Rethinking Climate Change and Intra- and Inter-generational Justice in the Global Age: A Deweyan Perspective

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INTRODUCTION

In the opening of *A Common Faith,* published in 1934, John Dewey remarks: "Never before in history has mankind been so much of two minds, so divided into two camps, as it is today."[1] In the face of what he perceived as unprecedented human polarization, Dewey made a distinction between "religion" and "religious experience" and affirmed the spiritual and political values of common human "religious experience" for addressing and redressing human polarization. To Dewey, human "religious experience" originating from human interaction with the universe can and ought to be emancipated from established and institutionalized religions. Emancipated religious experiences then can foster a common faith among people with divergent values and worldviews.

Almost a century later, the continuous tug of war between economic development and environmental protection readily reminds us of Dewey's remark regarding human polarization. In an increasingly polarized society, bridging the divide between deniers of and believers in climate change appears to be an especially formidable task. Although climate change has been a recurring phenomenon throughout human history, believers in climate change take note of the recent acceleration and the global scope of climate change ensuing from anthropogenic greenhouse gas emissions. To believers in anthropogenic climate change, the impending calamity of climate change has posed an existential threat to intra- and inter-generational justice. In contrast, climate change deniers are inclined to regard climate change as "natural" and "normal." The naturalization and normalization of climate change undercut or even reject any efforts to mitigate climate change in the global age. In addition, epistemic uncertainties surrounding the causes and consequences of climate change have been the major obstacle to mobilizing the public to take responsive and responsible actions for changing the trajectory of climate change. More specifically, modern formal education, to a great extent, leads to the perpetual quest for simplistic "scientific" certainty. As a result, it is not surprising that the slightest doubt concerning climate change can easily dissuade educated citizens from taking precautionary or preventive actions to mitigate anthropogenic climate change. Furthermore, the compartmentalization of education, especially at the higher education level, has undermined educated citizens' confidence in undertaking cross-disciplinary inquiry into the multifaceted implications of climate change. Consequently, there is a widespread belief that only trained scientists are capable of and responsible for addressing climate change.

However, the complexities of climate change require us to go beyond the confines of "specialized" discipline boundaries. As climate change impinges upon the pursuit of intra- and inter-generational justice — the ethical foundation of the

entire educational enterprise — philosophers of education truly cannot afford to sit on the sideline. In particular, the divide between deniers of and believers in climate change expose the continuing human polarization. Since believers in climate change cannot effectively address and redress climate change on their own, it is critical to explore the common ground between deniers of and believers in climate change in order to engender collaborative action to mitigate or even prevent accelerating climate change. Arguably, both believers and deniers recognize the present generation's ethical responsibilities toward their immediate posterity, which include pursuing intra-generational justice in the global age. In view of the continuum of human existence and increasing interdependence among all nations, it is prudent to assume that both believers in and deniers of climate change share a common interest in pursuing intra- and inter-generational justice. The divide between them appears to lie in their different attitudes toward epistemic uncertainties surrounding climate change. To bridge the divide between the two camps, I, in what follows, re-examine Dewey's non-dualistic arguments for "a common faith" in order to awaken our epistemic and ethical responsibilities to attend to how the un/certain causes and consequences of climate change shape intra- and inter-generational justice in the global age.

DEWEY ON "RELIGION" AND "RELIGIOUS EXPERIENCE"

Despite a common tendency to separate religion from science, both religion and science signify the human endeavor to pursue truth and to comprehend reality. Clifford Geertz notes that religion is a cultural system which "establishes powerful, pervasive, and long-lasting moods and motivation in men by formulating conceptions of a general order of existence and clothing these conceptions with such an aura of factuality that the moods and motivations seem uniquely realistic."[2] Like religion, science, as a cultural system, also embodies such "an aura of factuality." Michael Heyd points out that modern science's achieving its independence from theological constraints is based on its serving as the "soteriological bridge" — by which humans can reach the transcendental ultimate reality.[3] From this standpoint, both religion and science reveal what Julia Kristeva describes as "the incredible need to believe" — the innate human drive to develop faith in God, nature, and human existence.[4]

In recognition of the common human desire to develop "faith," Dewey endeavored to distinguish "religion" from "religious experience" in order to tackle human polarization. To Dewey, "there is no such thing as religion in the singular. There is only a multitude of religions" (CF, 7). In recognizing "a multitude of religions," Dewey implicitly rejected any attempt to elevate one religion over the other. Also, he recognized that incommensurable religious belief systems could easily spawn conflicts rather than foster social unison even though religions, like cultures, will continue to undergo transformation. Thus, Dewey's effort to promote the pursuit of common faith did not include any revitalization of established religions. Instead, he used "religious" as an adjective to describe an essential aspect of our experience that is "a composing and harmonizing of the various elements of our being such that, in spite of changes in the special conditions that surround us, these conditions are also arranged, settled, in relation to us" (CF, 16). According to Dewey, one can attain

such an experience by partaking in activities such as aesthetic appreciation, scientific inquiry, and good citizenship. Dewey's discontent with established "religion" or "religions" appears to be rooted in his concern about established religions' tendencies to exclude non-believers from "any realization of the democratic ideal as a vital moral and spiritual ideal in human affairs" (*CF*, 84). In consequence, it is not surprising that Dewey's pursuit of "common faith" embraced emancipation from established religions.

Dewey's conception of "religious experience" challenges and further discredits the primacy of religions in shaping our "religious experiences." While the established religions more or less address, adhere to, or subscribe to the supernatural, Dewey advocates for a non-religious foundation of "religious experience." To be more precise, the Deweyan conception of "religious experience" focused on the integral relationship between humans and the universe. He stated, "the sense of the dignity of human nature is as religious as is the sense of awe and reverence when it rests upon a sense of human nature as a cooperating part of a larger whole" (*CF*, 25). To Dewey, "Faith in the continued disclosing of truth through directed cooperative human endeavor is more religious in quality than any faith in a completed revelation" (*CF*, 26). He further emphasized the role that intelligent imagination could play in recognizing, fostering, and sustaining such an integral relationship between humans and the universe. He stated, "the self is always directed toward something beyond itself and so its own unification depends upon the idea of the integration of the shifting scenes of the world into that imaginative totality we call the Universe" (*CF*, 19). Clearly, the imaginative totality of "the Universe" cannot be taken as a given. Rather, the recognition of an integral relationship between the individual and the Universe represents an arduous educational task because it requires human agents' making intelligent decisions to "bring conditions into greater consonance with what is humanly desirable" (*CF*, 25).

As discussed above, Dewey's non-dualistic conception of the universe encompasses both the social and ecological aspects of human existence. It follows that his proposed naturalistic foundations of "religious experiences" do not necessarily preclude one's forming unity with the social world — the human community. Thus, the examples of "religious experiences" include aesthetic appreciation, scientific inquiry, and good citizenship. The inherent ambiguities of Dewey's conception of "religious experience" hence lead to the ongoing debates about whether John Dewey is an anthropocentric or biocentric environmental philosopher.[5] In view of Dewey's commitment to promoting non-dualistic reasoning, Dewey's conception of "common faith" apparently centers on the interconnections between social and ecological issues. Still, can a presumably secular pursuit of common faith avoid repeating established religions' persecution of heretical doctrines and dissidents? According to Dewey, the existence of the universe is constituted by our intelligent endeavor to integrate "the shifting scenes of the world" into that "imaginative totality we call the Universe." Dewey's normative conception of "common faith" especially emphasizes the temporal dimension of human community. In Dewey's words,

> We who now live are parts of a humanity that extends into the remote past, a humanity that has interacted with nature. The things in civilization we most prize are not of ourselves. They exist by grace of the doings and suffering of the continuous human community in which we are a link. Ours is the responsibility of conserving, transmitting, rectifying and expanding the heritage of values we have received that those who come after us may receive it more solid and secure, more widely accessible and more generously shared than we have received it. (*CF*, 87)

To Dewey, a recognition of individuals' being an integral part of the continuous and ever-expanding human community is the key to fostering a common faith. Noticeably, reciprocity exists in between adjacent generations in spite of the persistence of generational gaps. In other words, the adult generation, to a large extent, dutifully assumes and fulfills its ethical responsibility of nurturing the immediate descendants. Formal school education epitomizes the adult generation's concerted efforts to ensure the younger generation's survival and flourishing. Dewey states, "we must take the child as a member of society in the broadest sense, and demand for and from the schools whatever is necessary to enable the child intelligently to recognize all his social relations and take his part in sustaining them."[6] In return, the younger generation recognizes their obligations to sustain and revitalize cultural traditions established by their immediate and distant ancestry. However, the reciprocity between the adjacent generations does not necessarily exist between the present generation and remote future generations. As a matter of fact, there has been a widespread tendency to ignore, disclaim, or discount the present generation's assuming responsibilities toward the remote future generations.[7] As it is questionable that individuals could have a pre-understanding of human moral responsibilities without going through a process of acculturation that fosters an inter-subjective recognition of ethical norms, it is essential to examine the social milieu that facilitates our recognition of ethical responsibilities.

Ivan Illich notes that modern educational systems in both developed and developing nations are constructed to guide individuals "away from their natural environment and pass them through a social womb in which they are formed sufficiently to fit into everyday life."[8] Instead of fostering an integration of "the shifting scenes of the world" into the "imaginative totality of the Universe," modern formal education, to a large extent, severs the organic connections between humans and nature and institutes the polarized ecological and economic systems. While Dewey did not foresee the magnitude of today's ecological problems including climate change, his conception of "the Universe" is helpful for rectifying the dualism that is deeply embedded in formal schooling. More specifically, Dewey's non-dualistic conception of the common faith grounded in one's interactions with the natural environment are instrumental for recognizing the organic interconnections among all living and non-living beings, especially in the age of the Internet.[9] However, the cultivation of common faith must go beyond facilitating the interaction between humans and nature. Dewey's conception of "the Universe" is not conterminous with the so-called natural environment. To comprehend "the imaginative totality of the Universe," Dewey attends to "the matrix within which our ideal aspirations are born and bred. It is the sources of the values that the moral

imagination projects as directive criteria and as shaping purpose" (*CF*, 85). To Dewey, the matrix for facilitating the development of a moral imagination should not be confined in individuals' critical minds. Rather, it is "a product of the cooperative and communicative operations of human beings living together" (*CF*, 86). In what follows, I attempt to explicate why building a common faith for altering the trajectory of climate change must be grounded in cooperative and communicative ethical inquiries concerning intra- and inter-generational justice.

BUILDING A COMMON FAITH IN THE ECOLOGICAL AGE

The multifaceted phenomenon of climate change indeed challenges our moral imagination. As indicated before, epistemic uncertainties concerning climate change are obstacles to mobilizing public action. At the same time, ignorance and/or indifference toward climate change can be attributed to what Edward Said called "the normalized quiet of unseen power,"[10] generated and mobilized by the relentless pursuit of economic growth at both local and global levels. In 1991, Lawrence Summers, then chief economist of the World Bank, wrote "I have always thought countries in Africa are vastly under polluted; their air quality is probably vastly inefficiently low compared to Los Angeles … Shouldn't the World Bank be encouraging more migration of the dirty industries to the Least Developed Countries?"[11] Summers's statement reflected developed nations' zeal to relocate dirty industries to the developing nations. However, developed nations are not necessarily committed to fair and just environmental cost sharing. Noticeably, President George W. Bush refused to "let the United States carry the burden for cleaning up the world's air, like the Koyto Treaty would have done"[12] even though the United States is the biggest polluter. As a result, developing nations continue to endure environmental degradation and become even more vulnerable as they face climate change in the global age. In 1991, the Intergovernmental Panel on Climate Change (IPCC) pointed out that the small island states of the Pacific "given their high vulnerability and low adaptive capability to climate change" have been exposed to greater degrees of environmental risks even though they "account for less than 1% of global greenhouse gas emissions."[13]

Yet, in the name of pursuing economic growth, Frank Luntz advised policy makers that they must "continue to make the lack of scientific certainty a primary issue" because "should the public come to believe that the scientific issues are settled, their views about global warming will change accordingly."[14] The persistent quest for scientific certainty about climate change easily casts doubt on global warming. However, the far-reaching impact of the "greenhouse effect" does not recognize the boundaries between developed and developing nations. Accelerated climate change clearly indicates that "migration of dirty industries" from developed nations to developing nations offers no environmental protection to developed nations. The very recent Sandy superstorm especially calls acute attention to catastrophic and far-reaching consequences of climate change in the developed nations. At the same time, more environmentalists in developing nations are taking the lead to reduce greenhouse emissions.[15]

As discussed above, climate change has re-shaped intra- and inter-generational relationships. In face of the ongoing globalization, the divide between the First World and the Third World has become pointless — as Edward W. Soja notes, "all that was local becomes increasingly globalized, all that is global becomes increasingly localized."[16] In view of such glocal interconnections, the pursuit of intra-generational justice is not in conflict with inter-generational justice. In recognition of the interdependences between justices, the cultivation of moral imagination must attend to both the spatial and temporal dimensions of "the Universe." While modern schooling continues to play a key role in facilitating inter-generational cultural transmission and addressing the adjustment needs of living in an interdependent global village, it is also evident that modern schooling persists in educating autonomous individuals whose flourishing is often at the cost of natural resources exploitation. In the words of Jakob Wolf and Mickey Gjerris, we have come to "live lives of worry (Heidegger called it *in cura*) where we constantly look at the world from the perspective of self-preservation."[17]

To redress the polarization of humans and the Universe, Dewey's conception of "common faith" focuses on reclaiming the organic connections between individuals and the Universe. From Dewey's standpoint, one's awareness of the temporal continuity of the human community does not mean unreflective immersion in one's cultural traditions. Instead, one has to reflectively inquire into the historical roots of today's ecologically problematic cultural practices and make further efforts to re-direct cultural formation at both local and global levels. In 1992, the United Nations Framework Convention on Climate Change (UNFCCC) proposed the following principle to address global climate justice: "The Parties should protect the climate system for the benefit of present and future generations of human kind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities."[18]

The United Nations' principle points out that the present generation has the power to shape future generations' prospects, rather than vice versa. An awareness of future generations' powerlessness should lead us to take precautions against the negative impact that exploitative cultural practices can have on succeeding generations. To rectify the popular justifications of differentiating, discounting, or even disclaiming the present generation's moral responsibility to future generations, it is critical to address and redress hegemonic cultural values (that is, atomistic individualism, contractual social relationships, the pursuit of progress, and the severance between ethics and epistemology) embedded in modern schooling and to advocate for egalitarian intra- and inter-generational relationships.

To this end, the United Nations' principle of "common but differentiated responsibilities and respective capabilities" further compels us to re-examine developed nations' historical responsibilities of inducing climate change.[19] It has been widely taken as a cultural norm that "our actions and policies should be informed by our best scientific judgments."[20] Since 1988, the Intergovernmental Panel on Climate Change (IPCC) has submitted three comprehensive reports on the patterns of climate change. The IPCC's reports have reflected an emerging scientific

consensus regarding global climate change. Yet, epistemic uncertainties surrounding attributing, verifying, and calculating the relationship of developed nations' historical emissions to impending climate change promote endless debates and impede consensus building for collective actions at the global level. Assessing and substantiating developing and developed nations' respective capabilities also face insurmountable political struggles that can easily justify inaction. Furthermore, in a polarized society, the lay public is not privy to the ongoing debates on climate predictions within the community of climate science. The exclusion of the lay public from debating climate change indicates a widespread belief that true scientific knowledge is supposed to be certain, infallible, and final.[21] It also reveals an assertion that progress is pre-determined and that scientific enterprise will proffer a technological fix for ecological problems such as climate change. Such an optimal faith in scientific rationality and technological capabilities, embedded in formal school education, often leads to discrediting climate scientists' efforts to grasp the intangible reality of climate change when they are not able to provide unequivocal "evidences" to support their claim.[22] Uncertainties concerning climate change further discourage the lay public from taking precautions against not-yet-verified consequences of climate change.

In line with Dewey's efforts to cultivate common faith through cooperative and collaborative endeavor, it is crucial to reform science education, which "is now so narrowly scientistic that many scientists simply do not know that there is any systematic way of thinking besides their own."[23] An innovative yet viable educational effort to pursue intra- and inter-generational justice must redress the above structural constraints of formal schooling in order to establish an egalitarian and inclusive epistemic community in which environmental policy-makers, curriculum specialists, classroom teachers, and students can be co-inquirers in examining scientific knowledge claims, cultural values, and ethical norms concerning climate change. Furthermore, to explore alternative epistemic frameworks, science education as an integral part of civic and citizenship education must reckon that self-correction as the essence of scientific inquiry does not necessarily guarantee certainty and infallibility in the construction of scientific knowledge. Above all, epistemic uncertainty concerning climate should not justify inaction. Instead, epistemic uncertainty should oblige us to cultivate our moral imagination in order to attend to how gradual, cumulative, and incremental climate change that can lead to catastrophic events. In other words, moral imagination can provide compelling grounds for taking precautionary measures against the worst-case scenario that could originate from unnoticeable gradual changes. David Orr defines ecological literacy as "the ability to ask 'what then?'"[24] Echoing Dewey's conception of common faith, Orr argues against the ongoing compartmentalization of knowledge and endorses educational reform that fosters "a sense of connectedness, implications, and ecological citizenship, and will provide the competence to act on such knowledge."[25] To David Orr, "If literacy is driven by the search for knowledge, ecological literacy is driven by the sense of wonder, the sheer delight in being alive in a beautiful, mysterious, bountiful world."[26] Apparently, the sense of wonder embedded in moral imagination is the key to bringing about "what then" questions.

In short, "what then" is a crucial question to motivate the lay public and scientist to conduct a collaborative inquiry into the interconnections between varied specialized academic disciplines, between actions and consequences, between short-term and long-term consequences, between means and ends, between economics and ethics, and so on.

The ability to pose the question of "what then" does not assure a successful quest for the answer. To illustrate, the pursuit of ecological sustainability indicates the courage to stipulate or even "foresee" the consequences of growth-oriented economic development. Yet, it is misleading to assume that ecological sustainability is calculable. Similarly, while it is appealing to pledge to the pursuit of intra- and inter-generational justice, it is a formidable task to translate such a vague concept into judicious individual actions, legislation, and public policy-making. In view of the uncertainty and unpredictability of dynamic interactions within ecological, economic, and political systems, addressing the "what then" questions is indeed challenging. In particular, it should be noted that environmentalists who employ "ecological crises" as an ultimatum for demanding social changes often encounter skeptical resistance from students as well as the lay public. C.A. Bowers points out that dialogue is essential to education for eco-justice.[27] Meaningful educational dialogues depend upon teachers' humility rather than their assumption of epistemological authority. In the same vein, Paulo Freire's critique of the banking model of education clearly pinpoints the effects of teachers' assuming unbridled authority. The complexity of climate change requires the cultivation of mutual humility between professionals and laity. In particular, the procedural aspect of environmental justice clearly relies upon public participation and access to information on an egalitarian basis. In brief, cultivating common faith must be based on sustaining collaborative efforts to ensure all members as equal partners in a constitutive community where all citizens can be co-inquirers into our ethical responsibilities toward intra- and inter-generational justice.

CONCLUSION

Although the process of education often leads to the preservation of traditional cultural values, education is also perpetually future-oriented. Alvin Toffler puts it well, "All education springs from images of the future and all education creates images of the future.… Unless we understand the future for which we are preparing we may do tragic damage to those we teach."[28] The teleological concept of progress embedded in modern schooling has been in command of our vision for future societies. Yet, technological and scientific advancements appear to engender more ecological risks, and the future has become increasingly more uncertain. In face of the uncertain or even unknowable future ensuing from climate change, civic and citizenship education should cultivate moral imagination that extends one's physical senses and cultural perceptions in order to unmask the "invisible" ecological interconnections among all living beings, as envisioned by Dewey.

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1. John Dewey, *A Common Faith (*New Heaven, CT: Yale University Press, 1934), 1. This work will be cited in the text as *CF* for all subsequent references.

2. Clifford Geertz, *The Interpretation of Culture* (New York: Basic Books, 1973), 90.

3. According to Heyd, "the term soteriological bridge assumes that ultimate reality, or the source of ultimate significance, is transcendental, and hence the crucial problem is to construct a bridge by which to reach that reality or transcendental principle." See Michael Heyd, "The Emergence of Modern Science as an Autonomous World of Knowledge in the Protestant Tradition of the Seventeenth Century," *Knowledge and Society: Studies in the Sociology of Culture Past and Present* 7 (1988): 165–180.

4. Julia Kristeva, *This Incredible Need to Believe* (New York: Columbia University Press, 2004).

5. For a detailed discussion on the recent debates on this issue, see Deron Boyles, "Dewey, Ecology, and Education: Historical and Contemporary Debates over Dewey's Naturalism and (Transactional) Realism," *Educational Theory* 62, no. 2 (2012): 143–161.

6. John Dewey, *Moral Principles in Education* (Carbondale, IL: Southern Illinois University Press, 1975): 9.

7. Huey-li Li, "Environmental Education: Rethinking Intergenerational Relationship," in *Philosophy of Education Society 1994*, ed. Michael Katz (Urbana, IL: Philosophy of Education Society, 1995), 385–397.

8. Ivan Illich, *Toward a History of Needs* (Berkeley, CA: Heyday Books, 1978).

9. For instance, Richard Louv's *Last Child in the Woods: Saving our Children from Nature Deficit Disorder* (Chapel Hill, NC: Algonquin Books of Chapel Hill, 2005) emerged as a best-selling book in 2005.

10. Edward Said, *Humanism and Democratic Criticism* (New York: Columbia University Press, 2004), 33.

11. Lawrence Summers, confidential World Bank Memo (December 12, 1991), quoted in Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Cambridge, MA: Harvard University Press, 2011), 1.

12. Quoted in Peter Singer, *One World: The Ethics of Globalization* (New Haven: CT: Yale University Press, 2002).

13. Intergovernmental Panel on Climate Change, *Third Assessment Report*, http://www.ipcc.ch/.

14. Quoted in Jennifer Lee, "GOP Change Environmental Messages" *Seattle Times*, March 2, 2003.

15. Aaditya Mattoo and Arvind Subramanian, *Greenprint: A New Approach to Cooperation on Climate Change* (Washington, DC: Brookings Institution, 2012).

16. Edward W. Soja, *Postmodern Geographies: The Reassertion of Space in Critical Social Theory* (London: Verso, 1989).

17. Jakob Wolf and Mickey Gjerris, "A Religious Perspective on Climate Change," *Studia Theologica* 63, no. 2 (2009): 130.

18. United Nations, *United Nations Framework Convention on Climate Change* (New York: United Nations, 1992).

19. Paul Harris, *World Ethics and Climate Change: From International to Global Justice* (Edinburgh: Edinburgh University Press, 2010).

20. Dale Jamison, "Global Responsibilities: Ethics, Public Health and Global Environmental Change," *Indiana Journal of Global Legal Studies* 5, no.1 (1998): 99.

21. Quoted in Laura Nader, "Anthropological Inquiry into Boundaries, Power, and Knowledge" in *Naked Science: Anthropological Inquiry into Boundaries, Power, and Knowledge*, ed. Laura Nader (New York: Routledge, 1996).

22. Rafaela Hillerbrand, "Epistemic Uncertainties in Climate Predictions: A Challenge for Practical Decision Making," *Intergenerational Justice Review* 9, no. 3 (2009): 94–99.

23. Mary Midgley, "Can Science Save Its Soul?," *New Scientist* 135, no. 1832 (1992): 25.

24. David W. Orr, *Ecological Literacy: Education and the Transition to a Postmodern World* (Albany, NY: SUNY Press, 1992), 85.

25. Ibid., 103.

26. Ibid., 86.

27. C.A. Bowers, *Educating for Eco-justice and Community* (Athens, GA: University of Georgia Press, 2001).

28. Alvin Toffler, *Learning for Tomorrow: The Role of the Future in Education* (New York: Vantage Books/Random House, 1974).