

## *John Dewey, Humanism, and the Value of Science*

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What Humanism means to me is *an expansion, not a contraction, of human life, an expansion in which nature and the science of nature are made the willing servants of human good.*

John Dewey, “What Humanism Means to Me”

Thus wrote John Dewey, whose progressive pragmatist philosophy stands as one of the most important articulations of humanism in the twentieth century. Humanism in the United States, however, came in many flavors, with public intellectuals, activists, and artists from all sides of the political spectrum claiming it as the doctrine best suited to advance their vision of human flourishing. The literary humanists led by literary critics Paul Elmer More and Irving Babbitt,<sup>1</sup> for example, clung to a version of humanism reaching back to Plato, which held mind–body dualism to be the key ingredient to promoting the good life. For these conservative cultural critics, the wholesale embrace of science by what they called “humanitarians” and “evolutionists” such as Dewey represented a kind of regressive barbarism, which, in their view, undermined a conception of the human as distinct from other animals. Babbitt, More, and their followers believed that to keep humans’ animalistic, “wild” appetites in check, we must cultivate in students what they referred to as “the inner check” or “higher will.”

Many progressive intellectuals and social reformers, by contrast, espoused versions of humanism distanced from what they believed was the corrupting influence of religion, and especially Christianity, which, rather than fulfilling its promise to promote the flourishing of all human beings, was used to support economic practices that exploit children and the poor and uphold racist and sexist values (Cameron 2023). Unlike the

<sup>1</sup> The literary humanists were later known as the New Humanists, but to avoid confusion with the very different New Humanism of the historian of science, George Sarton, I use the term “literary humanism” to refer to the former throughout this chapter.

literary humanists, prominent sociological humanists such as W. E. Du Bois and Jane Addams adopted a naturalistic, Darwinian worldview, and turned to science as a means by which subjugated communities – African Americans, women, the working class, etc. – might achieve political, industrial, and social equality (Cameron 2023; Deagan 1988a; Early 2006; Morgan 2016). The progressive humanism of Dewey shared many of the assumptions of the sociological humanists about human nature. Dewey also believed that rather than focusing on cultivating a controlling higher will by means of an education centered around the classics, we must promote an imaginative and experimental educational approach.

The aim of this chapter is to spell out the intertwining of humanism and science across Dewey's work and, more specifically, to anchor his account of the value of science in his philosophy of humanism. I begin by situating Dewey's pragmatic humanism within a culture war in the 1910s and 1920s concerning what human nature is and whether science should guide our efforts to address social ills and promote human flourishing. I then argue that although he agreed with the literary humanists that education needed to be reformed, Dewey insisted in *Democracy and Education* (1923/1916) and *Human Nature and Conduct* (1922), among other works, that to make real social progress, we must cultivate a scientific disposition, a taste for excellence, and flexible cognitive habits to better equip future generations to meet the challenges of the changing conditions of human experience. I conclude by supplementing Dewey, vis-à-vis Addams (2002/1902), with preliminary thoughts on the role that caring about others ought to play in helping us produce knowledge that can be used to promote the common good.

### The Literary Humanist Quarrel with Science

The 1920s was an era of profound cultural turmoil and social unrest in the United States. Culminating in the 1929 stock market crash, many citizens were troubled by what they perceived as a dramatic cultural decline. In a poem published in 1923, American poet William Carlos Williams perhaps best expressed a collective anxiety about the lack of human involvement in directing the course of human history, with “No one / to witness / and adjust, no one to drive the car” (1923). The public intellectuals who rose to prominence at the end of the decade, the literary humanists, likewise worried about the materialism of everyday life, relativistic and naturalistic tendencies in philosophy, and the romantic individualism they believed

was being promoted in literature and the arts. Babbitt, More, and their followers embarked on a cultural crusade against what they thought was a misguided entanglement of humanism with science in academia, which, they feared, was contaminating the moral fabric of the community. The source of the problem for the literary humanists was humanity's lack of self-control. Having thus diagnosed the problem, they reasoned that humans must separate themselves from their natural selves by disciplining their animal impulses and passions, and by cultivating the higher ethical self or will as the means to discover universal values and standards against which to measure their conduct. These universal standards are required to ground the diversity of human experience in a common element, a norm to which we must all aspire (Babbitt 1930: 28).

Comprised mainly of literary critics, the literary humanists leveled many of their critiques at the Rousseauvian romantics or so-called emotional naturalists, who believed that social institutions have a corrupting influence on humans. Whereas Rousseauvian romanticism exalted primitivism, the view that humans are naturally good in a state of nature, literary humanism celebrated the ascendancy of humans over nature. And whereas romantic ethics reduced morality to "an expansive sympathy," the literary humanists believed morality entails a "restraint on passion" (Hoeveler 1977: 45). The pragmatists, and "scientific" philosophers more generally, were also among their favorite targets, as they endorsed a conception of human nature as being entirely a product of a material and social environment, and based their philosophy of life on the contingent, organic element of human experience. But no group was more reviled than the so-called humanitarians, who applied the scientific method to the study of human behavior and conduct, and who neglected the fixed, spiritual "center" shared by all humans and which differentiated them from other animals (Babbitt 1930).

Although many of their portrayals of their opponents' views were simplistic and inaccurate, the literary humanists offer an important window into a culture war over whether science should play any role in our understandings of what human nature is and how humans should conduct themselves. Here I focus on Louis Trenchard More, Paul Elmer More's younger brother, whose critical attitude toward the sciences served to bolster the literary humanist critiques of naturalist thinkers and social reformers. We will see that More was precisely the man of science the literary humanists needed to legitimize their attacks on what they believed was a harmful approach to understanding the nature of human experience and ameliorating the human condition.

Trained as a physicist, More set out to delimit what should be within the purview of scientific investigation in *The Limitations of Science* (1915), and later in "The Pretensions of Science," which appeared in one of the most important contributions to the literary humanist movement, Norman Foerster's edited collection *Humanism and America* (1930), and also in *The Dogma of Evolution* (More 1925), which purports to unmask the extent to which Darwinian evolutionary theory was infecting modern thought. More agreed that science is a valuable tool for helping us to predict the future, for diminishing superstition, and for allowing us greater control of our environments (1915: 187). Yet, despite science's valuable contributions to the advancement of human civilization, he claimed that it leads us astray when scientists create "a fictitious world of the imagination made out of æthers, electrons, mathematical symbols, and have confused it in their own and others' minds with the sensible world of brute fact" (1930: 3, see also 16; and More 1915: 188). In other words, when scientists dabble in the world of metaphysics, they indirectly cause social harm, as they lend authority to what More refers to as the "pseudo-sciences" of psychology and sociology (More 1930: 4). Arguing that we need a separate method from that of the "objective" sciences to study the nature of human consciousness and behavior, More contended that any field that investigates subjective phenomena scientifically is a pseudo-science.

More fervently believed that we should be wary of the psychologists and sociologists, "far greater in number than the two descendants of James" (1930: 3)<sup>2</sup> and far more dangerous than the metaphysically inclined scientists, as they cause harm directly by making false and misleading claims about human nature and conduct (1930: 4). In *The Dogma of Evolution* and "The Pretensions of Science," More specifies that biologists, and especially Thomas Huxley (1930: 4–5), are to blame for popularizing the misconceptions that the world is in flux and that man is an organic machine subject to physical laws. Worried that, in his words, "an increasingly large number are . . . turning to scientific doctrines in the hope that a deeper experimental knowledge of the laws of man's individuality, of his social relations, and of his environment" will solve social problems, More insisted that naturalism is not an appropriate guide for "evolving a society nearer to the ideally good" (1915: 214). His diagnosis of "these new systems of scientific ethics," however, is based on a fundamental misunderstanding of the morally inflected scientific naturalism of some of their

<sup>2</sup> This is likely a reference to John Dewey and George Herbert Mead.

popularizers, especially Dewey, who, even while arguing that we should cultivate in children a scientific attitude, believed that laws derived from empirical observation are not by themselves appropriate guides to moral conduct.<sup>3</sup>

More's simplistic understanding of how naturalist philosophers and social reformers conceived the value of science led him to distort some of his opponents' naturalistic conceptions of human nature. This was frustrating to many, including George Sarton, who wrote in a review of Foerster's collection, *Humanism and America*, "[o]ne wishes one could send some of these 'humanists' back to school that they may learn the A B C of science, and be taught how dishonest it is to condemn things of which one knows nothing" (Sarton 1930: 448). As an example of this, consider some of More's attacks, which misrepresented scientific social reform projects as "eugenics":<sup>4</sup>

A third class of eugenicists consists mostly of the hysterical elements of social workers who sob over the sins of society and sob over the innate purity of the harlot, who weep over the heartlessness of the law-abiding and weep over the innate nobility of the criminal. So far as one can make out from their incoherent utterances, they wish to put all the sins of the individual on society, without comprehending that society is made up of individuals. Whatever good they may accomplish, no one in the least conversant with science will concede that they are advancing an ethics in conformity with scientific methods; for if science makes any one thing clear, it is that the actions of the individual must bring their reactions also on the same individual. (1915: 254–255)

More was not alone in his distaste for and fear of the theoretical commitments of naturalist philosophers and social reformers. His colleague, Babbitt, worried about the philosophical commitments of the naturalists (to whom he also referred as "the Baconians"): "The Baconian has inclined from the outset to substitute an outer for an inner working – the effort of the individual upon himself – that religion has, in some form or another, always required" (1930: 34). Attributing all manner of social ills to his opponents, Babbitt blamed them for encouraging "the acquisitive life and also the pursuit of material instead of spiritual 'comfort'" (1930: 34). This was due to their supposed allegiance to Rousseauvian romanticism: "the upshot of this myth of man's natural goodness has been to discredit the

<sup>3</sup> See Rømer 2012 for an interpretation that challenges the widespread understanding of Dewey as a naturalist.

<sup>4</sup> Chief among them was Addams, who did much to improve the conditions of the working class in the suburbs of Chicago – among many other social achievements.

traditional controls, both humanistic and religious” (1930: 35). More agreed and added, in *The Limitations of Science*, that “[s]ide by side with the doctrine that human sympathy is the controlling factor in ethics, and this belief is evidently the basis of eugenics, there has always persisted the contrasted doctrine that the state of man is one of warfare, a survival of the fit” (1915: 258).

It is tempting to point out the many fallacious, uncharitable, and incorrect claims made by the literary humanists, dismiss their arguments as pseudo-philosophy produced by scholars with only a superficial understanding of both philosophy and science, and move on. It is worth pausing here, however, to break down the source of their worries and why it matters. At heart, what the literary humanists were pointing to was a gradual erosion of traditional values, the emergence of schools of thought that challenged their belief that humans are cognitively and morally distinct from other animals, and educational approaches that they feared did not cultivate in pupils their capacity for moral agency. They believed that a naturalistic understanding of the human encouraged citizens to pursue their first-order desires. And they doubted the efficacy of educational and social reform programs built on what they believed were shaky theoretical foundations.<sup>5</sup> On their “correct” version of humanism, the study of human nature ought to be based on “intuition” (Babbitt 1930) and imaginative apprehension of some common element shared by all humans (Babbitt 1919). Literature, and in particular time-tested literature untainted by the romantic celebration of individual experience, was valuable as a source of knowledge of the subjective elements of experience. It is literary humanism cordoned off from scientific psychology, then, that should serve as a guide to human conduct.<sup>6</sup>

Although literary humanist efforts to inject fear and suspicion of the encroachment of science into all domains of human life in the public sphere did not find a large audience, their attacks on the authority of science nevertheless succeeded in the decades to come. Several critics at the end of the 1930s charged that faith in science was misguided and undermined the very foundations of democratic thought in the United States (Jewett 2020). In what follows, we will see that, as the literary humanists feared, Dewey’s progressive humanism relocated the source of value to the

<sup>5</sup> Jewett (2020) gives an overview of the literary humanist cultural critiques and contextualizes them within larger debates about biological, social, and cultural determinism stemming from Russell, Krutch, Watson, and Freud. He also discusses the influence of these debates on the public understanding of science in the present.

<sup>6</sup> See for example Paul Elmer More 1928.

domain of human experience. We will also see that though their attacks against progressive humanism were off the mark, they nonetheless testified to a burgeoning fear of the authority of science, which helped to shape the contours of Dewey's positive proposal. As a pragmatist, he did not merely see himself as intervening in narrow, academic, philosophical debates in ethics or education. Despite their abstract quality, Dewey's philosophical contributions were a direct response to the changing intellectual landscape and social conditions of his time. His philosophy was systematic and holistic, theoretical and pragmatic, and can be understood as a philosophy of humanism.<sup>7</sup>

### Dewey's Philosophy of Humanism

Dewey is perhaps best known for championing an instrumentalist conception of science, or the view that science is valuable as a means to helping us accomplish human ends. Science is *always* value-laden, according to Dewey, as the aims of science are tied to what we value. This could be anything from removing sexist biases from science to valuing objectivity in science. Given that for Dewey, scientific investigation is inextricably bound up with our values – in fact, as Matthew Brown (2020) has recently argued, even scientific facts, when employed as means to solve a problem, are selected for their *value* to help us accomplish our ends in view – it is surprising that not much has been written about the close entwining of science and humanism in Dewey's thought. Perhaps this scholarly gap is the result of our contemporary academic environment, which, with notable exceptions, tends to cordon off the sciences from the humanities. Dewey believed, however, that a proper understanding of human nature and conduct was necessary not merely for designing an educational curriculum that might better serve our democratic aims but also for reenvisioning the role that science might play in advancing progressive social aims. Thus, although he was critical of the tendency of humans to employ science to advance the interests of industry, he was also hopeful that we could cultivate in new generations imaginative and critical habits of mind and a social consciousness that would enable us to harness our collective resources toward solving social problems and ameliorating the human condition.

<sup>7</sup> Schulenberg (2021) discusses Dewey within the context of pragmatist humanism. His interest lies, however, in the neglect by most pragmatists of the significance of aesthetic form, which I do not consider here.

Like the literary humanists, Dewey worried about the materialism of the age and the lack of a critical attitude in the public. He differed, however, in how to go about addressing these problems. First, he was critical of metaphysical discussions in ethics, which offer accounts of moral motivation disconnected from the complexity of everyday situations (Brinkmann 2013; Dewey and Tufts 1932/1908). Second, he rejected the dualistic conception of human nature put forth by the literary humanists according to which the animal self is distinct and separate from the reflective, ethical self. Third, since like other animals, we are creatures of habit, Dewey believed that rather than cultivate an inner check, which, as we will see, produces internal disharmony, we must reimagine and artfully cultivate *new* habits of thought and behavior (Dewey 1922; McClelland 2005). Dewey recognized that intelligent habits are difficult to acquire, however, as social environments tend to encourage mechanical habits of thought and behavior.<sup>8</sup> For this reason, he thought that we ought to concentrate our efforts on cultivating somatic awareness and cognitive flexibility in the young (Dewey 1923/1916; 1922; Westbrook 1991).<sup>9</sup> By adopting an experimental, or as Dewey liked to call it, a “scientific” disposition, citizens will be better equipped to meet the various ethical and social challenges of the future.

Although the literary humanists were right that the progressive humanists sought to apply the scientific method to human experience, and that many progressive thinkers adopted a naturalistic, Darwinian conception of human nature and conduct, they were entirely wrong to claim that “evolutionism,” as they liked to call it, implies social Darwinism or essentialism about human nature. For Dewey, Darwin’s evolutionary theory shifts our conception of the human, not as essentially distinct from other animals, but as an organism that is not only shaped by but capable of shaping its material and social environment. This new understanding propelled him to examine human valuation practices and inspired him to envision the conditions that need to be in place for humans to employ their capacity for moral agency. The literary humanists believed that to resist our first-order desires to consume – to reject materialism as a standard mode of conduct, in other words – we need to turn to the past and derive ideals of conduct to aspire to, but Dewey worried that this

<sup>8</sup> For Dewey, habits are not acquired through rote repetition and are thereby not tied to action; rather, habits are modes of responding to certain salient features of the environment. When intelligent and *thoughtful*, habits produce “creative response[s] to a changing environment and emergent impulses” (Westbrook 1991: 290, see also 293).

<sup>9</sup> See Shusterman 2012 for a more recent elaboration of Dewey’s insight.



approach would leave false beliefs and assumptions unexamined. For example, the classics may propagate falsehoods, uninformed by the findings of the latest science, such as the belief that Black people are essentially intellectually inferior to white people. He also worried that this approach would impair our ability to think flexibly and critically when faced with particularly vexing social problems. Rather than look to the past, we should employ standards appropriate to the specific situation at hand. This is because the material and social environment changes from generation to generation, and we need to apply new solutions to ever-evolving social problems. For Dewey, cultivating an inner check encourages us either to blindly follow fixed rules and take judgment out of the equation, or to suffer because of conflicting intuitions about what we should do, where instead we could be reflecting on the value of traditional standards for solving practical problems.

Key to Dewey's proposal is an understanding of human nature and conduct as malleable and responsive to the pressures of the material and social environment (Dewey 1922; Brinkmann 2013; McClelland 2005; Westbrook 1991). If his proposed understanding of human nature and conduct is true (an understanding that, he would agree, needs to be verified by means of empirical inquiry), then it follows that flexible, or *intelligent*, habits will counteract our tendency to settle into mechanical and unproductive habits. Now, just how, precisely, are we supposed to accomplish this?

As early as the 1890s, and with the support of the journalist Franklin Ford, Dewey became enthusiastic about the prospect of engineering an epistemic environment in which knowledge is more equally distributed. Frustrated by the tendency in philosophy to produce theoretical knowledge disconnected from the problems of everyday life, Dewey and others decided to start a newspaper, which was to be called *Thought News* and distributed across southern Michigan (Westbrook 1991: 55). The aim of the paper was to spread ideas of democracy and to develop in the public habits of inquiry and a heightened awareness of their social "function" in an "interdependent community" (Westbrook 1991: 53). Dewey thought that by making philosophy accessible to the community, it would become valuable as a tool for injecting new life into what he and the other prospective founders of the newspaper referred to as the "social organism." The project fell through in part because of a fallout between Dewey and Ford, whose vision for the paper was much more ambitious than Dewey's in its scope: Where Dewey wanted to inject new life into philosophy and bridge the gap between the masses and the educated elite, Ford wanted to

radicalize journalism and use the newspaper as a vehicle for studying the social organism “like a steam engine” (Ford quoted in Westbrook 1991: 56).<sup>10</sup> Despite its failure, *Thought News* remains an important touchstone for understanding Dewey’s future scholarly pursuits, which increasingly focused on the need to develop a scientific disposition in citizens to better equip them to solve the problems facing their communities. We will see in what follows that Dewey became invested in reenvisioning childhood education, to cultivate intelligent habits at a stage when minds are most flexible, but let me focus here on just one aspect of how Dewey thought students should be educated.

Much has been written about the importance of experiential learning and, especially, of exposing students to concrete situations so they can learn to appreciate the worth of their experiences firsthand.<sup>11</sup> But more needs to be said about the importance of these firsthand experiences for cultivating intelligent habits.<sup>12</sup> “The formation of habits,” wrote Dewey,

is a purely mechanical thing unless habits are also *tastes* – habitual modes of preference and esteem, an effective sense of excellence. There are adequate grounds for asserting that the premium so often put in schools upon external ‘discipline,’ and upon marks and rewards, upon promotion and keeping back, are the obverse of the lack of attention given to life situations in which the meaning of facts, ideas, principles, and problems is vitally brought home. (1923/1916: 276)

Tastes, however, cannot be developed merely by teaching aesthetic, ethical, and epistemic standards secondhand. Dewey gives the example of a music student who learns that certain formal features of classical music are esteemed by the experts, and hence, that he, as a student of music, should also appreciate those features; this student can even come to believe that his own standards correspond to the conventional standards of what counts as great music. But if he has most enjoyed ragtime in the past, “his active or working measures of valuation are fixed on the ragtime level. The appeal actually made to him in his own personal realization fixes his attitude much more deeply than what he has been taught as the proper

<sup>10</sup> Other figures who were involved in planning the launch of the newspaper included Corydon Ford, Franklin Ford’s brother, and Robert Park. See Matthews 1977 for a discussion of the importance of *Thought News*, and especially Park’s relationship with Dewey and Ford for shaping Park’s theoretical commitments.

<sup>11</sup> Some scholars describe firsthand experience as “aesthetic” experience. See Johnston 2002 and Römer 2012, among others.

<sup>12</sup> For related discussions about the regulative role pre-reflective qualitative experience plays in initiating inquiry, see McClelland 2005 and Stuhr 1997. See also Römer 2012, for an analysis of Dewey’s concept of intelligence.

thing to say; his habitual disposition thus fixed forms his real ‘norm’ of valuation in subsequent musical experiences” (1923/1916: 275).

Dewey argues that the same principle applies to moral and epistemic judgments, in which “vital appreciation” comes to play a much bigger role in impressing upon us “the measure of the worth of the generous treatment of others,” for example (1923/1916: 275). When we teach secondhand values – as the literary humanists recommended we do – we create a “split” between our habitual inclinations and the theoretical standards we were taught in school and by our parents. If one grows up in a society where slaves are considered property that ought to be returned to their masters – as Mark Twain’s iconic character Huck Finn’s nineteenth-century contemporaries believed one should – one will experience an internal conflict and perhaps even suffer when one’s habitual inclinations go in the opposite direction. Huck’s adventures with the runaway slave Jim enabled Huck to experience the value of freedom, even though he believed he would go to hell if he did not follow the rules and return Jim to his slaveowners (Twain 2014/1884). This, according to Dewey, creates a “kind of hypocrisy of consciousness, an instability of disposition” (1923/1916: 275). Similarly, a student can be taught to perform certain analytical moves and acquire information by means of “mechanical rehearsal,” but unless “it somehow comes home to him at some point as an appreciation of his own,” the significance of the norms will not impress themselves as standards “which can be depended upon” (1923/1916: 276). Dewey refers to “appreciation” experiences as personal responses involving the imaginative apprehension of their worth, and he emphasizes that “appreciation value” is to be found in all fields of study, not just in the realm of literature and other arts. “The imagination,” wrote Dewey, “is the medium of appreciation in every field. The engagement of the imagination is the only thing that makes any activity more than mechanical” (1923/1916: 276).<sup>13</sup>

Dewey defined “appreciation” as “an enlarged, intensified prizing . . . [an] enhancement of the qualities which make any ordinary experience appealing, appropriable – capable of full assimilation – and enjoyable” (1923/1916: 278). Significantly, Dewey thought that the fine arts have an important role to play in education, even though they are not “the exclusive agencies of appreciation.” This is because they are not only “intrinsically enjoyable” but also serve the instrumental function of “fixing

<sup>13</sup> Dewey’s theory of the role the imagination plays in moral deliberation has been discussed in Fesmire 2003 and Pappas 2008, among others.

taste, in forming standards for the worth of later experiences” by creating “a demand” or an appetite for elevating everything that we do to “their own level” (1923/1916: 279):

They [the fine arts] reveal a depth and range of meaning in experiences which otherwise might be mediocre and trivial. They supply, that is, organs of vision. Moreover, in their fullness they represent the concentration and consummation of elements of good which are otherwise scattered and incomplete. They select and focus elements of enjoyable worth which make any experience directly enjoyable. They are not luxuries of education, but empathetic expressions of that which makes any education worthwhile. (1923/1916: 279)

For both Dewey and the literary humanists, the fine arts are instruments to be employed for finding standards by which to measure our conduct in other domains of life. For Dewey, however, they are much more than instruments for moral cultivation – they are means by which we acquire a *taste* for excellence and a love for doing and enjoying *all* human activities for their own sake, and not merely for the instrumental benefits that they may afford.

Whereas appreciative experiences of fine art are valuable in that they furnish us with the habits of mind necessary for properly measuring the worth of other, future activities, a scientific attitude inclines us to confront head-on what Brown refers to as the “contingencies” that inevitably arise when we engage in inquiry. Brown defines “contingencies” or “perplexities” as “any moves or moments in inquiry that are genuinely open, where reasonable inquirers could disagree about the way to proceed” (2020: 64). For Brown, as for Dewey, processes of inquiry that settle questions without any forethought or deliberation are not genuinely experimental or scientific, as a scientific attitude requires that we actively evaluate the problems to be solved, that we purposely determine the value of the evidence before us for solving the problem at hand, and that we measure the worth of our interpretations of the evidence. I would add that for Dewey, humans ought to undertake inquiry not merely for instrumental ends but for its own sake,<sup>14</sup> and like any other human activity, inquiring practices are most meaningful when we do them well. Doing things well also has the effect of developing in us a taste for *excellence*. Measured by the consequences of our practical judgments, excellence

<sup>14</sup> In support of this Dewey writes: “In so far as any study has a unique or irreplaceable function in experience, in so far as it marks a characteristic enrichment of life, its worth is intrinsic or incomparable” (1923/1916: 281).

further enlarges the meaning of human life and affords us the opportunity to appreciate our accomplishments – whether collective or personal – in the same way that we might prize and value a work of art.

### Science and Humanism

Science, according to Dewey, is a means to human ends, and an end is to be appreciated on its own terms. Accordingly, for something to be a means rather than merely a tool, it must be part of some coordinated, intelligent activity, and fulfill an aspect of our organic need to resolve disturbances or disharmonies that inevitably arise during our transactions with the environment. To perform one of our main life functions – absorbing oxygen – our bodies mechanically employ our lungs. Every time we breathe, we experience temporary relief from the lack of oxygen and the need to take a breath. And the same is the case for every other life function our bodies automatically perform. Our bodily organs are not in themselves means, however, as they have not been intelligently employed as part of a coordinated activity to accomplish an end-in-view. It is only when our minds are focused on the rate and depth of our breath that our lungs become part of the coordinated activity of practicing mindfulness for the purposes of easing anxiety and other types of somatic disturbances. Similarly, a hammer is not a means until we use it in conjunction with other tools to hammer in nails and shape wood into a box:

They are actual means only when brought in conjunction with eye, arm, and hand in some specific operation. And eye, arm and hand are, correspondingly, means proper only when they are in active operation. And whenever they are in action they are cooperating with external materials and energies. Without support from beyond themselves the eye stares blankly and the hand moves fumblingly. They are means only when they enter into organization with things which independently accomplish definite results. These organizations are habits. (Dewey 1922: 22)

When we first hammer a nail into a piece of wood, we must be careful not to get our fingers caught. But the longer we practice, hammering nails becomes a habit waiting to be used to build the frame of a house or repair a broken door. Likewise, our practice of mindfulness eventually becomes habitual, as we internalize the skill of slowing down our heart rate by deepening our breaths.

Some habits for Dewey are more malleable than others and can be improved with practice. Only when we have experienced standing straight in a yoga class, for example, are we able to form the idea in reflective

experience of how to correctly stand straight and break bad habits outside of the studio. Only then, in other words, are we able to learn the habit of standing straight without “fiats of will” (Dewey 1922: 22–25). Even our ability to discern different colors is the product of “skilled analysis”: “A moderate amount of observation of a child will suffice to reveal that even such gross discriminations as black, white, red, green, are the result of some years of active dealings with things in the course of which habits have been set up. It is not such a simple matter to have a clearcut sensation. The latter is a sign of training, skill, habit” (Dewey 1922: 25). Since skills are subject to improvement, the child could become more skilled at differentiating hues of green by engaging in the practice of realist painting and capturing the many varieties of green of a tree. This understanding of the ways that prior habits influence our ideas applies also to other types of activities, including scientific inquiry: “distinct and independent sensory qualities, far from being original elements, are the products of highly skilled analysis which disposes of immense technical scientific resources. To be able to single out a definite sensory element in any field is evidence of a high degree of previous training” (Dewey 1922: 25).

But what of habits of thought and feeling? On this point, Dewey seems more pessimistic than the “radical reformers,” who put their faith in rapid institutional change, as if quickly changing institutions could change our customary habits of thought and feeling. Institutions, according to Dewey, generally embody our collective habits of thought and feeling; when we attempt merely to change the former, we leave intact the latter, which makes it very unlikely that social change will follow: “Actual social change is never so great as is apparent change. Ways of belief, of expectation, of judgement and attendant emotional dispositions of like and dislike, are not easily modified after they have once taken shape” (1922: 77). This is because, first, as we saw earlier with the example of standing straight, secondhand ideas cannot easily change dispositions to which we have been habituated by firsthand experience. Thus, if we are accustomed to experiencing firsthand a legal system that benefits some members of the community at the expense of others, it will be extremely difficult for some to give up their special privileges. And second, our cognitive habits and dispositions are shaped by our interactions with others. A child that shares her toys with other children will be praised by her teachers and parents. Indicative of a character trait customarily prized in the girl’s social environment, repeated social approbation of similar behaviors serves the function of shaping the child’s future disposition to behave selflessly. This

suggests that if we do not change our collective attitudes toward historically marginalized groups, social change will not follow.

It follows that to change embodied habits, Dewey suggests, we must change what is collectively *valued*. And the only way to produce new, collective values, according to Dewey, is to adopt a “truly humane education,” consisting of “an intelligent direction of native activities in light of the possibilities and necessities of the social situation” (1922: 70). Worried that minds have become inflexible and dependent on fixed belief and the authority of others, Dewey writes in *How We Think*, for example, that “it is its [education’s] business to cultivate deep-seated and effective habits of discriminating tested beliefs from mere assertions, guesses, and opinions; to develop a lively, sincere, and open-minded preference for conclusions that are properly grounded, and to ingrain into the individual’s working habits methods of inquiry and reasoning appropriate to the various problems that present themselves” (1910: 28). Rather than train children by means of “premature mechanization of impulsive activity after the fixed pattern of adult habits of thought and affection,” children must be educated to form new habits of inquiry – they must be trained to think critically – to be “serviceable under novel conditions” (Dewey 1922: 75).

A truly humane education must also draw its lessons from “the elaborate systems of science [which] are born *not of reason*” but of the impulse to hunt, combine things, and communicate with others, methodically organized into “the dispositions of inquiry, development and testing” (Dewey 1922: 136, emphasis added).<sup>15</sup> Yet, above all, it must exploit children’s natural tendency to be curious about the world: “[t]raining is such development of curiosity, suggestion, and habits of exploring and testing, as increases their scope and efficiency. A subject – any subject – is intellectual in the degree in which *with any given person* it succeeds in effecting this growth” (Dewey 1910: 46). In sharp contrast to the literary humanists, who, we may recall, recommended that we cultivate in children a higher ethical will to control their base, animal instincts, a truly humane education cultivates a scientific disposition in future citizens, not merely for slowing down the impulsive drive to hurriedly accomplish one’s goals, but also for avoiding becoming overly interested in reflection disconnected from everyday experience: “We may become so curious about remote and

<sup>15</sup> On this point, Hickman (1990) argues that “[i]f by ‘scientism’ it is meant that the methods of experimentation have proved so successful in the domains in which they have been developed and applied that they ought to be utilized and further developed in areas where they have not been tried, then the term is applicable to Dewey’s instrumentalist program” (quoted in Johnston 2002: 4).

abstract matters that we give only a begrudged, impatient attention to the things right about us. We may fancy we are glorifying the love of truth for its own sake when we are only indulging a pet occupation and slighting demands of the immediate situation" (Dewey 1910: 137). Both the tendency to hurriedly accomplish one's goals and to become overly interested in reflection, Dewey writes, are irrational to the extent that "the foresight of consequences is warped to include only what furthers execution of predetermined bias" (1910: 138).

The hallmark of a humanistic education is the inculcation of a habitual disposition to inquire into, deliberate about, and test the efficacy of traditional principles under new conditions.<sup>16</sup> Progressive humanism does not reject conventional principles outright, as some principles have been tested and proven to be efficacious instruments for ameliorating the human condition, such as the principle of respecting a person's freedom. Some other principles, such as certain legal principles, may need to be modified so that, in Dewey's words, they can become "more effectual instruments in judging new cases" (1910: 165). Some traditional principles in fact contribute toward social inequities and must be rejected on the grounds that they do not cohere with the principle of respect for a person's freedom, as we saw in the example of Huck Finn. But the issue cuts deeper than that. According to Dewey, blindly adhering to old principles is simply "another manifestation of the desire to escape the strain of the actual moral situation, its genuine uncertainty of possibilities and consequences" (1910: 166). A scientific disposition toward moral inquiry takes older principles to be *hypotheses* to be tested in the imagination against concrete situations (1910: 167).

Dewey gives the example of a young person who has repeatedly experienced the consequences of being kind to others. These experiences culminate in the disposition of kindliness (1923/1916: 275), which, in addition to acquiring appreciation value (by which he means the value an activity acquires while we are enjoying, prizing or appreciating it),<sup>17</sup>

<sup>16</sup> The role that science might play in our "valuation" practices, or, as Dewey also refers to them, "evaluation" practices, is controversial. See Johnston 2002 for an overview of the debate. See also Waks 1998 and McCarthy 1999 for enthusiastic endorsements of Dewey's scientific theory of value judgments, and Boisvert 1998, Hickman 1990, Garrison 1997, and Johnston 2002, which emphasize, to different degrees, the aesthetic dimension of human valuation practices.

<sup>17</sup> Stroud understands Dewey's use of "appreciation" as synonymous with "taste" (Stroud 2011: 41). I see a connection, however, between what Dewey calls "appreciation value" and Stroud's concept of "immediate value." Stroud writes: "When Dewey explicitly links his notion of immediate good to intrinsic value . . . he is careful to note that the *immediacy* of value is what is intrinsic, and not some sort of value that has an essentialist primacy" (Stroud 2011: 44).



reliably produces good consequences in experience. A disposition to approach moral situations as occasions for inquiry will yield reliable predictions of good outcomes that may or may not conform with conventional morality, as can be observed in Huck Finn's taste for the value of freedom and his intuition that it also applies to Jim's situation. Although it is true that Huck's belief that he will go to hell if he does not tell on Jim somewhat limits his moral development – insofar as Huck fails to generalize from Jim's situation to the plight of all slaves – this is not because of the inherently biased nature of empathy, as Alan Goldman (2010) argues, but rather because Huck is surrounded by adults who dogmatically impress their corrupt moral values on children and steer them in the wrong direction.

A humane education would have afforded Huck the possibility of greater moral development, provided he had internalized the notion that conventional principles are not infallible. In a different social environment, Huck would not have experienced internal conflict but would have rather been encouraged to take in “the full scope” (Goldman 2010: 276) of the situation, test the outcomes in his imagination, and derive the correct principle from the ground up. This is not to say that it is always inadvisable to apply a rule to a situation. But Dewey warns in “The Logic of Judgments of Practice” (1915) that adhering to an ideal or a standard involves no judgment. He gives the example of being faced with the situation of whether or not to buy a suit. If the operating principle is that you already have a suit in mind, then you are not really selecting a suit through a valuation process, as you have already prejudged the situation (1915: 518). It is the opposite of taking a scientific approach to the process of figuring out what you should do with the outcome of your judgment in view.

A scientific disposition is a cognitive habit that can serve as a means to solving practical problems beyond the domain of what is narrowly referred to as “science.” What we call “science,” according to Dewey, is a sociological artifact, which more than anything tells us about our conventional styles of organizing experience. It also reflects what in his mind is an unproductive bifurcation of the humanities from the sciences in education, which he takes to be largely responsible for impairing our ability to solve problems jointly. In *Democracy and Education* (1923/1916), Dewey argues that we have arbitrarily assigned values to various fields, as if aesthetic value belonged only to the domain of literature, and epistemic value, to science. Science, he argues, can have many different values, depending on the problem to which it is applied, as a means:

[T]he attempt to distribute distinct sorts of value among different studies is a misguided one, in spite of the amount of time recently devoted to the undertaking. Science for example may have any kind of value, depending upon the situation into which it enters as a means. To some the value of science may be military; it may be an instrument in strengthening means of offense or defense; it may be technological, a tool for engineering; or it may be commercial – an aid in the successful conduct of business; under other conditions, its worth may be philanthropic – the service it renders in relieving human suffering; or again it may be quite conventional – of value in establishing one's social status as an “educated” person. As matter of fact, science serves all these purposes, and it would be an arbitrary task to try to fix upon one of them as its “real” end. All that we can be sure of educationally is that science should be taught so as to be an end in itself in the lives of students – something worthwhile on account of its own unique intrinsic contribution to the experience of life. (Dewey 1923/1916: 282)

Although the instrumental value of science is undeniably far more consequential, given the many uses to which scientific knowledge can be put, we cannot neglect the importance of enjoying or valuing the process of doing science *well*. In other words, although science is instrumental in helping us solve problems, we stand a better chance of ameliorating the human condition when we cultivate scientific curiosity combined with a taste for both excellence and goodness in future generations. This will guarantee better tools at our disposal for solving problems.

## Conclusion

At this point, it is worth returning to the problem that Dewey started with: How might we employ science in the service of values that better serve our communities? Recall that he believed cultivating in children a scientific attitude would better equip them to meet the challenges of the future. He also emphasized the importance of firsthand experiences for deriving norms that are personally meaningful and that have been tested in experience for their reliability and success at producing good (or valuable) consequences. But how is Deweyan valuation supposed to work in practice? And how do we guarantee that by cultivating in children a scientific disposition, they will arrive at values that serve the common good? How do we ensure, in other words, that these children of the future, equipped with flexible habits of mind and a taste for the value of excellence and goodness, are going to employ science to serve social rather than selfish, economic interests?

To answer this question, let me first touch on the concept of sympathetic understanding in the work Jane Addams, a prominent humanist

sociologist and social reformer in the early twentieth century who influenced the emancipatory focus of pragmatism, including Deweyan ethics, through her exemplary work with poor immigrants in the suburbs of Chicago (Seigfried 1999). Like Dewey, for whom moral deliberation is a dramatic, artful, and *caring* process involving play acting, perspective-taking, and anticipation of the consequences of our judgments (Caspary 2000; Fesmire 1995; Goldblatt 2006; Hamington 2010), Addams worried about values that were increasingly becoming more influential – mechanization and materialism – and believed that cultivating the proper uses of the imagination could enable citizens to discover new values (1930: 124) and redeem industry from the role it had played in augmenting social “evil” and “distress” (1930: 28). For Addams, ethical agency is realized when we deliberately choose to expose ourselves to other values firsthand, as we cannot discover new values when we are isolated from other human beings (2002/1902). For this reason, she lived among the poor immigrants of the suburbs of Chicago, and in 1889 cofounded with Ellen Gates Starr the socialist settlement, Hull-House – a thirteen-building complex equipped with a daycare, dining, and other types of gathering spaces where the middle-class residents would learn from the community about its needs. Through that work, she came to appreciate the inherent dignity of all persons and was inspired to mobilize legal reforms to address various social injustices, including women’s oppression, child labor, and the exploitation of laborers.

Addams’ theoretical and practical work sheds light on the importance of cultivating personally meaningful and caring relationships with others for not only experiencing but also internalizing other values by means of sympathetic understanding (2002/1902). The core idea behind sympathetic understanding, as Charlene Haddock Seigfried explains, is that of reciprocity, in which we recognize both our responsibility toward others and our dependency on them (2002/1902: xx–xxi). But perhaps even more important is that sympathetic understanding is a mode of attention that opens space to “the viewpoint, values, and goals of others” (2002/1902: xxi). These values and goals impress themselves on us and become part of “moral deliberation and social transformation” (2002/1902: xxi). Addams’ social ethics suggests that moral deliberation cannot simply presuppose care for the welfare of and a sense of responsibility for others; rather, these things arise from a process in which we internalize the goals and values of others – which will sometimes conflict with our own.<sup>18</sup>

<sup>18</sup> See Helm (2010), whose account of caring about others as “persons” serves as a useful supplement to Dewey’s and Addams’ ideas.

Dewey was not always explicit about the importance of the value of caring about others to his theory of valuation, perhaps because he worried about the limitations of our capacity to sympathize with others. In *Ethics*, which Dewey cowrote with his colleague from the University of Chicago, James Tufts, though he follows Darwin in claiming that our success as a species lies in our capacity to sympathize and cooperate with one another, Dewey nonetheless warns that sympathy “rarely extends beyond those near to us, members of our own family and our friends. It rarely operates with reference to those out of sight or to strangers, certainly not to enemies” (Dewey and Tufts 1932/1908: 261). For this reason, he draws on Adam Smith in posing the figure of the “ideal spectator” to take the place of the social group. By imagining not whether our peers would approve of our actions but whether the ideal spectator would, we stand a better chance of executing moral judgments that “merit approbation because their execution will conduce to the general wellbeing” (Dewey and Tufts 1932/1908: 270). Dewey thus emphasized that actions that merit approbation are those in which we voluntarily make a choice to “bring good to others” (Dewey and Tufts 1932/1908: 272).

Despite his reservations about relying on our natural sympathy when we are making moral judgments, Dewey also claimed that “sympathy is the animating mold of moral judgement . . . because it furnishes the most efficacious *intellectual* standpoint. It is the tool, *par excellence*, for resolving complex situations” (Dewey and Tufts 1932/1908: 298). When sympathy is mechanical and the controlling factor in our actions, it is likely to produce actions that benefit us and those who are in our circles of concern at the expense of distant others. Sympathy combined with reflection, or what Dewey and Tufts in the *Ethics* refer to as “intelligent sympathy,” by contrast, is bound to produce actions that merit approbation from the ideal observer, who upholds the standards of beneficence and social welfare. From this perspective, sympathy is not merely the animating mold of moral judgment but also the pillar of a humanist science. For science to be *humane*, caring about others must influence the values we bring to bear when we make epistemic judgments.<sup>19</sup>

Following Addams, who “studied the everyday world . . . [and] connected this analysis to the political and economic conditions that generated the mundane and oppressive reality” (Deagan 1988b: 255), for Dewey, a humane science must be similarly employed to serve human rather than

<sup>19</sup> See Kitcher 2011 for an account of how “broad,” “cognitive,” and “probative” schemes of values interact with one another to produce practical judgments.

industry interests.<sup>20</sup> The great irony here is that, given the shared aims of the literary humanists and the pragmatists, men and women such as Dewey and Addams were one of the primary targets of the literary humanists, whose skepticism about the metaphysical foundations of humanism was completely unwarranted. Whereas the literary humanists dealt armchair critiques, the progressive humanists were on the ground, successfully employing science to relieve the plight of the working class, women, and children, and advancing the cause of racial equality. When faced with questions about the role that science might play in ameliorating the human condition, one need only read about this period in American history and derive lessons about what the human spirit is capable of when armed with the right imaginative, aesthetic, and scientific resources. The solution, it seems clear, is not to cordon off the sciences from the humanities. If humanism is to ameliorate the human condition, it is as a science of experience.

<sup>20</sup> See Scimecca and Goodwin (2003), who discuss Addams' humanist sociology within the context of American pragmatism.