

# SHARED VULNERABILITIES

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**A**s COVID-19 emerged, my first thoughts were about how this virus would once again show the strong interdependence of human health and the health of the environment and other animal beings. Human failure to respect the rest of the natural world, and the human tendency to feel separate and above the rest of the natural world, regularly risks the well-being of the planet—humans included. While many environmentalists have pointed to such shared vulnerability, ecofeminist and ecowomanist philosophies have, as a whole, gone further. Seeing the interlocking systems of oppression based on race, class, gender, species (and more), they have long argued that we need to address the underlying logic of domination and colonization in order to achieve any real change. Not seeing these connections makes it harder to effect lasting changes. As the emergence of COVID-19 turned into a pandemic, this need became abundantly clear.

While many conversations focus on the inequalities that the pandemic puts into stark relief—access to health care and housing, income security and savings, availability

of education and technology, housing density, care for dependents, and the ability to work under safe conditions (to name a few)—I think it is helpful to remember that the roots of these inequalities can be found in the logics of domination and colonization that have such a long history. The colonial practice of resource extraction is just one example. In addition to the direct consumption of animals entailed in these practices—trophy hunting, the exotic pet trade, and use as food and medicine—there are the less direct disruptions to the habitat and health of other animal beings. As COVID-19 demonstrates (as with HIV, SARS, MERS, Ebola, and more), these practices and disruptions can come to impact human beings very directly as they increase the likelihood of emerging infectious diseases.<sup>1</sup>

Connected to this extraction from, and destruction of, the environment and other animal beings is the direct killing, exploitation, and harm of human beings. The lack of

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<sup>1</sup> HIV is linked to the hunting and eating of chimpanzees. Ebola is found in chimpanzees and gorillas, but the source is likely a bat. SARS and MERS, which are both Corona viruses, come from a virus probably originally hosted in bats, but SARS in humans is connected to civets and other wildlife found in markets and MERS is linked to contact with camels.

respect for the rest of nature, and the tendency to view it as a merely a replaceable resource, connects with the lack of respect for many classes of human beings who are also seen as exploitable and disposable. Women and people of color are the most vulnerable to being seen and exploited in these ways, all the while those with various forms of privilege deny their dependency on such a system of exploitative use. While the US Black Lives Matters is currently focused on the immediate and visible threat of police violence and its ties to racism and slavery, it is important to also remember that black and brown bodies are used and killed to mine the metals needed to make the cell phones that are being used to make police violence more visible to the world at large.<sup>2</sup> That mining, and the bushmeat trade that goes with it, is part of what enables diseases to transfer and so augments the emerging threat of pathogens—a threat the privileged can't entirely escape. This is, in part, why COVID-19 has finally galvanized world attention on the shared vulnerabilities

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<sup>2</sup> Chimpanzees, gorillas, and a host of other wildlife are also killed and have their habitat destroyed by the mining.

made more extreme by the inequalities and exploitative practices.

But, it seems little can hold our attention for long. Except in the messaging from animal and environmental groups, little attention is being paid to the practices that enabled this coronavirus to make the jump from other animal beings to human beings. Not even six months after the world really began to have to adjust to the new Covid world, almost all our attention is focused on finding a vaccine and drugs to help those who are sick. While it is important to find a way to live with this virus, I would argue that it is equally important to change how humans live so as to lessen the threat of such zoonotic disease transfer and to limit its spread when it does occur. To change how humans live, though, is hard and politically unpopular. In the US in particular, suggested or mandated changes to human behavior, such as wearing a mask or not having large social gatherings, have been met with strong resistance. One important cause of this resistance is the perceived human exceptionalism that is still common today. Many humans seem to think they are outside of the rest of nature and can

control the other than human so it does not present a real threat. Another contributing factor to this unwillingness to adjust how we live is the conception of the individual, and of individual liberties, that is common in the US. That concept of the individual is the classical liberal conception of the individual as atomistic, antagonistic, and autonomous. Critiques of the classical liberal individual abound in philosophy, with different forms of feminist theory often leading the charge.

John Dewey was an early and eloquent critic of this notion of the individual and individualism. He called it ragged individualism in his book *Individualism, Old and New* (1930).<sup>3</sup> However, he had been working out some of the issues addressed in *Individualism, Old and New* in *Human Nature and Conduct* (1922) and *Experience and Nature* (1925). I think we need to revisit some of these critiques of the individual and individualism commonly found in social

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<sup>3</sup> John Dewey, *Individualism, Old and New*, in *John Dewey: The Later Works of John Dewey: 1925-1953: 1929-1930, Essays, The Sources of a Science of Education, Individualism, Old and New, and Construction and Criticism*, The Collected Works of John Dewey, vol. 5, ed. Jo Ann Boydston (Carbondale: Southern Illinois University Press, 1988), 45.

contract theory and laissez-faire capitalism, if we hope to find an adequate response to living in a social and natural world that increases human vulnerability to disease. However, I think we need to go further and actually reconceive the notion of the individual (human and other than human), if we hope to find a new equilibrium in our natural and social environments. The lessons of how humans might live in order to minimize the threat of new zoonotic diseases turn out to be some of the same lessons for how humans might live in order to minimize the exploitation and oppression of other living beings—human beings included.

### **Dewey on the Individual, Individualism, and Individuality**

In *Individualism, Old and New, Human Nature and Conduct*, and *Experience and Nature*, and many of his other writings, Dewey is at pains to push his reader to rethink the nature of philosophy and the nature of a fulfilling and intelligent human life. He argues that philosophy needs to take an

empirical turn and take experience seriously, both as a starting point for thinking and as method of testing hypotheses.<sup>4</sup> Without this approach, Dewey argues, philosophy is left with no way to test or verify theoretical perspectives. Further, without this approach, there is no “enlargement and enrichment of meaning” and philosophy “becomes arbitrary, aloof—what is called ‘abstract’ when the word is used in a bad sense to designate something which exclusively occupies a realm of its own without contact with the things of ordinary experience.”<sup>5</sup> This approach results in his famous test for the value of any philosophy: “Does it end in conclusions which, when they are referred back to ordinary life-experiences and their predicaments, render them more significant, more luminous to us, and make our

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<sup>4</sup> It is helpful to keep the following definition of experience in mind: “It is precisely the peculiar intermixture of support and frustration of man by nature which constitutes experience.” John Dewey, *Experience and Nature*, in *The Later Works of John Dewey: 1925-1953: 1925, Experience and Nature*, The Collected Works of John Dewey, vol. 1, ed. Jo Ann Boydston (Carbondale: Southern Illinois University Press, 1988), 314.

<sup>5</sup> *Ibid.*, 17.



dealings with them more fruitful?”<sup>6</sup> In other words, does it help life get better in some way.

This approach to philosophy (and science) is necessary because we live in a changing world with real risk. Dewey argues that philosophers have sought abstracted ideals in order to find some sense of certainty and stability in a world that is “uncertain, unpredictable, uncontrollable, and hazardous.”<sup>7</sup> Rather than deny or fear the situation of live creatures in the world, Dewey articulates an approach to philosophy that allows for increased understanding, predictability, and control, though these are never lasting or final. His naturalistic metaphysics recognizes that the live creature is born, develops, and dies—all in constant transactive relationships with environments that contain both moments of change and stability, moments of risk and security, moments of contingency and probability. The problem of philosophy, and many individuals, comes in denying uncertainty because uncertainty is uncomfortable. Dewey’s experiential approach to philosophy, based in an

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<sup>6</sup> Ibid., 18.

<sup>7</sup> Ibid., 43.

idealized scientific method of grounded hypotheses tested in experience, shows “that reflective thinking transforms confusion, ambiguity and discrepancy into illumination, definiteness and consistency” within specific contexts.<sup>8</sup> This is what it means to be “intelligently experimental” and this is what enables non-arbitrary choices and actions that help shape the world and our experiences in it.<sup>9</sup> This allows for the development of what Dewey calls ends-in-view which are aims or useable plans that function as “intellectual and regulative means” for dealing with the precarious and problematic in our lives.<sup>10</sup> Neither dogma nor predetermined desired ends have a place in intelligent inquiry.

That such intelligent inquiry is difficult, is evidenced by human’s continual desire to rest in some dogma conceived as final and certain. Without intelligent inquiry we tend to get

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<sup>8</sup> Ibid., 61.

<sup>9</sup> Ibid., 63 and 67.

<sup>10</sup> Ibid., 86.

carefully cultivated and artificially protected fantasies of consolation and compensation; rigidly stereotyped beliefs not submitted to objective tests; habits of learned ignorance or systematized ignorings of concrete relationships; organized fanaticisms; dogmatic traditions which socially are harshly intolerant and which intellectually are institutionalized paranoic systems; idealizations which instead of being immediate enjoyments of meanings, cut man off from nature and his fellows.<sup>11</sup>

We can see these ignorings, dogmatism, and paranoia in many of the current US responses to the pandemic. Fantasies that the virus will just go away, learned ignorance that denies the advice of scientists and health experts (including the COVID-19 vaccines), and paranoic systems such as QAnon are just a few that come to mind.

Dewey argues that education in the method of intelligence is the best defense against such dangers. In his own time, Dewey worried that education in the US was not

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<sup>11</sup> Ibid., 239.

effective for developing the habit of inquiry and intelligence. He noted that while more individuals obtain a high school education in the US than in many other places, “one-half of the pupils in the last years of the high school think that the first chapters of the Hebrew Scriptures give a more accurate account of the origin and early history of man than does science, and only one-fifth actively dissent.”<sup>12</sup> This kind of denial of science in favor of dogmatic belief is still evident in those declaring COVID-19 a hoax and in the many conspiracy theories being fomented on social media. This suggests that US education has more work to do with regard to teaching the method of intelligence and reflection.

For Dewey science, morals, and aesthetics “exhibit the difference between immediate goods casually occurring and immediate goods which have been reflectively determined by means of critical inquiry.”<sup>13</sup> The reflectively determined goods are those thought to be better where “better is that which will do more in the way of security,

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<sup>12</sup> Dewey, *Individualism, Old and New*, 47.

<sup>13</sup> Dewey, *Experience and Nature*, 304.

liberation and fecundity for other likings and values.”<sup>14</sup> The alternative is mind and habit formed and controlled by fear.

The mind that is hampered by fear lest something old and precious be destroyed is the mind that experiences fear of science. He who has this fear cannot find reward and peace in the discovery of new truths and the projection of new ideals. He does not walk the earth freely, because he is obsessed by the need of protecting some private possession of belief and taste.”<sup>15</sup>

Focusing on fear, rather than reflection, results in dogmatic and inflexible positions.

One dogma that needs to be unsettled in order to intelligently deal with our natural, social, and political environments is the dogma of individualism. This requires rethinking notions of the individual and individuality as well. For Dewey human individuals are social individuals through and through, and they are always in transactive

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<sup>14</sup> Ibid, 321.

<sup>15</sup> Dewey, *Individualism, Old and New*, 118.

(that is mutually modifying) relationships with their natural, social, and political environments. Humans cannot stand outside of nature and individuals cannot stand separate from other beings and their environments. Dewey writes, “Existentially speaking, a human individual is distinctive opacity of bias and preference conjoined with plasticity and permeability of needs and likings. One trait tends to isolation, discreteness; the other trait to connection, continuity.”<sup>16</sup> Humans experience this tension. Sometimes the world is experienced as a “continuous system of connected events” and the individual feels at home. At other times, though, the individual “is at odds with its surroundings.” That presents a choice. Some surrender to the forces of the world, others seek “to remake conditions in accord with desire.”<sup>17</sup> Those who surrender to the world live in what they see as a finished and closed world, but are still subjected to inevitable change. Those who use intelligence to remake conditions accept risk and uncertainty. “No one discovers a new world without

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<sup>16</sup> Dewey, *Experience and Nature*, 186.

<sup>17</sup> *Ibid*, 188.

forsaking an old one; and no one discovers a new world who exacts guarantee in advance for what it shall be, or who puts the act of discovery under bonds with respect to what the new world shall do to him when it comes into vision.”<sup>18</sup>

How individuals engage with the world matters.

The human individual, for Dewey, is a body-mind. This term “designates what actually takes place when a living body is implicated in situations of discourse, communication and participation.” Dewey states that “‘body’ designates the continued and conserved, the registered and cumulative operation of factors continuous with the rest of nature, inanimate as well as animate; while ‘mind’ designates the characters and consequences which are differential, indicative of features which emerge when ‘body’ is engaged in a wider, more complex and interdependent situation.”<sup>19</sup>

When we see and understand the body-mind as “organism *in nature*, the nervous system in the organism, the brain in the nervous system, the cortex in the brain . . . in a moving, growing never finished process” we can end the long

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<sup>18</sup> Ibid, 189.

<sup>19</sup> Ibid, 217.

standing philosophical separation of body and mind.<sup>20</sup> For Dewey we gain some sense of being an individual when we resist what is customary. Even when resisting, though, this self is a social being through and through.

Dewey notes that individuals start as infants who are shaped by their natural, social, and political environments even as they shape these environments by their own curiosity and purposes. While education commonly focuses on instilling specific socially desired habits into children, it should focus on developing the habit of “active, inquiring, expanding experience.”<sup>21</sup> What is needed is the development of the habit of critical inquiry. “In learning habits it is possible for man to learn the habit of learning. Then betterment becomes a conscious principle of life.”<sup>22</sup> He argues that education in a democracy should promote original, critical thinking rather than adherence to “what the

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<sup>20</sup> Ibid., 224, 225.

<sup>21</sup> John Dewey, *Human Nature and Conduct*, in *The Middle Works of John Dewey: 1899-1924: 1924, Human Nature and Conduct*, The Collected Works of John Dewey, vol. 14, ed. Jo Ann Boydston (Carbondale: Southern Illinois University Press, 1988), 47.

<sup>22</sup> Ibid., 75.



sect or clique or class says . . . .”<sup>23</sup> Without widespread independence of thought in the service of social aims, democracies run the risk of being subject to those concerned with their own power and money. Such people “encourage routine in others . . . . Subjection they praise as team-spirit, loyalty, devotion, obedience, industry, law-and-order. But they temper respect for law—by which they mean the order of the existing status—on the part of others with most skilful [sic] and thoughtful manipulation of it in behalf of their own ends.” This can be seen in the kind of group think encouraged at political rallies and on social media. Unthinking following is what those who desire power for the sake of power want to promote in others and “while they denounce as subversive anarchy signs of independent thought, of thinking for themselves, on the part of others lest such thought disturb the conditions by which they profit, they think quite literally *for* themselves, that is, *of* themselves.”<sup>24</sup> This is eerily prescient when one reads it in the context of former President Trump’s responses to both

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<sup>23</sup> Ibid., 48.

<sup>24</sup> Ibid., 49-50.

the pandemic and the ongoing protests over systemic inequalities and police violence.<sup>25</sup> Those following Trump's lead follow conspiracy theories that resist all appeals to evidence and they condemn social justice protestors for disrupting their perceived peace and security. While appeal to law and order, and denials of the virus, may make one feel more secure, they actually make life more precarious.

To address the spread of COVID-19, or to effect lasting social change, we need to work to change the habits of individuals (an important role of education) as we work to change the habits of institutions and laws. However, "the habits of thought and feeling are not so easily modified." Dewey notes that "Political and legal institutions may be altered, even abolished; but the bulk of popular thought which has been shaped to their pattern persists. Those who call for immediate revolution fail to confront the strength of personal, social, and institutional habits." Here Dewey cautions against believing that deep change can come from quick, even if dramatic, action. Calls to defund the police—

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<sup>25</sup> This passage also sheds light on the "stop the steal" mantra that helped push many toward the January 6<sup>th</sup> attack on the Capital in 2021.

in all the various ways that has been meant—will not, on their own, end institutionalized violence against people of color. That will require ongoing work in law, education, economic relations, and more. “(T)he short-cut revolutionist fails to realize the full force of the things about which he talks most, namely institutions as embodied habits. Anyone with knowledge of the stability and force of habit will hesitate to propose or prophesy rapid and sweeping social changes.”<sup>26</sup> That said, Dewey is aware that social conditions are what create the revolutionary and the revolutionary can help change habits. “The rebel is the product of extreme fixation and unintelligent immobilities. Life is perpetuated only by renewal. If conditions do not permit renewal to take place continuously it will take place explosively. The cost of revolutions must be charged up to those who have taken for their aim arrest of custom instead of its readjustment.”<sup>27</sup> The pandemic brings to light the failure of humans to continually readjust in their relationships with the rest of nature and, at least in the US,

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<sup>26</sup> *Ibid.*, 77.

<sup>27</sup> *Ibid.*, 113.

the failure of society to continually readjust in the face of inequality and oppression.

Dewey draws attention to some of the tensions between thought and action in the social and political environments of the US that remain with us today. While we say we value “equality of opportunity and of freedom for all without regard to birth and status,” we fail to keep this value at the center of our identity or efforts.<sup>28</sup> Instead we promote a pecuniary culture. The result is that “instead of the development of individualities which it prophetically set forth, there is a perversion of the whole ideal of individualism to conform to the practices of a pecuniary culture. It has become the source and justification of inequalities and oppressions”<sup>29</sup> We continue to push the myth that anyone can succeed with hard work and determination. We continue to resist actions that are perceived as limitations on individual freedoms, even as we fail to acknowledge the social influences that help constitute individuals and communities.

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<sup>28</sup> Dewey, *Individualism, Old and New*, 48.

<sup>29</sup> *Ibid.*, 49.

We may desire abolition of war, industrial justice, greater equality of opportunity for all. But no amount of preaching good will or the golden rule or cultivation of sentiment of love and equity will accomplish the results. There must be change in objective arrangements and institutions. We must work on the environment not merely on the hearts of men.<sup>30</sup>

Of course, Dewey believes we must work on both environments and hearts, as neither alone is enough and they are inseparable. But just what is the notion of the individual and individuality that remains once one realizes how thoroughly any individual is shaped by natural, social, and political environments?

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<sup>30</sup> Dewey, *Human Nature and Conduct*, 19-20.

## **New Biology and the Individual, Individualism, and Individuality**

Dewey was influenced by the natural and social sciences of his time. He regularly drew on anthropology, sociology, psychology, biology, and physics as he tried to demonstrate what a naturalistic approach to philosophy looked like. He would expect current philosophy to do the same. In that vein, I turn to emerging work in microbial biology and One Health to explore new understandings of what it means to be human, to be an individual, and to express individuality. These understandings help to undermine the rugged or ragged individualism Dewey worked against, and point to the importance of understanding humans as always in deeply transactional relationships with the rest of their natural, social, and political environments. I focus on two articles by Jonathan Beever and Nicolae Morar: “Bioethics and the Challenge of the Ecological Individual”<sup>31</sup> and “The

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<sup>31</sup> Beever and Morar are drawing on and extending Lorraine Code’s ecological self (2006). Jonathan Beever and Nicolae Morar, “Bioethics and the Challenge of the Ecological Individual,” *Environmental Philosophy* 13, no. 2: 215-238 (2016).

epistemic and ethical onus of ‘One Health.’” Their work is in line with much of what Dewey thought about human individuals, and provides an important way to understand and address pandemics.

Beever and Morar set out to help us rethink what it means to be an individual. Their main focus, as was Dewey’s, is the classical liberal individual who is seen as atomistic, self-interested, competitive, and autonomous.<sup>32</sup> They present human’s ontological situatedness and point to some of the ethical, social, and political implications of this situatedness. Their ecological concept of the individual could help us move forward in the way that Dewey defined as better—“better is that which will do more in the way of security, liberation and fecundity for other likings and values.”<sup>33</sup>

They point out that current science undermines the long held philosophical and psychological understandings of human individuals as “discrete organisms made only of

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<sup>32</sup> Unfortunately, in these articles they often conflate the individual with individuality. These are not the same, and so I follow the lead of their use of the term ‘individual’ in their title.

<sup>33</sup> Dewey, *Experience and Nature*, 321.

human biochemical and genetic components, or distinct minds whose cognitive functioning was internalized and detached from outside resources, or as selves radically separated from the social relations they inhabit.”<sup>34</sup> They turn to microbial biology to demonstrate that human individuals are composite creatures who include a host of symbionts in our microbiome. This is supported by evidence that body weight is connected to the diversity (or lack thereof) in our digestive microbial community and that immune function is tied to the transfer of a microbiome during a vaginal birth. This means that “there is a deep biological sense in which we are *not* individuals, but ecosystems through and through . . . .”<sup>35</sup> Further, they argue, human individuals incorporate non-biological technology in a kind of extended mind, storing information in external devices instead of only in our heads. Social factors also play a role in shaping individuals. Poverty impacts “independence, self-determination, and autonomy”

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<sup>34</sup> Beever and Morar, “Bioethics and the Challenge of the Ecological Individual,” 216.

<sup>35</sup> *Ibid.*, 218.



and power dynamics “shape how we view or categorize types of persons, shifting the conversation from causal forces acting on a stable self to the ways . . . social forces *constitute* the self.”<sup>36</sup> Bringing together the biological, cognitive, and social challenges to the idea of a discrete, distinct, and detached self Beever and Morar point to a very Deweyan “dynamic ontology” that understands the human organism as a complex of a diversity of genetics, symbionts, and biochemistry that is “embedded into interactive environments.” Human individuals are “*co-constituted* by whole series’ of environmental conditions” and so notions of individual autonomy and moral responsibility are challenged.

While their main concern in this paper is with the implications this has for bioethics, I want to connect their main point here with their discussion of the emerging field of One Health. They argue that if we understand the human individual as not just in an environment, but as “constituted by close partnership with other forms of life and sociality,”

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<sup>36</sup> Ibid., 220-221.

we could radically reorient much of philosophy.<sup>37</sup> However, they worry that such a shift in understanding the individual cannot be expected any time soon (if ever). But the movement of One Health might be a place where such a shift is beginning to take place. The One Health paradigm begins with the idea that there are important connections among the health of the environment, human beings, and other animal beings. A pandemic from a zoonotic disease serves as support for this view. Given these connections, knowledge and practices that inform veterinary medicine can be useful in human medicine and vice versa. Environmental disturbances or changes can impact the health of plants and animals. From this many endorse an interdisciplinary approach and are

committed to the premise that the idea of One Health in disease ecology brings forward a globally shared interspecies health concern.... Epistemic boundaries are, at best, artificial, as pathogens have never been shy from moving from one species to another, or they are, at worst, dangerous as they limit our capacity to

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<sup>37</sup> Ibid., 230.

imagine and develop multiscale health solutions to medical crises and pandemics.<sup>38</sup>

The more relational approach of One Health brings attention to the fact “that human health is not independent from its biological background but . . . is built on constant relationships with the environment.”<sup>39</sup> However, Beever and Morar worry that One Health may not do enough to de-center the human or challenge the idea of what a human individual may be. Further, many One Health proponents are so focused on the interconnections among environmental health, human health, and the health of other beings that they miss the interdependence that exists among these same groupings. This often has the consequence of seeking to understand the health of the environment and other animal beings only for the purpose of improving or safeguarding human health. Viewed this way, One Health does little to nothing to change the anthropocentric

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<sup>38</sup>Nicolae Morar and Jonathan Beever, “The Epistemic and Ethical Onus of ‘One Health,’” *Bioethics* 33, no. 1: 2.

<sup>39</sup> *Ibid.*, 3.

paradigm and human exceptionalism that governs most of epistemology and ethics. The 2009 Q Fever outbreak in the Netherlands demonstrates that the danger to human health posed by Q Fever resulted in mass cullings of goats, many of whom were healthy. Viruses such as West Nile and Zika serve to demonstrate that in a shrinking world human, animal, and environmental health all need to be attended to, but they are approached primarily through the lens of human health. Their example, supporting this point, is the release of genetically engineered mosquitos to prevent mosquito reproduction with little or no concern for the welfare of mosquitos or the health of particular ecosystems. The knowledge of interconnections often fails to alter the moral priority placed on human beings.<sup>40</sup>

At its best One Health does push for the moral consideration of the more than human and “pushes against the idea of siloed individual entities and highlights an important tension between the ‘old’ metaphysics of the individual and the ‘new’ ontology of relational health: from

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<sup>40</sup> Ibid., 4.

connections to interconnections.”<sup>41</sup> But Beever and Morar argue it needs to go further and grapple with interdependence. With interdependence comes an ontology that recognizes that “parts and wholes are not just interacting but are co-constitutive (dependent on one another for their identities).”<sup>42</sup> To make their point they once again turn to the microbiome to challenge the idea of an autonomous individual human in interaction with other beings and offer instead a view of the human that is interdependent with, and co-constituted by, the microbiome. They then point out that this kind of interdependence extends to plants and other animal beings who exist and thrive only with these relationships. What we take to be individuals are really superorganisms and “neither the host nor the microbial community would exist as such without interdependent reliance on the other’s biochemical and nutrient services, or at least they would not be able to thrive as healthy organisms.”<sup>43</sup> This is very much in line

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<sup>41</sup> Ibid., 5.

<sup>42</sup> Ibid., 6.

<sup>43</sup> Ibid., 7.

with what Dewey termed transactive relationships between live organisms and their environments.

The understanding of humans as superorganisms complicates clear cut notions of “an individual” and highlights the transactive interdependence that makes up our natural, social, and political worlds. Social and political choices about food production and distribution can impact the microbiome of individuals and communities (negatively and positively). That microbiome, in turn, can impact the physical and psychological health of individuals and communities. Such impacts are not evidenced only in physical outcomes such as weight and immunity, but can be evidenced in psychological responses to the world such as fear, flexibility, or curiosity. This means that Dewey’s call to educate people in the habit of inquiry, not only requires attention to educational institutions and pedagogy, but to the microbiome as well. As Cynthia Willett notes in her book *Interspecies Ethics*, humans are superorganisms who depend on relationships with microorganisms in their gut, food, and soil. These relationships can make us more or less resilient—physically and psychologically. She discusses how

our “gut brain” can create uneasiness, anxiety, calm, or happiness.<sup>44</sup> All of these contribute to the possibility of learning and remaining open and flexible in the face of uncertainty and change.

### **How Respect for Individuality Results in Respect for Communities and Ecosystems**

The uncertainty and ambiguity of lived experience requires that individuals and communities develop reflective and flexible strategies of inquiry and adaptation if they are to survive and flourish. Challenging notions of being “an individual,” though need not challenge notions of individuality. Even if, somehow, one could create the same microbiome for two beings, their different experiences would result in different physical and psychological traits. Individuality is not lost with the loss of the individual. And individuality becomes key to reliance and flourishing as a variety of outlooks, responses, knowledges, experiences,

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<sup>44</sup> Cynthia Willett, *Interspecies Ethics* (New York: Columbia University Press, 2014), 84-85 and 114.

genetics, and environments help create more diversity (pluralism) among possible ways of navigating the world.

Individuality does not result from some stable core “self,” but from the ongoing transactive relationships within which we are all enmeshed. Given the topic here, it is worth noting that human beings’ (and other animal beings’) communities and individuals have been shaped by a long history of relationships with climate and disease. These have resulted both in the death and loss of possibilities and in life and new possibilities. The same is true for the relationships between human and other animal beings. For example, living with livestock resulted in zoonotic diseases, but it also resulted in increased immunity among some humans to those diseases. This then resulted in vaccines that can spread that immunity to humans at large. Before that, though, travel, trade, and colonization resulted in disease exposure among different groups of humans, often with devastating consequences. The impact of smallpox on Native Americans is one well-known example, the plague is another. Both are



still with us, but contained to one degree or another.<sup>45</sup> Such diseases did not just kill people, they wiped out human knowledge and cultures on a wide scale. While COVID-19 does not seem to present the same kind of threat, it is proving more spreadable than other recent emerging infectious diseases such as SARS, MERS, or Ebola. All of this is just to point out that current human habits make it almost inevitable that large parts of the human population will be exposed to new lethal and damaging diseases.<sup>46</sup>

If humans can develop a more general and widespread respect for the rest of the natural world, though, and if humans can curb some of their currently widespread consumptive habits, we might be able to lessen and slow the emergence of new pathogens into the human population. This requires acting with foresight—in Dewey's terms, using ends-in-view that are informed by past experiences in order to guide present action in a better way. It also requires that

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<sup>45</sup> Smallpox has been eradicated among the human population, but the virus exists in two labs. The plague continues to infect wildlife such as prairie dogs, ferrets, squirrels, and chipmunks.

<sup>46</sup> It is important to note, that many who survive COVID-19 will live with health impacts which they must manage for the rest of their lives.

current social problems and institutions be re-thought and re-made in light of what the stress of the pandemic has made much more obvious. Rather than asking when we will return to normal—to some pre-Covid state of affairs—we should be asking how the future might be different. With some habits at least temporarily broken, we have an opportunity to make more lasting changes. Rather than fearing those changes, and working to create fear in others, Dewey would argue we should be reexamining, rethinking, and reforming many habits and institutions. He notes that “too often the man who should be criticizing institutions expends his energy in criticizing those who would re-form them. What he really objects to is any disturbance of his own vested securities, comforts and privileged powers.”<sup>47</sup> Dewey’s diagnosis and response to such intransigence is still relevant today. At least part of what needs to happen is for humans to understand that they are part of the rest of nature, recognize their shared interdependence, and act with foresight in the ongoing transactive relationships with the rest of nature. Related to this is the need to recognize

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<sup>47</sup> Dewey, *Human Nature and Conduct*, 116.

humans' shared interdependence with each other and to act with foresight to shape the social and political relationship as well. These steps begin the process of challenging the long held notions of individualism and the individual. Any particular human, or human community, is co-constituted by natural, social, and political environments. To effect any lasting change, it is necessary to use Dewey's method of intelligence to examine the past history and development of individuals, communities, and institutions in order to understand their present purposes and impacts and in order to attempt purposeful change that can be ongoing.