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Precautionary and Proactionary as the New Right and the New Left of the Twenty-First Century Ideological Spectrum

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Abstract Despite its specific origin in the seating arrangement of the French National Assembly after the revolution of 1789, the right–left divide of the ideological spectrum has proved remarkably resilient in anchoring public intellectual life for over two centuries. In this article, I argue that we are witnessing a 90° rotation of this ideological axis, resulting in a new set of poles, each of which combines elements of the old right–left divide. The 'precautionary' pole brings together the conservationist side of the right and the communitarian side of the left, whereas the 'proactionary' pole unites the libertarian side of the right and the technocratic side of the left. I prepare the ground for discussing these new alternatives with a consideration of the political theology of the old right–left divide, which ultimately turns on alternative visions of how the past determines the future. This 'left' basically holds that what is possible significantly exceeds what is probable, with liberals adopting an 'antirealist' and socialists a 'realist' stance towards the prospect of an optimal social order. Both the precautionary and proactionary poles of the new ideological spectrum are fixated on our attitude towards a future in which the ontological constitution of the polity (i.e. its 'humanity') is among the issue under contestation. In this emerging ideological conflict, more of which is transpiring in video than in print, the precautionaries are marked as more 'risk-averse' and the proactionaries more 'risk-seeking' than had been presumed to be the normal attitude in the modern welfare state.

Keywords Ideology · Left · Liberal · Political theology · Popper · Precautionary · Proactionary · Right · Socialist · Welfare state

The modern right-to-left ideological spectrum is an artefact of the seating arrangements at the French National Assembly after the revolution of 1789. To the right of the Assembly's president sat the supporters of King and Church while to the left sat their opponents, whose only point of agreement was the need for institutional reform. The distinction capitalised on long-standing cultural associations of right- and left-handedness with, respectively, trust and

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suspicion—in this case, of the *status quo*. In retrospect, it is remarkable that this distinction managed to define partisan political allegiances for more than 200 years, absorbing both the great reactionary and radical movements of the nineteenth and twentieth centuries. But the decline in voter turnout in most of today's democracies suggests that this way of conceptualising ideological differences may have become obsolete. Some have even argued that ideologies and parties are irrelevant in an increasingly fragmented political landscape. However, I shall argue that once we understand what the old right–left division was about, we shall see that it is due for a 90° rotation on its axis to recapture the spirit of the original division. In this context, I shall propose the *precautionary* and *proactionary* as the poles defining, respectively, the new right and the new left (Fuller and Lipinska 2013).

Recalling the Political Theology of the Old Right–Left Divide

Nowadays, it is common to construct the ideological spectrum by placing conservatives on the right, liberals in the middle and socialists on the left. The resulting pattern leaves the impression that the metaphysical individualism associated with liberalism anchors the spectrum, with the extreme ends on both sides occupied by collectivists who base group identity on either family or race (the right) or class or state (the left). However, this default interpretation, while perhaps correct in some of the detail, is clearly not true to the spirit of 1789. In the original National Assembly, as just mentioned, the centre was occupied by the *status quo*, and the question dividing the two sides was whether society should re-dedicate itself to the historic roots of the *status quo* (which had become corrupt in the recent past) or break decisively with the past in search of a more forward sense of self-legitimation. It was in this context that the people who would soon be known as 'reactionaries' sat on the right, while the people who we would now consider 'liberals' and 'socialists' sat together on the left.

Over time and for reasons that will be explored below, liberals and socialists increasingly parted company—but still as alternative ways of breaking with the *status quo*. Generally speaking, liberals would have people face the future as individual agents from whose aggregate decisions emerge an overall sense of direction for society, be it defined in terms of majority rule or dominant market share. In contrast, socialists would have them face the future as one collective agent explicitly dedicated to such a specific direction. Thus, while for liberals the difference between 'progressive' and 'reactionary' is always in flux, as votes or prices signal changes in direction, for socialists the difference is institutionalised in a more principled way, as electoral defeats are replaced by purges and market failures by expropriation. Put another way, liberals are antirealists and socialists are realists about the future, but unlike their right-of-centre colleagues they agree that the future—not the past—provides the ground for societal legitimation. But, as I shall now argue, this is not quite the right way to distinguish the ends of the ideological spectrum. In particular, what distinguishes liberals and socialists with regard to the future is based on their rather different attitudes towards the past—especially when it has not turned out as they would have liked.

At first glance, it would seem natural to interpret the 1789 right–left split in terms of a past versus future orientation, but in fact *all* the ideologies looked to the past in one crucial respect: for an appropriate account of human nature—specifically, of human potential. However, they differed in terms of how much of that potential has been revealed in actual human history. The right-wingers believed that most or all of that potential had been already revealed, such that long-surviving patterns of conduct were the ones worth taking forward into the future. The left-wingers held that relatively little of that potential had been realised,

but substantially new social arrangements would provide the opportunity to reverse that state-of-affairs. True to Bismarck's definition of politics as the art of the possible, underlying this difference in sensibility lay alternative metaphysical interpretations of what is 'possible'.

Right-wingers clung to an understanding of what is possible that would have been familiar to Aristotle and remained largely unchallenged until John Duns Scotus in the fourteenth century. Aristotle effectively equated the possible with the empirically probable, itself in turn a gloss on 'natural'. In contrast, left-wingers availed themselves of Duns Scotus' more modern 'semantic' identification of the possible with the conceivable—that is, a logically coherent yet unrealised state-of-affairs. Theologically speaking, in shifting the meaning of the possible from what has been experienced to what might be realised, Duns Scotus had effectively elevated humanity from the highest animal to an aspiring deity (Fuller 2011: chap. 2). In our own day, this point has not gone unnoticed by those comprehensively conservative religious thinkers who call for a 'neo-orthodox' revival in Christianity (Milbank 1990). In this context, Duns Scotus stands accused of having combined and radicalised two strands in Augustinian theology: (a) God is (always) free to create any conceivable world; (b) we are created in the image and likeness of God. From these premises, it is then easy to conclude that we have an obligation to explore those unrealised possibilities (Funkenstein 1986: chap. 2).

In that case, the fact that in 1789 France, the established church continued to support the *status quo*—a hereditary monarchy, even after it had been shown to be corrupt—appeared as an affront to those whose believed that our divine entitlement rendered us capable of much more than simply perpetuating the legacy of previous generations. Indeed, humans may have the wherewithal to constitute a government from first principles, the sort of 'second creation' adumbrated in eighteenth century social contract theory that had been put into practice on a large scale only a few years earlier in the founding of the USA (Commager 1977). This Scotist mentality, which marked where the left broke most sharply with the right in the French National Assembly, is characteristic of what I later call the 'proactionary' pole of the newly emerging ideological spectrum. In effect, it interprets the 'meek' in the third verse of Jesus' 'Sermon on the Mount'—'Blessed are the meek; for they shall inherit the Earth' (Matthew 5:5)—to refer to humanity's unrealised potential to rule themselves (as manifested in their current state of powerlessness). Much of the 'prophetic' strain in modern evangelical Christianity stems from this intepretation.

Duns Scotus' radical reinterpretation of 'the possible' was popularised by John Wycliffe, who rendered his teacher's revisionary scholasticism concrete by having the Bible translated into English so as to unleash human potential. This project finally received royal approval two centuries later with the publication of the King James Version in the early seventeenth century. The King's lawyer, Francis Bacon, shared this spirit as concomitant with the experimental method, which he famously portrayed as extracting from nature secrets that it might otherwise hide forever (Fuller 2008: chap. 2). While much has been made of the suspicion if not outright hostility toward nature that is reflected in Bacon's sentiment, it is perhaps best understood as humans seeing in nature what they regard as being in most need of correction or elaboration in themselves, given the hereditary burden of Original Sin that attaches to our animal nature (Harrison 2007). Duns Scotus had paved the way linguistically for Bacon's vision, which was now proposed to harness the new science to the political ascendancy of England, by introducing a manner of speaking that analytically detached God's attributes (i.e. omnipotence, omniscience, omnibenevolence) from a unique deity. Scotus' linguistic innovation made it possible for humans to aspire to godlike powers without outright turning into God, thereby staying on the right side of religious heresy (Bragues 2007: chap. 14). Of course, theists had to entertain an increasingly problematic—

and ultimately secularising—consequence of the Scotist move: namely, that divine attributes differ from corresponding human ones only by degree and not kind, which in turn has been the basis for *both* the 'literalist' reading of the Bible and the idea that nature can be read as a book written in a decipherable (typically mathematical) code (Fuller 2010: chap. 5). In any case, the subtle but systematic abstraction of divine function from divine substance begun by Scotus unleashed enormous consequences ranging across logic, physics and economics, resulting in a conception of value based on efficient exchanges of energy, as humans tried to approximate God's capacity to create *ex nihilo* (Cassirer 1923).

One complicating factor in defining the original right–left divide was the emergence of comparative cross-cultural histories of governance in the half century prior to the French Revolution, most impressively by Baron de Montesquieu. Officially presented as updating a line of inquiry initiated by Aristotle, both a 'right' and a 'left' spin was given to its eighteenth century revival. Right-wingers (e.g. David Hume) concluded that the variety of governance patterns found throughout the world argued against the possibility of a universally applicable blueprint for social organisation. After all, each society, true to the accumulated experience of generations of its members inhabiting the same place, would have hit upon custom-made social arrangements. In the nineteenth century, ideologies that we now recognise as both 'cultural relativist' and 'racist'—often not clearly distinguished from each other—developed this approach, typically to promote a conception of the state based on 'nationality'. In contrast, left-wingers (e.g. Marquis de Condorcet) interpreted the variety of governance patterns as alternative realisations of a universal human potential, from which everyone may learn as we converge on a common progressive trajectory. Implicit here is the prospect that humanity is collectively advanced by tapping into opportunities already present in some culture's past but which have yet to be fully realised or sufficiently extended (Fuller 2011: chap. 1).

Right vs. Left as a Contest over the Past to Determine the Future

As we have just seen, the original right- and left-wingers were arguing from much the same empirical base, but whereas the right-wingers treated the sheer survival of social practices as self-validating and hence stressed the costs of deviating from them, the left-wingers conjured the benefits that would have been (and perhaps may still be) accrued by pursuing versions of known alternative practices. This difference may be seen as a political version of the complementary relations exhibited by matter in motion at the quantum level that Werner Heisenberg formulated as the 'uncertainty principle': *The right espouses a politics of position, the left a politics of momentum.* The right holds that we are where we belong, while the left presumes that where we are is no more than a state in motion. At stake here is what the analytic philosopher Nelson Goodman (1955) originally called 'projectibility', which he described as the 'new riddle of induction'—in short, which aspects of the past are worth projecting into the future? (Goodman himself imagined two predicates, 'grue' and 'green', that are true of all emeralds prior to now but 'grue' claims that in the future they will be blue not green.) The original 1789 ideological divide vividly illustrates why the answer is far from obvious—though in less dramatic ways judges routinely face a version of this problem when selecting cases as precedents for framing the case under adjudication.

On the one hand, the right-wingers practice a kind of 'straight rule' induction, whose presumption is that the future continues the dominant tendency in two senses of 'dominant': Given our knowledge of the past, it is the most obvious course of action in light of the most obvious framing of the situation. Thus, special reasons must be offered to change a course of

action that has been established on, respectively, such empirical and conceptual grounds (cf. Fuller and Collier 2004: chap. 10). This general approach, admitted by Hume to be our default habit of mind, is properly called 'conservative'. It was accorded a metaphysically (and politically) elevated status as the working of 'natural reason' by the cleric Richard Whately (1963) in the most authoritative logic textbook in early nineteenth century Britain.

On the other hand, the left-wingers interpret the dominant tendency as an extended contingency that is reversible under the right conditions to reveal alternative lines of thought and action that had been obscured or suppressed. The difference between liberals and socialists on this score has turned on whether any of those alternatives are, so to speak, 'The Truth-in-Exile'. Generally speaking, liberals say no, socialists say yes. Whereas liberals hold that any alternative is in principle realisable under the right circumstances, socialists privilege a limited number—if not simply one—of those alternatives as providing an authentic realisation of human potential (of course, without denying the need to apply force to enable its realisation). Thus, while liberals have focussed on maintaining an ever-present capacity to reverse any regime that happens to be dominant at the moment (e.g. via regular elections, free markets), socialists have concentrated on identifying the one true regime that is worth pursuing in the face of anticipated resistance, as it overturns entrenched habits of thought and action.

Lurking behind this division in the left is the dual character of the deity implied by the Scotish revision of the concept of possibility previously mentioned. God is the only being who can do whatever he wants and whatever he does is what he wants. (The hidden premise is that the deity's 'wants' are 'oughts', by definition of the deity's supremacy.) The former clause captures the liberal's and the latter the socialist's aspiration for humanity in light of our having been created *in imago dei*. From these alternative theological spins, flow opposing conceptions of justice. For liberals, justice is a matter of procedural fair play, whatever the outcomes, whereas for socialists it is a matter of reaching the right result, perhaps by whatever means. The method of 'reflective equilibrium' in Rawls (1972) may be seen as an attempt to reconcile these competing intuitions—'justice of the means' and 'justice of the ends', so to speak—in service of a transcendental argument for the welfare state.

At a still deeper level lies a difference of metaphysical interpretation—specifically, of the 'human potential' that both liberals and socialists accuse right-wingers of short-changing. Here, it is useful to recall the distinction between two Hegel-inspired concepts: Freud's *sublimation* and Marx's more faithful conception of *sublation*. Sublimation implies that (libidinal) energy passes through many forms without ever quite losing its original character, whereas sublation implies a more fundamental transformation that can only be fully understood once (labour power) energy reaches its final state of organisation. The former captures the liberal's sense of the body politic's momentum, the latter the socialist's. From this standpoint, the great truly liberal account of capitalism is Max Weber's *The Protestant Ethic and the Spirit of Capitalism*, as the latter term in the title is presented as a sublimation of the former term. Further sublimation transpires in the twentieth century as Protestantism's self-transcending productivist impulse migrates from the manufacture of consumer goods to one's own sense identity through what Thorstein Veblen memorably called 'conspicuous consumption'.

Karl Popper (1957) notoriously got the epistemic measure of the difference between liberals and socialists in terms of two senses of 'expectation' that reflect different attitudes that liberals and socialists have towards the future: *prediction* and *prophecy*—the former the cornerstone of the scientific method (*qua* Popper's own falsifiability principle) and the latter the utopian hope that fuels radical politics, both sacred and secular. Thus, the 'prediction'

pole belongs to the piecemeal social engineers, whom Popper prefers, and the 'prophecy' pole to the revolutionaries who justify their policies in terms of historical destiny. On the one hand, Popper's social engineers aim to keep politics maximally open to new possibilities by ensuring that any course of action taken is reversible in light of the consequences. On the other hand, his dreaded revolutionaries are keen to eliminate alternative possibilities for action that might divert society from reaching its ideal state. However, despite their stark differences, both predictors and prophets are positively disposed towards the future, especially the long run. Moreover, both provide mental preparation for particular disappointments along the way—the predictors anticipate corrigible error (typecast as 'ignorance'), while the prophets anticipate surmountable obstacles (typecast as 'enemies').

In its day, Popper's notoriety came from challenging the scientific credentials of Marxist 'historical' or 'dialectical' materialism—indeed, by turning the Marxist standpoint on its head, arguing that the very liberals whom Marxists despised (under such epithets as 'idealist', 'Machian', 'positivist') practiced a truly scientific politics because they submitted their knowledge claims to fair tests, be it in the ballot box or the marketplace. Here Popper took a page from Max Weber's original stereotyping of the open-minded scientist and goal-oriented politician, as portrayed in the two great speeches of his later career, 'Science as a Vocation' and 'Politics as a Vocation'. Weber's contrasting presentation of how scientists and politicians coped with failure mapped onto the more general action-orientations, respectively, *Wertrationalität* ('value-rationality'), which covered both scientific and religious practices, and the *Zweckrationalität* ('goal-rationality'), which covered both political and economic practices.

However, the dichotomisation is simplistic. According to the Weberian stereotype, when faced with failure, the scientist switches hypotheses while the politician carries on as if nothing had happened. But here it is important to compare like with like. After all, the scientist seeks truth with the single mindedness of a politician who seeks power. For example, I may favour elections as a means of selecting leaders either because elections force people to think about leadership in the right way (i.e. *wertrational*) or elections are an efficient means to come up with the right leader (i.e. *zweckrational*). The former would lead me to extol campaigning and voting as expressions of civic virtue, an intrinsic political good regardless of who actually got elected, while the latter would lead me to think about more efficient means of achieving the aim of effective leadership, which may include so-called strategic voting (i.e. voting, if at all, for someone other than your preferred candidate). Similarly, I may uphold Popper's criterion of falsifiability either because it forces scientists to think about their hypotheses in an appropriately critical–rational frame of mind (i.e. *wertrational*) or it does the best job of getting scientists closer to the truth (i.e. *zweckrational*). The former would lead me to focus on embedding falsifiability into the scientific culture, whereas the latter would lead to me to seek more efficient versions, if not outright substitutes, of falsifiability.

But the matter can be approached with still greater subtlety: falsification does not demand that the scientist give up the overall direction of her inquiry once her hypothesis is shown to be false—that is, she does not abandon her motivating metaphysical world view, which extends well beyond what can be justified simply in terms of a discipline-based Kuhnian paradigm (Agassi 1975). Rather, the falsificationist concedes that realising the sort of world anticipated by her metaphysics inevitably requires pursuing a different line of empirical inquiry, one that incorporates elements of her previous pursuit but now re-oriented towards different specific outcomes. More specifically, the post-mortem of a falsified hypothesis involves not simply avoiding a class of untenable predictions in the future, but more importantly incorporating the error as a guide to building a richer theory that then provides

the basis for new hypotheses (cf. Hegelian sublation), as opposed to an ad hoc repair that would allow the theory to advance as if nothing had happened. However, to insist on the theory's abandonment would effectively deny the information value of the falsification—a forced extermination of thought, if you will.

All of this is not so very different from a politician who is flexible with regard to tactics while pursuing a strategy whose constancy is not deterred by specific setbacks. Perhaps the key difference is that the politician would aim to publicise only the self-fulfilling—and not the self-defeating—consequences of her strategy. While the public admission of error is seen as a mark of integrity in a scientist, it is often taken to be a mark of incompetence in politician. (However, popular histories of both science and politics tend toward the self-serving concealment of all but the most instructive failures; hence, the application of the term 'Whig' to both sorts of histories: cf. Brush 1975.) Nevertheless, scientists and politicians may learn equally well from error, even as the latter fail to say so openly. In this context, it is worth recalling the high esteem in which Enlightenment politicians, not least the US founding fathers, held *hypocrisy*, a state of divided consciousness that requires the politico to be sufficiently confident in his own ultimate right-mindedness to self-justify various reversals of fortune without admitting them publicly (Runciman 2008). The closest that science comes to admitting the value of hypocrisy may be Popper's own distinction between the *beliefs* and the *theories* held by the scientist: Popper (1972) does not care what beliefs scientists (privately) hold as long as they hold their theories (publicly) accountable to evidential tests (Fuller 2007: chap. 3).

Interestingly, in the history of the philosophy of science, this strong distinction between one's beliefs and one's theoretical assertions is normally associated with 'instrumentalism', a position popularised by the logical positivists, who reduced the content of scientific theory to the evidence that supports it—in that sense, a suitably operationalised theory is no more than a machine for generating evidence. However, instrumentalism emerged a little over a century ago from the Roman Catholic physicist Pierre Duhem (1969). Duhem had been deeply influenced by the then-recent opening of the Vatican archives to the records of the trial of Galileo, in which the difference between what was directly evidenced and what could be inferred only given prior beliefs was very much at play. The lesson that Duhem drew was that for *both* Galileo and his Jesuit Inquisitors, faith in God provided an unerring but not directly scrutable guide for their inquiries. Nevertheless, by trying to cash out this belief in agreed terms of evidence (say, as the outcome of an experiment), each managed to keep alive their respective beliefs, despite the inevitable empirical setbacks, and in a way that could inform both sides. Such a lesson proved especially useful in the secular political environment of Duhem's own Third Republic France, where instrumentalism functioned as a brake on the steering of science for specific political ends (A Duhemian for our times is Bas van Fraassen [1980].)

However, Duhem's epistemic grounds for, so to speak, 'scientific hypocrisy' could not be more different from Popper's: Duhem kept his theism private to protect its capacity to illuminate scientific inquiry in the face of freely chosen theories that every so often are subject to overextension and falsification, whereas Popper was more concerned that privately held beliefs with no clear criteria of public testability did not contaminate the course of scientific inquiry. For Duhem the hypocrisy embodied in science's belief-masking technical discourse and laboratory rituals was insurance against scepticism and the abuse of science by the dominant political party; for Popper it insured against relativism as well as the pressure towards consensus within the science itself. However, neither Duhem nor Popper realised that hypocrisy might have what Jon Elster (1998) has called, with a nod to Benjamin Franklin, a 'civilising force' (Fuller 2000: chap. 8; Fuller 2009: chap. 4). In other words,

even if one's beliefs remain largely hidden, one's prolonged engagement in public life—be it in politics or science—may unwittingly serve to alter those beliefs over time, if only to minimise any sense of cognitive dissonance between one's private and public faces. This phenomenon is familiar as *adaptive preference formation*, but its exact interpretation is contestable.

The social psychologist Leon Festinger and his colleagues developed the concept to explain how a religious sect that falsely predicted the end of the world managed to carry on preaching its gospel (Festinger et al. 1956). Their work left the impression that the sect had developed a defence mechanism, 'sweet lemons' as Elster (1983) memorably called it, which allowed them to cope with the falsification with minimal adjustment to their core beliefs. However, closer attention to the details of the sect's behaviour suggests that its members engaged in what metaphysicians call a 'modal' analysis of their beliefs—that is, the sect interrogated what was possible, impossible, necessary and contingent within their belief system. They ended up attributing their epistemic failure to features of their beliefs that were not necessary to hold for purposes to advancing their cause, while at the same time wanting to explain better their own understanding of God's word. While the sect's autocritique did not appease its opponents (who would have simply liked the sect to disappear), it served to bring the sect's epistemic standards in alignment with those of other faith communities. In effect, the modal analysis generated intellectual antibodies that strengthened the immunity of the sect's belief system. There may be a more general epistemic lesson here that plays into the 'proactionary' pole of the emerging ideological spectrum. Whereas Popper used to identify humanity's evolutionary advantage in terms of our capacity for our theories to die in our stead, stressing the distance between our conceptions and ourselves, it may be that our tolerance for theory death reflects our capacity to incorporate its living aspect (cf. Fuller 2007: chap. 3). It gives new meaning to Nietzsche's maxim: 'What doesn't kill me makes me stronger'.

The Precautionary Principle

As stated at the outset, one ideological division could reinvent the right–left distinction for the twenty first century: *precautionary* versus *proactionary* attitudes toward risk as principles of policymaking. In social psychological terms, the 'regulatory focus' of precautionary policymakers is on preventing the worst possible outcomes, of proactionary policymakers on promoting the best available opportunities (Higgins 1997). Metaphysically speaking, the distinction may be also captured in terms of how the two sides manage modality: On the one hand, precautionaries draw a very sharp distinction between the actual world and other possible worlds—an actual loss can never be compensated by the possibilities that are thereby kept open. For precautionaries, the value lost through species extinctions cannot be offset by however much room is thereby left to humans to expand their lives. On the other, proactionaries are quite open about their willingness to sacrifice a significant part of present-day conditions to enable the future to stay open—for them, even when things go horribly wrong, it is less an outright loss than a learning experience. In short, whereas precautionaries regard significant risk-taking as ultimately corrosive to our freedom, the limits of which are already evidenced in the actual world, proactionaries regard risk-taking as necessary to discover the limits of what is possible, which by no means is exhausted by what has already happened.

The precautionary principle is the better known of the two principles, as it increasingly figures in environmental and health legislation. The principle is normally understood as the

Hippocratic Oath applied to the global ecology: Above all, do no harm. An example of a familiar precautionary measure is the policy of reducing human reproduction as a means of reducing our carbon footprint on the planet: Even if it does not resolve the current ecological crisis, it will slow down its effects. However, the principle began life in early nineteenth century Germany as *Vorsorgeprinzip*, as Georg Ludwig Hartig was laying the scientific foundations for forestry. For Hartig, whose name nowadays graces a leading German charity dedicated to environmental sustainability, the precautionary principle entailed that each generation should leave the next one with forests in the same state in which they found them (through a policy of conscientious re-planting of cut down trees, etc.). This formulation of the principle persists to this day in a much more generalised form, often featuring in Green Party proposals for the defining just governance in terms of enabling future generations to live lives at least as fulfilling as our own (e.g. Read 2012).

However, the precautionary principle's origin in forestry highlights its contestable normative assumptions, including these two: (a) a steady-state (i.e. no net loss *or growth*) approach to *both* human and forest replacement; (b) a denial that the needs and wants currently satisfied by forests might be satisfied by something else (perhaps entirely artificial) in the future. Whatever one makes of these assumptions, applied either locally or globally, they derive their normative force from a sense of nature's ultimacy that precedes or supersedes human ingenuity. Indeed, this why the USA insisted on characterising precautionary as an *approach* rather than as a *principle* in the 1992 Rio Declaration on Environment and Development, as the Americans thought the latter would have surreptitiously introduced a sense of natural law that was inappropriate to international ecological policy negotiations (Garcia 1996).

From the standpoint of the history of economics, the logic informing the precautionary principle resembles less that of modern capitalism than of its eighteenth century predecessor, physiocracy. The physiocrats, mostly French Enlightenment philosophers, tied productive capacity directly to the material character of the economic inputs—say, the number of trees and humans—rather than to their effective output—say, the value derived from a given number of trees or humans, which may (in principle at least) be produced by some other means more efficiently, and perhaps even in the absence of the original trees or humans. Indeed, the near-magical character of 'labour' as a source of value in classical political economy from Smith and Ricardo to Mill and Marx lay in just this capacity to transform one form of capital into a more efficient form, which obviates the need to resort to the precautionary principle's steady-state thinking—or its updated, somewhat more liberalised versions, 'sustainability' and 'carrying capacity' (Jacob 1996). However, classical political economy suffered from two blind spots concerning the development of capitalism—only one of which even Marx anticipated—that contribute to the precautionary principle's continued relevance today.

The first, partly anticipated by Marx, is the relative ease which natural forms of capital would be replaced by artificial forms, not least including the mass replacement of human by machine labour, which in turn has periodically fuelled thoughts that the human body itself might be surplus to requirements in an optimally efficient economy—which is to say, one that is fully technologised. In that case, what both the physiocrats and today's precautionaries would take as the inviolate source of value may come to be treated under the logic of capitalism as disposable waste. In this important sense, capitalism, despite its reputation for being 'materialistic', is much less respectful of natural embodiment than earlier economic systems, which typically included ecological stewardship in their remit.

However, Marx did not foresee the second blind spot, which is that the ingenuity of human labour would result in the manufacture of not only new products that satisfy current

human needs more efficiently but also new human needs that then demand new products. In short, classical political economy underestimated the significance of advertising in allowing for the relatively peaceful 'anticipatory governance' of consumption, as producers sought to open up new markets once the old ones have been saturated. (Indeed, Marxists thought, on the contrary, that the inevitable saturation of domestic markets would force producers overseas, eventuating in a succession of imperial wars.) More specifically, as the permeation of the 'cash nexus' injected exchange value relations into more traditional sources of social meaning, one's sense of identity—and increasingly individuality—came to be something the continual maintenance and upgrading of which one took personal responsibility for. When Weber's great rival Werner Sombart first used 'capitalism' in a book title in 1902, it was to this transformation that he referred (Grundmann and Stehr 2001).

More than a century later, the result is that we are awash in products whose threat to the global environment offsets any efficiency gains that have been made in their production. Although, as we shall see below, proactionaries can counter the more moralistic versions of this critique of 'consumerism', notably Michael Sandel's, the precautionary sting remains in the prospect that increased productivity will never adequately recover the costs of increased production. To be sure, a first attempt at a proactionary response has appeared in the so-called Hartwell Paper drafted by several eminent economists and social scientists, who do not dispute the fact of significant short- to medium-term climate change but treat it as offering an unprecedented opportunity for innovative energy investments (LSE Mackinder Programme 2010).

The Proactionary Principle

The 'proactionary principle', under that name, originated as the title of a manifesto drafted by the transhumanist philosopher Max More (2005) and agreed by a congress of like-minded thinkers—including such champions of indefinite human longevity as Ray Kurzweil and Aubrey de Grey—at the 2004 'Progress Summit', sponsored by the Extropy Institute of Austin, Texas. The principle was explicitly designed as a foil to the more widely known precautionary principle. The fragmentation and disorganisation of the transhumanist movement—the Extropy Institute disbanded within two years of the Summit—has meant that the proactionary principle remains much less well known than its precautionary opposite, despite mounting criticism of the latter. As of July 2012, Google hits for 'precautionary principle' outnumber those for 'proactionary principle' by more than 50 to 1.

The immediate occasion for *The Proactionary Principle* was the appearance of George W. Bush's Bioethics Council Report, which *inter alia* invoked 'natural law' to call for a ban on US federal funding of stem cell research (Extropy Institute 2004). The report observed that the technology requires the sacrifice of many embryos in a largely trial-and-error process, which even when successful cannot guarantee that the generated organs will perform as desired. Thus, once the speculative nature of stem cell research's life-enhancing potential was set alongside the known destructive character of such research in practice, the Council concluded that a ban was required. In contrast, for proactionaries much greater long-term political and economic risks are assumed by *not* pursuing stem cell research, given an already growing population living into old age but in a condition that places increasing an burden on healthcare and welfare provision (Fuller 2011: chap. 3). From that standpoint, stem cell research represents the entry point into what Princeton molecular biologist and avowed proactionary Lee Silver (1997) has called 'reprogenetics', a technology capable—at least in theory—of producing functioning organs ('spare parts') on demand,

thereby providing an important platform for launching a credible programme of healthy indefinite life extension.

Perhaps the ideologically most innovative feature of *The Proactionary Principle* was its association of this ban with the politics of the precautionary principle. As the appeal to natural law above suggests, Bush's Bioethics Council was populated mainly by conservatives, including several clerics, who adopted a broadly Aristotelian moral horizon that stresses the necessary rootedness of convention in 'natural' attitudes and responses to the world (Briggle 2010). These people are not natural bedfellows with the eco-friendly, species egalitarian types who champion the precautionary principle and think of themselves as occupying the left of the political spectrum, perhaps even to the left of mainstream socialist parties. However, despite these surface political differences, they are in agreement that a sense of 'nature' that pre-exists or transcends human activity sets significant limits on what humans can ever hope to accomplish. Moreover, both tie our sense of humanity to the recognition of those limits, whether that recognition is understood as a fall from divine grace, our animal mortality or, more simply, the sheer finitude of our powers. One current political theorist whose world view borrows from both natural law tradition and more modern communitarian and ecological thought may be taken to embody the new precautionary ideologue who is an obvious target of *The Proactionary Principle*: that indefatigable foe of perfectionism and utilitarianism, Michael Sandel (2007, 2012).

If precautionaries would have us minimise risk-taking, proactionaries define the human condition in terms of its capacity to take, survive and thrive on risk, based on some calculation of benefit to cost. Contrary to Sandel (2012), who argues that much of what confers value on a well-lived human existence cannot be subject to a cost–benefit matrix, proactionaries argue that the value of an object or practice cannot be properly conceptualised—let alone evaluated as being 'over' or 'under' estimated—unless it has been assigned an exchange value (or price) within a particular moral economy, fluctuations within which may be reasonably seen as market like. Indeed, it is not clear how Marxists would have been able to tell whether workers were being 'exploited' had they not operated with a sense of a 'fair wage' that could be specified in monetary terms, which in turn implies that the value of human labour is neither indeterminate nor infinite (Newey 2012). In this respect, proactionaries return to the philosophical backdrop that originally united the 'liberal' and 'socialist' branches of the ideological left.

Until Karl Polanyi (1944) began to seed what is nowadays the 'eco-socialist' critique of the Enclosure Acts that Parliament passed in the eighteenth century, effectively privatising much of the British countryside, the Acts had been seen as a relatively successful albeit risky venture to increase land productivity by legally assigning personal responsibility for its maintenance, a precondition for the innovation uses and transfers of property that characterised the Industrial Revolution (McCloskey 1975). To be sure, liberals and socialists differed substantially over the impact of this development on social relations, leading socialists to call for a 're-collectivisation' of the means of production by the mid-nineteenth century, given that private ownership had begun to settle into new class-based hierarchies, just as pernicious as the old aristocratic ones that the bourgeoisie had claimed to have overturned. This in turn provided the basis for the various worldwide self-styled 'Communist' revolutions of the twentieth century. However, these revolts retained the proactionary impulse. Thus, Lenin did not revert to a Rousseauian sense of 'commons' that had pre-existed private property; on the contrary, he amalgamated privately owned land into artificial persons called 'collectives' that functioned largely as the individual owners had, while taking advantage of a perceived economy of scale and a rationalised division of labour, both designed to increase productivity while short-circuiting narrow pursuits of self-interest (Scott 1998: chap. 5).

The liberal pursuit of the proactionary principle in the twentieth century was most evident in the radical doctrines of 'risk, uncertainty and profit' propounded by Frank Knight (1921), the intellectual founder of what is now called the 'Chicago School of Economics'. Today, the Chicago School tends to be understood in terms of what it became in the second half of the twentieth century, in light of the influence of Friedrich Hayek and Milton Friedman, namely, an unqualified upholder of property rights in a de-regulated market environment (Davies 2010). Because Knight's original work was done before those political doctrines were set in stone, it provides an opportunity for considering a world view very close to that of the radical Scotist interpretation of what is possible. In particular, Knight viewed the economy from the standpoint of the entrepreneur, the person who converted the 'unknown unknown' into 'known unknown'—that is, 'uncertainty' into 'risk', in the technical senses of these terms for which Knight is normally credited. Still more plainly, the entrepreneur is someone keen on marketing a product that not only attracts buyers but also sets a new standard for demand, much as the automobile had done for personal transport in the generation prior to Knight's. However, the entrepreneur does not know how much to invest to bring about the desired result (or even whether any amount will be enough)—yet he must invest something. Whether that investment counts as 'profit' or 'loss' will be known only after the fact, and hence cannot be properly costed in advance: If you will have spent too much you will receive a profit, too little a loss.

Indeed, this was why the Austrian Finance Minister Eugen Böhm-Bawerk (1959) had argued *contra* Marx's theory of 'surplus value' that the entrepreneur is entitled to retain all of his profits and not redistribute them to wage-based workers, since they would have been paid even if what they produced had not cleared the market. In effect, the workers' fortunes had been protected all along in a way that the entrepreneur's own were not. In that respect, the employment of labour is a necessarily non-innovative feature of entrepreneurship. The Scotist logic here is that if costs are calculable prior to investment, then all you are doing is to project the past into the future rather than tap into a potential that has yet to be realised. Moreover, the learning that results from entrepreneurship, both failed and successful, tends precisely in that direction, such that uncertainty is converted into risk, and the adventurous entrepreneur turns into a manager of costs and benefits. Thus, the entrepreneurial spirit is always forced to colonise new spheres of uncertainty, which—at least so argued Schumpeter (1942)—fuels recurrent bubbles of speculative investment, the de-stabilising effects of which eventuate in a precautionary social welfare state. Setting aside whether Schumpeter's prognosis was either warranted or vindicated, it is clear that entrepreneurs treat their speculative investments as a material extension of hypothesis testing, in which discovering the limits of the existing market for a line of products resembles discovering the limits of the dominant theory for a given domain of reality. In that case the organisation of labour and capital to produce an innovative product is akin to the construction of what Popper, after Francis Bacon, called a 'crucial experiment'.

However, the very idea of treating the market (or the state, in the case of socialism) as a scientific testing ground, while indicative of the proactionary spirit, is completely alien to the precautionary approach, whose own equally powerful appeal to science involves underscoring existing uncertainties, not with an eye to resolving them through some experimental interventions but on the contrary, to curbing the pace and scale of technological innovation. Although precautionaries style themselves as 'guardians of the future' (e.g. Read 2012), their tendency to use science in such an overwhelmingly reactive and critical capacity, ignore several factors that together conspire (so proactionaries believe) to make for a 'perfect storm' for future generations: (1) increasing scientific knowledge about our material constitution; (2) weakening state power over the welfare of individuals nominally under its

control; (3) increasing willingness of corporate power to pick up the slack of the state's retreat—and this extends to the production and distribution of scientific knowledge of ourselves; (4) but given the specific nature of corporate accountability, it is not clear that humanity will be able to realise its species potential under such circumstances; (5) moreover, we are so adaptive as a species that if we don't take deliberate action, then we might well sleepwalk into a suboptimal future.

As the above 'perfect storm' scenario suggests, the main obstacle facing the enforcement of the proactionary principle comes from increasing corporate control over the scientific understanding of humanity—including of our genetic makeup—in the form of privately owned intellectual property. Our concern here is largely limited to questions of the ownership and disposition of this intellectual property. There is no doubt that the scale and scope of 'big business' has contributed significantly, especially in the twentieth century, to fuelling scientific ambitions and human aspirations, often in the face of active resistance from academia. And no doubt much of the resulting research—ranging from molecular biology to organisational sociology—has advanced the public good. The problem is that it has done so only as a by-product of profit-making, which in a relatively de-regulated knowledge economy may eventuate in corporate ownership of human reproductive capacities. This dystopic scenario was vividly portrayed in *Next*, the last novel that the best-selling author Michael Crichton (2006) published before his death. In the novel's postscript, Crichton called for the state to take active measures to conserve the human gene pool by outlawing its private corporate control.

Crichton, a libertarian, cast this proposal in terms of the protection of individual freedom. However, the proactionary principle, while sharing many libertarian ideas (and followers), takes the protection of individual freedom not as an end in itself but a means for the cultivation of 'humanity', understood as a being whose nature is both self- and world-transforming. (This, as we have seen, is in strong contrast to the supporters of the precautionary principle, who presume that 'Nature' sets a non-negotiable norm to which we and other living beings must ultimately conform.) The political economy required for this 'cultivation' is entirely revamped conception of the welfare state. Instead of the historic welfare state strategy of simply discouraging risk-taking (e.g. by promoting 'healthy living'), this new proactionary welfare state would provide a relatively secure bio-social environment for the taking of calculated life risks in return for reward, repair or compensation at the personal level—as well as providing a rich data base from which society may benefit as the progress of science is expedited.

The securitised encouragement of these life risks can be justified in proactionary terms as extending the duties of citizenship to include participation in 'scientific research', now understood as licenced both to research facilities (e.g. laboratories) and individuals (i.e. self-experimenters). This argument is already being made by bioethicists sympathetic to transhumanism (Chan et al. 2011). Two precedents from the history of democratic politics stand out here: (1) the duty of national service as a concomitant of the right to participate in political life (cf. you have a say about the future of scientific research, especially as it bears on humanity's self-transformation, by virtue of your having acquired a stake in it); (2) the enforcement of literacy as a capacity required to exercise both the fundamental human right to self-expression and the state obligation of public accountability (cf. the ongoing recording of the consequences and responses to the risks one undertakes).

Conclusion: Marking the Rotation of the Ideological Axis

As we have seen, proactionaries would re-invent the welfare state as a vehicle for fostering securitized risk taking, while precautionaries would aim to protect the planet at levels of

security well beyond what the classic welfare state could realistically provide for human beings, let alone the natural environment. Taken together, these two opposing innovations to the modern concept of welfare imply a rejection of the classic welfare state ideal that humans might procreate at will in a world where their offspring are assured a healthy and safe existence. For all their substantial disagreements, both poles of the emerging ideological order dismiss this prospect as a twentieth century fantasy that was only temporarily realised in Northern Europe for a few decades after World War II. Not surprisingly, conventional political and business leaders are not entirely comfortable with either the precautionary or the proactionary principle, which in turn helps to explain their lingering attachment to some version of the old ideological right–left divide. After all, precautionary policymakers would have business value conservation over growth, while proactionary policymakers would have the state encourage people to transcend current norms rather than adhere to them. A precautionary firm would look like a miniature version of today's regulatory state, whereas a proactionary state would operate like a venture capitalist writ large.

The classic welfare state's loss of political salience reflects a massive transformation in humanity's self-understanding, albeit in two diametrically opposed directions. Together, they constitute the self-divided entity that I have dubbed 'Humanity 2.0' (Fuller 2011). Both sides in this self-division pulls away from 'Humanity 1.0', the entity enshrined in, say, the United Nations Declaration on Human Rights (Fuller 2012). Precautionaries aspire to a "sustainable" humanity, which invariably means bringing fewer of us into existence, with each of us making less of an impact on the planet. Proactionaries are happy to increase the planet's human population indefinitely as nothing more or less than a series of experiments in living, regardless of outcomes. Thus, precautionaries would reacquaint us with our humble animal origins, from which we have strayed for much too long, whereas proactionaries would expedite our departure from our evolutionary past—in some versions, even the Earth, if we succeed in colonising other planets. In any case, proactionaries would at the very least re-engineer our biology, if not replace it altogether with some intellectually superior and more durable substratum.

In this article, I have already suggested ways in which the ideological axis is beginning to shift. In combining policies that draw on both the libertarian stance to the individual taken in classical political economy and state socialism's interventionist stance to society at large, proactionaries have begun to identify a recognisable precautionary foe—say, Michael Sandel, who weds a strongly normative orientation to nature to a communitarian politics. Karl Polanyi is reasonably regarded as a founder of this 'precautionary socialism', since he grounded socialism's redistributivist ethic less in abstract considerations of universal justice or even allocative efficiency than its historically normal (what a conservative would call 'traditional') character, the violation of which by *both* the modern state and the modern market is then invoked to explain the striking resource inequalities that exist in today's societies. Moreover, there is a liberal side to the emerging precautionary ideology, which can only be glanced here. It is a species of liberalism that arises after the failed 1848 European revolutions and becomes pronounced in the post-1918 version of the Austrian School of Economics (i.e. Mises, Hayek, etc.), one that is profoundly sceptical of the human capacity to control, or even quantify, large-scale social processes, which renders meaningless any sense of 'collective learning' above and beyond the social arrangements that manage to survive in the course of time. Such liberalism, while 'libertarian' in name is 'reactionary' in effect (Hirschman 1991).

At the start of this paper, I said the precautionary–proactionary divide has the potential to shift the ideological axis by 90°. The right is currently divided into conservationists and libertarians; the left into communitarians and technocrats. In the future, I suggest, the

traditionalists and the communitarians will form the precautionary pole of the political spectrum, while the libertarians and technocrats the proactionary pole. These will be the new right and left—or, rather, down and up. One group will be grounded in the earth, while the other looks toward the heavens.

Epilogue: Are Public Intellectuals Possible in the Global Videodrome?

One 'vulgar materialist' but not entirely inaccurate way of telling the history of ideology is in terms of the gradual disembedding of the message (the 'ideas') from the medium, allowing the message to be conveyed by what Karl Mannheim (1936) called the 'free-floating intelligentsia'. Intellectuals 'float' in that their lack of ownership of the means of text production does not pose an insuperable obstacle to their self-expression. As denizens of the 'public sphere', intellectuals have usually written on commission, though sometimes—as in the case of newspaper columnists—on salary. Commissioned work reflects that intellectuals typically have had a regular alternative income stream (e.g. an academic salary or inherited wealth) or if not, aspired to one (e.g. as a professional writer who could live from advances and royalties). The ideas that result from the free-floating character of their intellectual bearers have been captured by epidemiological (or 'memetic', as followers of Richard Dawkins say) models whose spirit of mass diffusion contravenes the disciplined and targeted models of ideational flows characteristic of clerical and academic forms of knowledge transmission (Fuller 2009: chap. 3). On its face, this 'mass diffusion' constitutes a *liberalisation* of the channels of knowledge transmission. But whether that amounts to genuine *democratisation* depends on both the eligibility to transmit and the capacity to receive the relevant ideas. State provision of mass education as propaedeutic to civic enfranchisement has been the signature modern way to improve the likelihood that such liberalisation is truly democratic (Fuller 2000: chap. 1; Fuller 2009: chap. 1).

An interesting and complex story may be told about how the right to free written expression, originally granted to printing press owners in the early eighteenth century, came to be outsourced to text providers who at first demanded a living wage because the regular production schedule of the printers meant that writers were treated like manual workers (which of course they literally were). Thus, modern laws of copyright arose first to remunerate the sheer effort of writing but later were designed to reflect the 'originality' of the content written, in line with the doctrines of genius propounded by the German idealist philosopher Fichte (Fuller 2002: chap. 2). This drive to originality semi-wittingly catered to what by the early nineteenth century had become a lucrative newspaper market, in which rival publications branded themselves in terms of the ideological identity of the writers they hired, which in turn served as market attractors to an increasingly literate bourgeoisie. While the state tolerated, and sometimes encouraged, the bourgeoning media industry as a steady tax revenue stream, the emerging ferment of ideas proved politically de-stabilising, resulting in civil unrest across Europe, most notably in 1848. At that point, the ultimate downside of the intelligentsia's 'free-floating' character became apparent, as their media-driven frenzy failed to translate into a sustainable politics. The one legacy was 'nationalism' as an ideology relatively autonomous from the right-left spectrum that, by virtue of being codified in the local language, served to brand—and effectively legitimatise—a state in geopolitical terms that were becoming increasingly marketised through the spread of imperialism (cf. Anderson 1983).

In short, the elective affinity between 'creative destruction' in the critical discourse of public intellectual life and the product life cycle of the periodical press had shown that liberalism could permeate much of society without necessarily altering, let alone

democratising, political institutions. Indeed, if by 'public intellectuals' we mean those actively engaged in the world of print media and, in the twentieth century, radio and television, a bipolar effect may be witnessed: Either intellectuals end up purely creatures of the market whose sales do not translate into votes or legislation, or they align themselves with the dominant powers, typically less as mouthpieces than figureheads (i.e. they act as if they are leading something in which they in fact play an ornamental role). This narcissistic relationship between ideologues and the media also helps to explain the relatively easy marginalisation of both in the decade prior to the First World War, the dawn of globalised media, courtesy of the telegraph, correctly dubbed the 'Victorian internet' (Standage 1998). This false dawn ended up reproducing the 1848 European experience in China, Russia, Iran, Turkey and Mexico (Kurzman 2009). (Exactly how Marxism—in the persons of Lenin, Trotsky and later Mao and Castro—eventually succeeded as an ideas-driven political movement in the twentieth century has yet to be fully understood, though a big part of the truth may lie in the permissiveness with which ideas were converted to violence.) Walter Lippmann continued to see the same pattern of ideological narcissism in US newspaper coverage of the First World War and the Russian Revolution (Lippmann and Merz 1920), whereas in our own day acute journalists have already observed 1848-style signs of the unfulfilled democratic potential of social media associated with the 'Arab Spring' that has been unfolding since 2010 (Morozov 2011; Mason 2012: chap. 9).

Considered in light of the above history, the 90° shift in the ideological axis promised by precautionary and proactionary as alternative policy principles is notable for its relative lack of classical 'public sphere' presence. Even the precautionary principle, the better known of the two, is more likely to be invoked in international treaties and philosophy journal articles than in the periodical press and broadcast media. However, one medium in which the precautionary and proactionary approaches have played out their different world-views—perhaps to especially good effect on the younger generation—is the motion picture industry, including such consumer-led, video-based platforms as YouTube (Kirby 2008; Bloom 2009). From Doomsday scenarios of environmental despoliation (e.g. Al Gore's *An Inconvenient Truth*, which contributed to his 2007 Nobel Peace Prize) to science fiction-inspired projections (e.g. TED talks, which by 2012 had been given in 130 countries), the precautionary and proactionary principles, in all but name, function as templates through which everyday experience is increasingly interpreted as prefiguring one or another polar future. Indeed, 'anticipatory governance' is reasonably seen as extending beyond the prompting of consumer demand to a more general sense in which people routinely live with some image of the future in the same way as denizens of 'traditional' cultures were said to have lived with some image of the past (Fuller 2011: chap. 3; Fuller 2012: chap. 2). In this respect, the new ideological order defined by the precautionary and proactionary principles may finally require the sort of person who Gotthold Lessing originally thought would be necessary for the ideas of the Enlightenment to realise their full emancipatory potential—that is, a *dramaturge*, someone capable of converting a script into a sustained dramatic performance through the selection of actors, music, staging, etc.

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