



BRUCE  
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## THE GREENING OF GREEN

*At the approach of danger, two voices always speak with equal force in a man's soul: one quite reasonably tells the man to consider the properties of the danger and the means of saving himself from it; the other says still more reasonably that it is too painful and tormenting to think about the danger, when it is not in man's power to foresee everything and save himself from the general course of things, and therefore it is better to turn away from the painful things until they come and think about what is pleasant.*

—Leo Tolstoy<sup>1</sup>

*The fight is, definitely, not yet lost... because however warm the planet gets, it will always be the case that the decade that follows could contain more suffering or less.*

—David Wallace-Wells<sup>2</sup>

An observation by the poet/philosopher John Koethe is pertinent to the political predicament of climate action. “Each of us has a ‘personal’ perspective on his or her own life,” Koethe writes, “from which we can’t help but regard that life and its interests and concerns with tremendous seriousness, and which invests them with an importance informing almost every aspect of our deliberation and practical reasoning. Yet each of us is also capable of self-awareness and of mentally ‘stepping back’ and regarding that life and its concerns from an impersonal perspective.”<sup>3</sup>

In the face of our current climate crisis there is a great divide between the personal and impersonal perspectives. The personal wants retention and continuity and is willing to defend them. On the other hand, the climate messages from the impersonal point of view are clear, but profoundly *unsettling*. These messages come not only from external experts, but also from within ourselves when we mentally step back and reassess our form of life. We quite literally are people who hold

the sands of the time of our lives in our fists—the tighter we squeeze, the faster our time runs out between our fingers.

The impersonal view won’t let us remain comfortably settled within the familiar, carbon-intensive world we have built. But the thought of abandoning this political-economic ship feels like high diving into dark water. The impersonal sends an SOS, rather than counseling a comfortable mid-course correction. The personal perspective sleepwalks, but the warning siren of the impersonal gets louder with each new scientific report.

A case in point is the forthcoming report from the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), an independent intergovernmental body comprising more than 130 member governments. The IPBES tracks changes in global biodiversity the way the IPCC does for climate change. Due out soon is a massive new report documenting the serious decline in biodiversity across the globe and the dangers that creates for life on Earth and for human societies.<sup>4</sup>

The report notes that the degradation of biodiversity and ecosystemic conditions has become so severe that piecemeal efforts to protect individual species are not enough. In major land habitats all over the world the abundance of native plant and animal life has declined by at least 20 percent over the past century. In addition, global warming has become a major factor in biodiversity decline. According to the *New York Times*, the IPBES report calls for “transformative changes” that include curbing wasteful consumption, slimming down agriculture’s environmental footprint, and cracking down on illegal logging and fishing. “It is no longer enough to focus just on environmental policy,” says Sandra M. Díaz, an ecologist at the National University of Córdoba in Argentina and the lead author of the report. “We need to build biodiversity considerations into trade and infrastructure decisions, the way that health or human rights are built into every aspect of social and economic decision-making.”<sup>5</sup>

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The geo-physical and biological planetary systems are all under stress, and those anthropogenic stresses are converging in some cases. The crucially important Earth-system processes are usually considered to be: climate change, biosphere integrity, stratospheric ozone depletion, ocean acidification, biogeochemical flows (phosphorus and nitrogen cycles), land-system change, freshwater use, and atmospheric aerosol loadings.<sup>6</sup> Each of these affects one or more of the others. A totality that climate scientist Johan Rockström calls “hyper-connectivity” characterizes the Earth.

Taking on board the overwhelming scientific evidence of human-induced climate change—and, harder still, making sense of what social and personal actions are necessary to mitigate its current and future effects—leaves most of us disoriented in moral time and space. What do we owe to those who will come after us, and how can we protect them through our actions now?

There are two basic ways of defining the challenge that timely climate action poses for humankind. One is to accept the inevitable conflict between the personal and impersonal perspectives and to say that our future depends on the triumph of the impersonal. The armaments in this clash will be the restructuring of desire, greed, and self-interest through laws and regulations such as carbon taxation, replacing private ownership with commons trusteeship, and the like. Some means must be found to empower the impersonal perspective of science and justice by instilling it in those who manage and regulate our law, our governance, and our economic institutions. Only in this way can we step back from and break the hold of continuity and comfort that global capitalism and the sovereignty of fossil carbon have over our lives. And only in this way can we counteract the great number of people who, naturally enough, resist change. To be skeptical is not the problem, to follow what is false and wrong is. John Donne saw this in another age while trying to act upon truth without stifling freedom of thought: “doubt wisely; in strange way/To stand inquiring right, is not to stray;/To sleepe or runne wrong, is.”<sup>7</sup>

The second way to define the challenge is to seek a synthesis and accommodation between the personal and the impersonal perspectives. The objective should be to integrate the impulses and demands of the view from our own lives and homes with the view from everywhere—the global, or planetary, view. Such integration—or perhaps I should say re-integration, for it has been accomplished at certain times in the past—is neither logically nor psychologically impossible.

The eighteenth century political philosopher Edmund Burke is often taken to be a thinker who opts for the defense of the personal in a war with the impersonal, but that reading oversimplifies his thought. I think what he had in mind was actually a ground-up connection, not an antithesis, between the personal and the impersonal when he wrote: “To be attached to the subdivision, to love the little platoon we belong to in society, is the first principle (the germ as it were) of public affections. It is the first link in the series by which we proceed towards a love to our country, and to mankind.”<sup>8</sup>

I believe that the connection is less foundational or germinal and more dialectical than Burke seems to allow; an ethical regard for universal rights and dignity can also nurture community and solidarity in the face-to-face relationships of everyday life. When an ethics of principles and an ethos of relationships co-exist and are co-creative, they form a circuit, not a ladder. One can be a member of a family, a republic, a civil society network, a church, and an interdependent species on a planet of ecosystemic life, all at the same time without undue cognitive dissonance. Put another way, the local and the global need not be antithetical, any more than the personal and the impersonal perspectives need to be, or for that matter, any more than the sense of community membership (being in solidarity with others) and the sense of autonomy (being your own person) need to be.

Accordingly, my thesis is that the second, accommodationist approach holds the most promise as a way out of the predicament of climate action. The key to seeing this is the distinction between form

and content. The form of the personal perspective is imminent or incarnate; it is deeply emplaced in landscapes and ways of life that are familiar (socially embedded) and tangible (physically embodied). The form of the impersonal is transcendent and normatively patterned and thus is well suited to highlight faceless others, nameless strangers, and ideas that have no material presence but have meaning and mental force. But while these incarnational and transcendent forms remain constant, the substantive meaning or content of their respective logics changes historically.<sup>9</sup> The tension we witness today in climate action politics between the personal and the impersonal—the resistance to change and the science-informed realization that change is imperative—comes from the *content* that has colonized the personal sense of place, belonging, and security in our culture and has come to define their meaning. This content is historically contingent, not necessary. The sense of both urban and rural places, at least in America if not much more widely throughout the world, has been transformed during the past century or so—especially during the period of the great fossil fuel use acceleration of the last seventy years.<sup>10</sup> Throw-away consumptive lifestyles; social insecurity from various austerity measures; increasing inequality of wealth due to technological change; the demise of collective bargaining; policies facilitating the redistribution of wealth into the top quintile from the lower four-fifths of the population; financial security tied to economic growth, which is tied in turn to an ever-growing carbon footprint—all these conditions and more have been made to seem normal from the personal perspective, even as the attention of the impersonal perspective has been drawn to Earth-system functioning, biodiversity loss, and climate change by new scientific research and modeling.

The strategy of accommodation and reconciliation between the personal and the impersonal that I have in mind here does not depend on somehow getting these two perspectives to see the same thing or in the same way. The strategy is to facilitate the symbiosis of these two capabilities of human self-awareness and mind so that they mutually reinforce each other. Eventually,

if rising greenhouse gas levels in the atmosphere and global warming continue, the personal perspective at the local level will be radically disrupted and will shift to make climate action a focal point of its attention. But we don't have time to wait until ecological crisis precipitates alignment between the personal and the impersonal in that way.

What's the alternative? The alternative is to enlist the potential capability that everyone has to step back from the immediate in which one is psychologically invested and become aware that the aspects of their homes and local lives that are damaging and wrong from an impersonal climate action point of view are also inauthentic and unfulfilling from a personal point of view. The alternative is to step back and see that those aspects can be changed and replaced; our belonging—and our belongings—can be placed on better, more secure, and lasting foundations. In this way the impersonal capability works to support the personal connection, and the personal strength of feeling fuels political support for climate action change. Impersonal conviction and personal contentment work together.

For example, urban theorist Mike Davis finds a connection between the impersonal perspective and the personal perspective in cities that are not dominated by carbon capitalist meanings and values. His discussion merits our attention at some length:

What often goes unnoticed... is the consistent affinity between social and environmental justice, between the communal ethos and a greener urbanism. Their mutual attraction is magnetic, if not inevitable. The conservation of urban green spaces and waterscapes, for example, serves simultaneously to preserve vital natural elements of the urban metabolism while providing leisure and cultural resources for the popular classes. Reducing suburban gridlock with better planning and more public transit turns traffic sewers back into neighbourhood streets while reducing greenhouse emissions... The cornerstone of the low-carbon city, far more than any

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particular green design or technology, is the priority given to public affluence over private wealth. As we all know, several additional Earths would be required to allow all of humanity to live in a suburban house with two cars and a lawn, and this obvious constraint is sometimes evoked to justify the impossibility of reconciling finite resources with rising standards of living. Most contemporary cities, in rich countries or poor, repress the potential environmental efficiencies inherent in human-settlement density. The ecological genius of the city remains a vast, largely hidden power. But there is no planetary shortage of “carrying capacity” if we are willing to make democratic public space, rather than modular, private consumption, the engine of sustainable equality. Public affluence—represented by great urban parks, free museums, libraries and infinite possibilities for human interaction—represents an alternative route to a rich standard of life based on Earth-friendly sociality.<sup>11</sup>

The story line of a new narrative of climate action can become achieving our communities, our places, our livelihoods through building something better. For too long the story line has been about sacrifice, deprivation, and elites who want to confiscate—rather than improve—existing ways of life.

There are several indications that in the United States the climate action narrative is beginning to change in this direction. For example, for many years the mainstream climate change strategy in policy circles has been to alter the economic calculus of carbon intensive behavior through a carbon tax or cap-and-trade system, which has worked in the past to curb other kinds of air pollution. But this approach has not fared well politically and has run afoul of the conflict between the impersonal and the personal perspectives, not only in the United States but in Australia and France as well. Part of this may have to do with the fact that the wealth of the median American household has fallen thirty percent since 2007, and something similar is felt by working families and *gilets jaunes* (“yellow

vests”) protesters elsewhere. Journalist David Leonhardt observes that:

Climate change may be an existential crisis, but in their day-to-day lives, many people are more worried about the problems created by the most obvious solution [carbon pricing] than by climate change itself. Which helps explain why climate activists have recently begun to change their political strategy... Rather than broadcast the necessary sacrifices, as taxes and cap-and-trade schemes do, the alternatives [clean energy mandates and subsidies] try to play them down and instead emphasize the benefits of less pollution... The question is whether any policy is both big enough to matter and popular enough to happen.”<sup>12</sup>

Nathaniel Keohane, head of the climate program at the Environmental Defense Fund, defines the narrative shift in even broader terms: “If we’re going to succeed on climate policy, it will be by giving people a vision of what’s in it for them, a positive vision of how it matters for their life and their kids... We really led with, and let us ourselves be defined by, the policy mechanism rather than the outcome we were striving for. You need to be able to inspire people.”<sup>13</sup>

There is a hint of strategic calculation behind this turn from carbon pricing to performance standards, and more than a little grasping at straws for signs of success and public support, which can be found in California’s successful approach to performance standards thus far. But we are not dealing with simple strategic politics; there is something more philosophically serious and interesting at work.

The climate action challenge has been seen as a pull-back from a widespread pattern of behavior—fossil carbon extraction and carbon dioxide excretion—that had been beneficial for many decades and upon which much technology and the major sectors of national and global economies rely, but that is now recognized as no longer tolerable. Apparently, neither our normative disciplines nor our political institutions are able

to respond adequately to this conundrum. If we must stop burning fossil carbon in such massive quantities within about two decades, but we still have known fossil fuel reserves that will last beyond this century and think we will remain dependent on fossil carbon energy for longer than two decades, then we have a democratic tragedy. We have a well-nigh irresistible temptation to spare ourselves hardship, even at the cost of despoiling the future. As a real estate developer in Miami said about impending sea level rise, “By then I’ll be dead.”

But it may be that this scenario is not inevitable. Investment, technological innovation, and government may all work together on a timetable that can avoid disastrous global warming after all. The climate action challenge can come to be seen as an opportunity because it essentially involves the opening of a new energy era centered on renewable energy sources and a shift from technologies that rely on carbon fuel combustion to those that can perform virtually all the required economic functions supporting economic opportunity and a high quality of life via the storage and utilization of electricity. Electrification of virtually all end uses and technological advances in collection and transmission mechanisms are the keys to unlock a new energy system. Two well-established renewable energy sources are hydro-power and geothermal power; two rising sources that will transform the world are solar and wind power. Apollo and Aeolus are back and are beginning to take off. Nuclear power remains a technology with an uncertain future that may play a role in the new energy system that replaces high-energy fossil carbon.

Another key is increasing elite and public understanding of responsible technology innovation and change. Energy systems and technologies vital to economic activity and personal quality of life have been abandoned and replaced by different ones many times before.<sup>14</sup> In virtually all cases the significant take-off point had little to do with the question of what fuel or technology accounted for the preponderance of usage, but rather what competing fuel or technology accounted for the largest amount of new financial investment. This

is the concept of a “peak” in technological change. Peak oil will be the time at which it begins to decline as a percentage of new investment without the likelihood of recovery as competing energy sources (solar and wind technologies) achieve enough momentum to take off and follow a curve of exponential growth. In 2017 solar and wind accounted for only 6 percent of global energy, but they accounted for 45 percent of energy growth. And for some time now, the cost of solar and wind has been going down by 20 percent with each doubling of their capacity. In 2015, India was expected to provide much of the world demand for coal and to triple its use by 2030. Yet by 2017 the cost of solar electricity had dropped by 50 percent to \$35-40 per megawatt hour. By comparison, the cost of electricity from a newly built coal-fired plant using Indian coal would be \$60 per megawatt hour, while using imported coal would be \$70. Such new plants are unlikely to be built now. Indeed, in 2018 India installed forty times more capacity for renewable energy sources than for coal-fired power.

The latest historic global energy technology transformation has begun. Renewables have taken off and will become dominant in an electricity-grid based system, displacing liquid and gas combustibles. It appears quite likely that fossil fuels will then be seen as the residual source of the overall energy system: the fuel used as a last resort. Established non-fossil fuel technologies, like nuclear, hydro, and biomass, will continue to expand at about 2 percent per year. New technologies like solar and wind will follow an S curve trajectory of near-term rapid growth. As Bill McKibben notes, when solar and wind account for all new energy growth, “We will then reach peak use of fossil fuels, not because we’re running out of them but because renewables will have become so cheap that anyone needing a new energy supply will likely turn to solar or wind power.”<sup>15</sup>

When will that be? A recent study by the Carbon Tracker Initiative entitled *2020 Vision: Why You Should See Peak Fossil Fuels Coming* projects that early in the 2020 decade the investment in fossil fuels will peak and go into decline as investors perceive that the demand for fossil fuels

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and their profitability are beginning a downward spiral.<sup>16</sup> There will be two principal reasons for this. First, as McKibben points out, competing renewable technologies will become more cost-effective and will capture market share. Second, the balance sheet liabilities for oil companies will increase due to what are called “stranded assets.” Just as railroads rendered prior investment in building a system of canals worthless in the nineteenth century, so too will renewables undermine the financial viability of the fossil fuel sector that carries an infrastructure investment valued at an estimated \$25 trillion.

Dependent in the first instance on technological innovation, the logic and dynamic of this re-configuration of the energy system is not being driven by the leadership of the fossil fuel sector; their attitudes toward renewables makes it doubly appropriate to refer to them as fossils. Increasing pressure from governmental regulation concerning environmental and human health and safety regulation is playing a part, but perhaps more so on Wall Street than in the oil and gas fields or at the end of the smokestacks. A major driver here is the strategic behavior of large lenders and investors, who are using their own financial interests and foresight to subsidize and promote something that seemed beyond reach when looked at as a political problem for democratic political systems. That something is a reduction in greenhouse gas emissions on a scale that will have significant mitigating effects on global climate change well within this century. In lieu of the greening of politics, we are seeing the greening of investment capital, the greening of green.<sup>17</sup>

If this can come to pass, it will give the world a chance to avoid triggering extraordinarily deleterious Earth system changes from which there is no recovery. And it may have sustained for a while longer the promise of an open future for the unfinished project of Enlightenment. In that future, the content and meaning that fills the normative and relational forms of our impersonal and personal self-awareness can be more just and caring. Oil may soon peak and begin its decline, but humanity will not.

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### NOTES

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