

USEFUL FOR WHAT?**DEWEY'S CALL TO HUMANIZE****TECHNO-INDUSTRIAL CIVILIZATION****Steven Fesmire**fesmires@greenmtn.edu

ABSTRACT: The heart of Dewey's call to humanize techno-industrial civilization was to conceive science and technology in the service of aesthetic consummations. Hence his philosophy suggests a way to reclaim and affirm technology on behalf of living more fulfilling lives. He remains a powerful ally today in the fight against deadening efficiency, narrow means-end calculation, "frantic exploitation," and the industrialization of everything. Nonetheless, it is common to depict him as a philosopher we should think *around* rather than *with*. The first section of this essay explores his philosophy of technology and environment in light of Bacon, Heidegger, and Borgmann. Most of the techno-industrial and vocational activities which we pretend are "instrumental," Dewey argued, actually reduce "to a very minimum the esthetic aspect of experiences had in the course of the daily occupation." It is argued that, insofar as cooperative intelligence can guide the direction of technological development, it does not honor contemplative life if we abdicate or downgrade that responsibility. The second section of this essay explores Dewey's instrumentalism as a critique of vicious intellectualism. It is argued that, for Dewey, genuine progress serves the aesthetic dimension of experience. This assertion contrasts with the most common interpretive error among both critics and admirers of Dewey, namely that he is mostly a champion of science. Moreover, critics of Dewey's instrumentalist theory of inquiry often mistake it as (a) an attack on any conception of intrinsic value, or (b) an attempt to collapse the value of means into the value of ends. In Dewey's view, we habitually look for progress in the wrong place because we carry around with us some big idea of a final and ultimate good for measuring it. In his view, the ameliorative expansion of significance that emerges from our dealings with perplexing situations is the only place progress can really be found.

In his 1919 lectures at Tokyo University, published in 1920 as *Reconstruction in Philosophy*, John Dewey suggested that the foremost global philosophical challenge is to reconcile East Asian contemplative–aesthetic attitudes with Euro-American scientific–experimental attitudes. During two and a half years in East Asia and in subsequent work, Dewey made early steps in the direction of a global philosophical outlook by promoting a fusion of aesthetic refinements with experimentalism.

Dewey's aim, as he made explicit in Japan, was to set forth the possibility and method by which techno-industrial civilization might be humanized. Without the methods of science, he argued, we drift at the mercy of natural forces. But without lives rich in aesthetic consummations, he portended in *Reconstruction in Philosophy*, we "might become a race of economic monsters, restlessly driving hard bargains with nature and with one another, bored with leisure or capable of putting it to use only in ostentatious display and extravagant dissipation" (MW 12:152).¹

Dewey's Philosophy of Technology and Environment: Beyond Bacon, Beyond Heidegger

"The solution to any problem from technology isn't less technology but more technology," said a cofounder of *Wired* magazine.² Dewey's likely response to this bold assertion depends on the meaning of technology. Under the economic and cultural conditions in which industrial technology currently operates, this blanket endorsement is sadly misguided. Dewey remains a powerful ally today in the fight against deadening efficiency, narrow means-end calculation, "frantic exploitation" (LW 5:268), and the industrialization of everything. He was a scathing critic of blind and ill-considered "technology as it operates under existing political-economic-cultural conditions" (LW 15:190), as he wrote in *The Humanist* in 1945.³

¹ Citations of John Dewey's works are for the critical edition published by Southern Illinois University Press under the editorship of Jo Ann Boydston. Citations give series abbreviation followed by volume number and page number. For example: (LW 10:12) is page 12 of *Art as Experience*, which is published as volume 10 of *The Later Works*. Series abbreviations for *The Collected Works of John Dewey*: EW *The Early Works* (1882–1898), MW *The Middle Works* (1899–1924), LW *The Later Works* (1925–1953).

² Kevin Kelly in "Marketplace," National Public Radio, October 19, 2010. <http://www.marketplace.org/shows/marketplace/marketplace-october-19-2010>; accessed May 17, 2016.

³ Cf. Dewey, *Unmodern Philosophy and Modern Philosophy*, ed. Phillip Deen (Carbondale, IL: Southern Illinois University Press, 2012), 344.

Despite current narrow usage, all tool- or knowledge-based mediation of our environments is in a broad sense technological, if the term is approached along ancient Greek lines as processes that take place by means of human invention.⁴ Technology in this inclusive sense, Dewey observed in "What I Believe," "signifies all the intelligent techniques by which the energies of nature and man are directed ... ; it cannot be limited to a few outer and comparatively mechanical forms" (LW 5:270). This broad sense suggests a way to reclaim and affirm technology on behalf of living more fulfilling lives.

In his 1969 book *Agrarianism in American Literature*, Thomas Inge expressed a widely held view: technology corrupts while nature redeems.⁵ This notion dualistically sets technology in opposition to nature. A Dewey-inspired pragmatic approach rejects this persistent tendency to pit human intelligence in an antagonistic relation to nature, asks us to get clearer about our ends and values, and reflects on which technological innovations are functional or dysfunctional means to our most valuable ends.

We are always entangled in the hazy assumptions of our own day and the uninspected doctrines of bygone days. Economist Paul Krugman has lately called such bygone doctrines "zombie ideas," creeds of the living dead.⁶ The habit of conceiving technology in an antagonistic way, or as an alien visitation, is among the most disturbingly consequential of our outdated zombie ideas.

⁴ Larry Hickman emphasizes technological management, not control, and he argues that for Dewey technology was a way of engaging the world through the tools of inquiry. See, for example, Hickman's "Nature as Culture: John Dewey's Pragmatic Naturalism," in *Environmental Pragmatism*, ed. Andrew Light and Eric Katz (London: Routledge, 1996).

⁵ M. Thomas Inge, *Agrarianism in American Literature* (New York: Odysseus Press, 1969). In Paul Thompson, *The Agrarian Vision* (Lexington: University Press of Kentucky, 2012), 7.

⁶ Paul Krugman, "Rubio and the Zombies," *The New York Times*, February 14, 2013, http://www.nytimes.com/2013/02/15/opinion/krugman-rubio-andthe-zombies.html?_r=0; accessed May 17, 2016.

If any outdated dualism foreshortens much of the history of American environmental thought, it is the sharp separation of human actors from pristine nature. For example, until relatively recently the prevailing tendency among wilderness advocates in the United States was to speak and write as though human inventiveness and technology are alien Euro-American intruders upon the natural scene. Nature, it was long held, is exemplified in wilderness, sharply set over and against things urbane, domestic, and agricultural.

This dualistic notion was intelligible in its original context. The classic idea of harmonious nature, married to the persistent (anti-Darwinian) Aristotelian doctrine that nature does nothing in vain, fed a nineteenth-century romantic backlash against the modern Cartesian schism of values from nature. In the United States, romantic tendencies toward the revalorization of nature shone through the transcendentalists Emerson and Thoreau and found an environmental champion in John Muir's influential view of nature as a sympathetic home that ultimately requires little adaptation or transformation.

On Muir's romantic "preservationist" view—in contrast with the narrowly utilitarian "conservationist" view advanced by Gifford Pinchot, founder of the United States Forest Service in 1905—things in nature are ultimately what they ought to be. This is a pleasant thought, until we remember with Dewey that we have intellectually fashioned, reified, and idolized a harmonious and complete Nature in the image of our own greatly magnified human ideals. It is easier to serve and accommodate, without reshaping, a natural world that we believe has a final interconnected order, a single ultimate purpose, and an infinite stock of goodness. Our world, however, is dynamic and still emerging, not perfected.

We did not begin "playing God" with the advent of nuclear technology or genetic modification. If playing God means elevating humans above nature, then Western tradition has cast human minds and human knowledge in this worrisome transcendental role all

along. Since the seventeenth century, philosophers have increasingly downplayed or dismissed the old supernaturalism while retaining the damaging sense of separateness from nature. They have thereby increased the antagonism that pits us against nature. These intellectual habits have outlived whatever usefulness they once had. Dewey's alternative approach was to reclaim technology as part of our cultural inhabitation of nature. He suggested a way to extol science and its technological applications, at least in the abstract, as essential to actualizing our most humane ideals. For in Dewey's view, the defensible aim of science and technology is to help make our lives together more significant and resilient.

By the 1940s Dewey even favored the word technology—if taken in his very broad sense—over instrumentalism to convey his operational view of scientific knowledge (LW 15:89). So taken, instead of calling a referendum on technology, we should strive to alter the current conditions in family, education, government, and industry in which our technologies are currently developed and deployed.

It is common to cherry-pick statements that depict Dewey as an excessive technocrat, a philosopher we should think *around* rather than *with*. Dewey's circa 1920s confidence in the humanizing arts of technological control at times strains our twenty-first-century eyes fatigued by resource depletion, oil wars, climate change, and American swagger. In his historical overview of the modern mechanical worldview in *Reconstruction in Philosophy*—which along with *The Quest for Certainty* contains his best technocratic cherries to pick—Dewey celebrated technologies implicated in some of our most serious contemporary environmental problems. For example, he wrote approvingly: “When chemical fertilizers can be used in place of animal manures, when improved grain and cattle can be purposefully bred from inferior animals and grasses, when mechanical energy can be converted into heat and electricity into mechanical energy, man gains power to manipulate nature” (MW 12:120).

A twenty-first-century nose catches occasional whiffs of Francis Bacon's “empire over nature” whenever Dewey overindulges in admiration for the industrial revolution and its progressive actualization of Bacon's watchword: “knowledge is power.” Bertrand Russell even presented Dewey as a “power” philosopher promoting a socialized and technologically enhanced version of Nietzsche's will-to-power.⁷ Russell's pronouncements, though they remain very influential, never reflected any serious attempt to understand Dewey's positions.

Through the work of philosophical reconstruction, Dewey sought to “permit the Baconian aspirations to come to a free and unhindered expression” (MW 12:108). Bacon's active and operative inductive method of the 1620s of course heralded the empiricism of the eighteenth century and, eventually, the experimental methods that gradually took hold in the nineteenth century. It was not a mistake, Dewey wrote in *Reconstruction in Philosophy*, to banish Aristotelian final causes from nature and to shift discussion about purposes to “factors in human minds capable of reshaping existence” (MW 12:120). Dewey baldly stated that “A natural world that does not subsist for the sake of realizing a fixed set of ends is relatively malleable and plastic; it may be used for this end or that” (MW 12:120).

So, Dewey shared Bacon's commitment to advancing human welfare through scientific knowledge. But he thoroughly rejected Baconian *philosophy* as entangled in a tragically flawed view of human intelligence as “an exaggeratedly self-sufficient Ego” (MW 12:108). Bacon conceived human experience as dualistically set over and against nature, which must be subjugated. Hence Bacon valued and obeyed nature only inasmuch as this was necessary to extract secrets for humane ends. In Dewey's opposing view, as expressed in arguably his most Baconian book, experimental intelligence can

⁷ Russell suggests that this is related to Dewey's Hegelian roots. On this controversy, see Tom Burke, *Dewey's New Logic: A Reply to Russell* (Chicago: University of Chicago Press, 1998), 21ff.

indeed transform the world and reshape “those phases of nature and life that obstruct social well-being” (MW 12:108). *But* we thwart our own best aims when we fail to understand that human initiative, inventiveness, and labor are themselves natural events for which we are responsible. Technology and intelligent innovation does not descend from the heavens or from a psychical inner realm separated from our bodies and cultures. Sidney Hook summed up this humane, naturalistic spirit of Dewey’s philosophy: “He has shown with patient detail that intelligence is at home in the natural world and not a mysterious intruder bringing its own standards from a realm beyond the skies.”⁸

Dewey’s existential attitude of “natural piety” in *A Common Faith* (1934) was an attempt to reconcile what is best in Euro-American romanticism with our scientific outlooks toward nature. Any appraisal of the shortcomings of Dewey’s own natural piety, such as his systematic failure to appreciate the extent to which parts of nonhuman nature are looking back at us with awareness, should also recall the deep imprint of Emerson upon his thinking (e.g., MW 3:184-192). Dewey’s pragmatism was an outgrowth of the American philosophical tradition, a fact that happily complicates any caricature of him as blithely celebrating what American environmental historian Donald Worster has helpfully called a “Linnaean” model of the exploitation of nature.⁹

Heidegger, whose philosophy of technology is often cited in opposition to Dewey, contended that means-end reasoning inevitably overreaches because it puts us in a controlling and “calculative” mode that hides aspects of the world. The central lesson of Dewey’s *Experience and Nature* complements Heidegger’s insight: Whatever is made visible by intelligence is always situated within the invisible. Yet unlike Heidegger (on a

standard reading), Dewey nowhere relegates engagement with practical human problems to second-class status. Dewey wrote, for instance:

The visible is set in the invisible; and in the end what is unseen decides what happens in the seen; the tangible rests precariously upon the untouched and ungrasped. The contrast and the potential maladjustment of the immediate, the conspicuous and focal phase of things, with those indirect and hidden factors which determine the origin and career of what is present, are indestructible features of any and every experience. (LW 1:44)

With his rich ecological imagination, Dewey perceived that we typically fail to see the visible in light of the invisible, to intellectually map what we are focusing on so as to include the constitutive, enveloping situation or complex system. But in contrast with Heidegger, Dewey bitingly criticized all holdovers of the disengaged medieval *vita contemplativa* as aristocratic philosophies that maintain “institutionalized class interest” (LW 15:191).¹⁰

Albert Borgmann has developed Heidegger’s insights to explore the way our lives become dominated by efficient devices.¹¹ For example, most of us in industrialized societies pay bills to run a furnace, replacing the seasonal rhythms that once centered on the hearth. Some devices have improved our quality of life, but we have also lost meaning-making “focal practices” that brought coherence, significance, and a sense of place. In his reconstruction of an early nineteenth-century boy’s diary, *Diary of an Early American Boy*, Eric Sloane writes: “Few of us today

¹⁰ For example, see Rorty’s comparison of Heidegger and Dewey on the latter’s treatment of “philosophies as if they were means to the enhancement of human life” (Richard Rorty, *Consequences of Pragmatism* [Minneapolis, MN: University of Minnesota Press, 1982], 50).

¹¹ On Borgmann’s critique, see Paul B. Thompson, *The Agrarian Vision* (Lexington, KY: University Press of Kentucky, 2010), ch. 5, “Farming as Focal Practice.” For a critique of Borgmann and Heidegger from the standpoint of Dewey’s philosophy of technology, see Larry A. Hickman, *Pragmatism as Post-Postmodernism: Lessons from John Dewey* (New York: Fordham University Press, 2007), 92–111.

⁸ Sidney Hook, *John Dewey: An Intellectual Portrait* (New York: John Day Co., 1939), 3.

⁹ Donald Worster, ed., *Nature’s Economy: A History of Ecological Ideas* (Cambridge, UK: Cambridge University Press, 1994), 53ff.

would think of wood splitting as anything but a tedious chore, but when one learns to do it well, there is a certain joy involved. Striking your axe in an exact spot, watching a log divide miraculously into segments and squares with single blows, or even learning to stack a simple pile of wood correctly, gives pleasure to the art of woodsmanship."¹²

We should strive to conserve practices, ideas, and things that are functioning well. If in a specific context the aesthetic richness we directly experience as fulfilling in the course of daily occupations and interactions—for example, splitting wood and building fires—is reduced by a proposed technological device, then in that context the device may be a dysfunctional means to our most valuable ends. (Of course this depends on the situation and on our overall set of ends.) Our global fixation on new and ever-more-efficient devices has on the whole been blind, ill-considered, and exclusive. Quality of life has too often been eroded and contracted rather than enhanced and secured. Insofar as we establish democratic processes to formulate and manage problems by examining means in light of ends while reexamining ends in light of proposed means, we proceed intelligently. The direction of technological development is not an inevitable forward march. Insofar as cooperative intelligence can guide it, in Dewey's view it does not honor contemplative life if we abdicate or downgrade that responsibility.

Dewey argues in the newly recovered and published "lost" book, *Unmodern Philosophy and Modern Philosophy* (2012), that most of the techno-industrial and vocational activities which we pretend are "instrumental" actually reduce "to a very minimum the esthetic aspect of experiences had in the course of the daily occupation." We enjoy the anticipation of getting paid, but the way we make our living is "isolated from direct consummation and fulfillment."¹³ To respond that

this is "just the nature of work" is a sign of neither practical realism nor wisdom. In *Experience and Nature*, Dewey clarified the tragic cost of an industrial imagination that idolizes efficient production and affordable consumption without taking stock of their collateral consequences:

The existence of activities that have no immediate enjoyed intrinsic meaning is undeniable. They include much of our labors in home, factory, laboratory, and study. By no stretch of language can they be termed either artistic or esthetic. ... So we optimistically call them "useful" and let it go at that. ... If we were to ask useful for what? we should be obliged to examine their actual consequences, and when we once honestly and fully faced these consequences we should probably find ground for calling such activities detrimental rather than useful. (LW 1:271–72)

Our problem, then, is not instrumental intelligence, but mechanically instrumental activity. Larry Hickman helpfully engages Dewey to criticize the latter as a narrowing product of "straight-line" instrumentalism that "works toward fixed goals, heedless of the collateral problems and opportunities that arise during the thick of deliberation."¹⁴

Philosophy, ed. Phillip Deen (Carbondale, IL: SIU Press, 2012), 344. Dewey's robust philosophy of technology is beginning to receive a new round of scholarly attention in light of insights in this book (see especially 203–51).

¹⁴ Hickman, "Nature as Culture: John Dewey's Pragmatic Naturalism," 50. Other relevant works by Hickman include *Philosophical Tools for Technological Culture: Putting Pragmatism to Work* (Bloomington, IN: Indiana University Press, 2001); "Dewey's Theory of Inquiry," in *Reading Dewey: Interpretations for a Postmodern Generation*, ed. Larry A. Hickman (Bloomington, IN: Indiana University Press, 1998); and his earlier defense of a pragmatic view of technology in *John Dewey's Pragmatic Technology* (Bloomington, IN: Indiana University Press, 1990), 13ff. In contrast with Hickman's reading, Robert Brandom presents Dewey as a materialist whose instrumentalism pivots on subjective satisfaction of desires. See Robert B.

Brandom, *Perspectives on Pragmatism* (Cambridge, MA: Harvard University Press, 2011), 42, 51–51, 72–77. Brandom's reading differs markedly from my own.

¹² Eric Sloane, *Diary of an Early American Boy* (Mineola, NY: Courier Dover Publications, 2008), 31.

¹³ John Dewey, *Unmodern Philosophy and Modern*

Dewey argued that blanket criticism of means–end or technological reasoning—such as the now-popular notion in some circles that such reasoning is invariably exploitative—does little “to free experience from routine and from caprice” (MW 10:45). He sought to liberate human activities from an anesthetizing status quo, in part by advancing an educational vision of forward-looking, aesthetically funded intelligence that imaginatively projects new ends. Ends fixed in advance and quarantined from scrutiny, such the worship of efficiency, can impoverish the art of inquiry.¹⁵ Through imaginative engagement we see extant conditions in light of novel possibilities so that we might guide the world’s transformation by taking an “excursion from the actual into the possible” (LW 8:198). This is part of Dewey’s picture of technological innovation and instrumental intelligence that have intrinsic worth, that is, in which means are valued for themselves and aesthetically enjoyed (MW 10:45). It is a perverse irony that what goes by the name of progress is often purchased by sacrificing the very goods this “progress” is defensibly a means toward.¹⁶

**Dewey’s Instrumentalism vs. Intellectualism:
Progress Serves the Aesthetic**

Perhaps the most common interpretive error among both critics and admirers of Dewey has been to read him mostly as a champion of science. This misreading marginalizes Dewey’s reflections on the primacy of the qualitative in works such as *Experience and Nature*, “Qualitative Thought,” and *Art as Experience*. Dewey repeatedly criticized the “intellectualist’s fallacy” that reduces all experiencing to knowing. The “real” or “nature” cannot be boiled down to the distinct objects of scientific study alone; nature’s emergent potential is also

disclosed by artistic-aesthetic and practical experiences. The Western philosophical tradition has singled out knowing as quintessentially human, as though it is less essentially human to experience things practically or aesthetically. We have correlatively reduced nature to the distinct and explicit traits by which things are known.

This “vicious” intellectualism, as James called it, is a bad intellectual habit that we need to get over. Not only does it tend to reduce nature to inert mechanisms “out there,” a tired relic of pre-ecological European philosophies, but it also obscures or excludes the primary characteristics through which things are used, enjoyed, loved, and shunned. Moreover, when we fail empirically to note that nature is charged with hidden potential, then human imagination and creativity are left to seek refuge in a private and occult subjective realm discontinuous with natural events and forces. That which is implicit and noncognitive is relegated to the private and non-natural inner space of “mind” set over and against the “real” traits of nature, as though mind and culture are not themselves natural outcroppings.

In opposition, Dewey asserted that “what is really ‘in’ experience extends much further than that which at any time is known” (LW 1:27). Things are dealt with, used, enjoyed, and endured (LW 1:28). A *genuinely* empirical philosophy should not ignore the primary originating context that gives urgent import and intent to what is judged and scientifically known. This qualitatively rich primary context—which Dewey in *Experience and Nature* called “primary experience”—makes scientific knowledge and technology themselves biologically explicable as ways of enriching what Dewey called human “action-undergoing” (LW 1:28–30).

When we ask which scientific questions are most worthy of investigation, and which technologies are actually worth developing, we broach questions that implicate our highest ideals. What should count as progress? Ultimately, what is our science, technology, and information most defensibly a means toward? In response, Dewey emphasized the immediately possessed meanings and enjoyments that characterize all

¹⁵ On inquiry as art, see Jim Garrison, *Dewey and Eros: Wisdom and Desire in the Art of Thinking* (New York: Teachers College Press, 1997).

¹⁶ I am grateful to Routledge Press for permission to draw from the manuscript of my book *Dewey* (New York: Routledge, 2015) in the Routledge Philosophers series.

experiences developed toward fulfillment (LW 10:42-50). He consistently condemned the still-dominant utilitarian-industrial outlook that narrows the affective horizon of immediate experience, to the detriment of meaningful, value-rich, and responsive lives. Science, which Dewey construed broadly to encompass all of the predominantly intellectual endeavors engaged in an experimental method of inquiry—regardless of the mother tongues of those doing the knowing—is a central art that is “auxiliary to the generation and utilization of other arts” (LW 10:33). In a footnote to *Art as Experience*, Dewey cross-referenced an earlier remark from *Experience and Nature*, doing the scholarship for us to ensure we do not mistake or subvert his meaning. In *Experience and Nature* he had written:

The only distinction worth drawing is not between practice and theory, but between those modes of practice that are not intelligent, not inherently and immediately enjoyable, and those which are full of enjoyed meanings. When this perception dawns, it will be a commonplace that art—the mode of activity that is charged with meanings capable of immediately enjoyed possession—is the complete culmination of nature, and that “science” is properly a handmaiden that conducts natural events to this happy issue. (LW 1:269)

Hence, for Dewey, science (when taken broadly) is an operative art whose proper role is to serve the aesthetic (when taken broadly) (LW 10:33; LW 1:269). This statement hinges on Dewey’s sense of the objective and revelatory aspects of the aesthetic. Both as a natural phase of ordinary life and as developed in formalized arts, the aesthetic quality of an experience “is attained only when, by some means, terms are made with the environment” (LW 10:23). As Jeffrey Petts succinctly captures Dewey’s unconventional sense, “aesthetic experience is a critical, adaptive felt response, revealing value in the world.”¹⁷

Critics of Dewey’s “instrumentalist” theory of inquiry nonetheless often mistake it as (a) an attack on any conception of intrinsic value, or (b) an attempt to collapse the value of means into the value of ends. The latter misreading has long baffled careful readers of Dewey’s ethical and political works, which pivot on the idea that we must state our objectives—for example, political ends such as justice, equality, and liberty—in terms of the social means we plan to use to attain them. Then we must dramatically rehearse the whole set of resulting consequences (see *Theory of Valuation*, LW 13:226-236). In contrast with 1930s Marxists, Dewey’s pragmatist political theory, as expressed in works such as *Liberalism and Social Action* (1935), was accordingly a radicalism for grown-ups—those with the courage and patience to secure the “democratic means to achieve our democratic ends” (LW 11:332), as he wrote in his 1937 critique of Soviet exile Leo Trotsky.

The former popular misreading, namely that Dewey’s instrumentalism was somehow an attack on intrinsic value, has led imperceptive critics to write as though Deweyans might at any moment grab Yo-Yo Ma by the collar and demand to know “What are you doing that for?” There is indeed a purpose to playing the cello. It is to enhance this immediate (often shared) experience. The cello is “instrumental” to just that, the playing and listening, whatever other value it may have by way of showcasing talent or garnering a livelihood. Contrary to attributions by influential critics like Brand Blanshard, Dewey did not reject the idea of immediate enjoyments such as growth, joyfulness, learning, love, or listening to a cello being valued without conscious reference to further purposes. He rejected the notion of intrinsic value only (1) in the Kantian sense in which the end is valued unconditionally and hence is beyond appraisal, good without qualification, or (2) in the sense in which there are goods that *in no way* enrich future experience, which is hard to imagine.

In *Art as Experience*, Dewey clarified his instrumentalism in light of this lifelong emphasis on the felt significance of immediate experience:

¹⁷ Jeffrey Petts, “Aesthetic Experience and the Revelation of Value,” *Journal of Aesthetics and Art Criticism* 58, no. 1 (2000): 61–71.

What is intimated to my mind, is, that in both production and enjoyed perception of works of art, knowledge is transformed; it becomes something more than knowledge because it is merged with non-intellectual elements to form an experience worthwhile as an experience. I have from time to time set forth a conception of knowledge as being "instrumental." Strange meanings have been imputed by critics to this conception. Its actual content is simple: Knowledge is instrumental to the enrichment of immediate experience through the control over action that it exercises. (LW 10:294)

Instruments invariably imply purposes, and hence some conception of progress toward those purposes. Perhaps Dewey's clearest discussion of progress was in the concluding section of *Human Nature and Conduct*. The gist of his view is that we habitually look for progress in the wrong place because we carry around with us some big idea of a final and ultimate good (see MW 14:198). This struck Dewey as analogous to a physician who seeks to heal patients in light of some static, complete, and universal ideal of perfect health, instead of experimentally aiding living processes of recovering (MW 14:196).

Witness, for example, the quest today by well-meaning economists for a single, predetermined metric that we should always follow to optimize policy outcomes. The unexamined assumption is that policy experts just set the facts in front of their minds' eyes, apply the right principles, rules, or metrics, and reach an optimized outcome that is ready-to-implement. This would be fine if, from the start, there had been only one legitimate direction in which to be tugged; or if the problem eliciting investigation had been merely psychological, or simply intellectual, not inextricably folded into the existential situation at hand. However, situational conflicts are not merely specious, and there is seldom a single correct rational judgment that will sweep the path to progress clear. Situational conflicts are rarely so superficial as to evaporate upon analysis.

Most widely shared problems today are "wicked" rather than benign, in the contemporary sense that (1) there is no single definitive solution and (2) the way we

formulate a problem and appraise success in dealing with it are themselves at issue. Dewey's experimental approach, as Bryan Norton wisely emphasizes in *Sustainable Values, Sustainable Change* (2015), was always more improvisational, pluralistic, adaptive, social, and nimble-footed.¹⁸ Dewey sought a practical footing informed by conflicting, legitimate claims in complicated situations. These forces, which inhere in the situation and not just in our vexed psyches, tug us in incompatible directions. We must deal with them if we are to learn our ways together—locally, regionally, nationally, and globally—toward our best ideals. Indeed, Dewey implied that the need to manage such divergent forces is what gives practical decision making its richness and vitality (see "Three Independent Factors in Morals," LW 5:280-281).

Achievements and progressive innovations in our dealings with intrinsically messy problems are real, and they are to be celebrated. But they are not measurable by any rigid "general formula of progress" (MW 14:196). Dewey rejected the two most influential variations of the misguided quest for an absolute standard by which to measure progress: 1) the juvenile notion that progress toward our ideals "means a definite sum of accomplishment which will forever stay done, and which by an exact amount lessens the amount still to be done... on our road to a final stable and unperplexed goal," and (2) the popular though foolishly pessimistic notion that all achievements are negligible in comparison to ultimate and perfect goods (MW 14:197-198).

Even a Deweyan aesthetic imperative to act so as "to increase the meaning of present experience" (MW 14:196) may, he argued, become a rigid standard that distracts people's moral imaginations from "the concrete elements entering into the situations in which they have

¹⁸ Bryan Norton, *Sustainable Values, Sustainable Change* (Chicago: University of Chicago Press, 2015). On "wicked problems," see especially Norton, ch. 2. On Dewey and improvisational intelligence, cf. Steven Fesmire, *John Dewey and Moral Imagination: Pragmatism in Ethics* (Indiana University Press, 2003).

to act" (LW 5:288). Yet the ameliorative expansion of situations is the only place progress can really be found. Our best twenty-first century ideals—such as living healthier, more just, and more sustainable lives—make a positive difference only when we are inspired and stimulated to "study the needs and alternative possibilities" within a particular situation (MW 14:196). Meanwhile, every achievement complicates things and launches us upon a new experiment in living, a new "experimental adventure." Hence, Dewey concludes:

"From the side of what has gone before achievement settles something. From the side of what comes after, it complicates, introducing new problems, unsettling factors" (MW 14:197).

In sum, Dewey conceived science and technology in the service of the revelatory significance of achieving something, that is, in the service of aesthetic consummations. This was the heart of his call to humanize techno-industrial civilization.