In this way, pragmatism can strike a balance between ongoing revision and dependence on perspectives gained from prior experiences and traditions that contrast with Beauchamp and Childress's coherentist approach. Beauchamp and Childress acknowledge that a coherent set of moral judgments

and principles may not necessarily be morally satisfying. They therefore propose that striving toward reflective equilibrium should begin with firmly established moral beliefs that are closely approximated by their principles and that they anticipate will be validated as the common morality through empirical investigation.[52] The principles require no further examination to serve as the basis for approximating reflective equilibrium, provided that they express our common morality as Beauchamp and Childress anticipate. The pragmatist view offers a competing and more refined approach. Even if there is such a thing as common morality, its contents require further scrutiny: To what degree are its contents influenced by past experiences and to what degree are they shaped by interests and customs that inhibit the emergence of alternative viewpoints and prevent the expression of experiences that diverge from them?

Conclusion

Because of the entrenched presuppositions and lack of methodological developments, the notion of an experimental science of ethics may sound outlandish. This fact did not escape the pragmatists: For example, Dewey acknowledged that there are "no hypotheses of the same empirical order [as in physics and chemistry] which are capable of relating them to one another so that the resulting propositions will serve as methodic controls of the formation of future desires and purposes, and, thereby, of new valuations."[53] However, the difficulties encountered in his time, and arguably today, are primarily practical—"supplied by traditions, customs, and institutions which persist without being subjected to a systematic empirical investigation and which constitute the most influential source of further desires and ends"; on a more optimistic note, Dewey continues by pointing out that "it is worth while to note that the same obstacles once existed in the subject matters now ruled by scientific methods."[54] It remains one of the main and most unique contributions of pragmatism that resolving ethical issues could not only draw from science or resemble science but become an experimental inquiry.[55]

By the early 2000s, the field of bioethics, including the "principlism" of Beauchamp and Childress, had evolved toward an orientation amicable to pragmatism. The assessment of bioethical policy and practice was no longer seen as simply applying a set of moral principles to cases; rather, the unique features of each case were considered significant in evaluating policy, and could even provide an incentive to adjustments to the core principles. However, the equilibrium approach adopted by Beauchamp and Childress expects satisfactory moral views to cohere with fundamental principles, provided that they are confirmed as the "common morality," leaving little room for their revision. In practice, pragmatism offers an alternative approach for bioethics: reviewing the consequences of existing and proposed concrete views and policies. While established moral views may be rooted in past experience, the pragmatist conception of experimental testing requires that we extend it to the moral principles that underlie concrete policies. As experimental inquiry relies on observation, pragmatism suggests that emotions and feelings can inform judgments that constitute the relevant observations. However, the holistic nature of the experimental confirmation of hypotheses entails that the impact of factors such as proximity, medication, and traditional moral perspectives on emotional responses—and the resulting moral judgments—has to be factored together. While such consideration often occurs in bioethical practice, conceptualizing these factors as background assumptions and hypotheses opens up new avenues for empirical and theoretical research.

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Notes

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