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Green Populism?:

Action and mortality in the Anthropocene

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Abstract

The rise of 'populism', often conflated with authoritarianism, is frequently viewed as being antagonistic to environmental values, where the latter are associated with 'liberal elites'. However, with a less pejorative understanding of populism, we might be able to identify elements within that can be usefully channelled and mobilised towards the urgent rescue of human and non-human life. This paper seeks to illuminate a 'green populism' using Hannah Arendt's analysis of the tension between science and politics. In Arendt's account, Western philosophy and science is predicated on a rejection of the mortal realm of politics, in search of eternal laws of nature. However, the pressing mortality of nature has pushed it back into the political realm, shrinking the distance between science and politics. Where nature itself is defined by its mortality, environmentalism and political action acquire a common logic, that could fuel a participatory, green populism.

Key words

Populism, Arendt, Anthropocene, experts, mortality

The rise of populism in the twenty-first century has been widely regarded as harmful to prospects for environmental sustainability. Not only have political leaders such as Donald Trump and Jair Bolsonaro stood on policy platforms that are explicitly hostile to the preservation of the natural environment, championing the interests of ecologically destructive industries, but there is a perceived 'anti-science' dimension to the rhetoric of many populists, which undermines the public credibility of issues such as climate change and the extreme urgency of addressing them. Bruno Latour has written that "Donald Trump's supporters should be thanked for having considerably clarified... that the climate question is at the heart of all *geopolitical* issues and that it is directly tied to questions of injustice and inequality". (Latour, 2018: 3).

Populists and their allies in the media (and on social media) often seek to politicise scientific research, to question or expose the normative and political commitments and privileges of scientists. If the defining quality of populism is to draw a moral distinction between a morally innocent 'people' and a corrupt 'elite' (Mudde & Kaltwasser, 2017), experts face the threat of being associated with journalists and professional politicians as part of 'the elite', accused of being a self-interested clique. Many commentators claim to have spotted a thread linking 'postmodern' critique and contemporary populist rhetoric, inasmuch as both treat 'facts' as political constructs (e.g. D'Ancona, 2017; Kakutani, 2018). 'Objectivity' is rendered less publicly credible by the combined assaults of post-structuralists and populists (Latour, 2004), or else it becomes aggressively reasserted as a 'Western' political program, in the hands of neo-positivist intellectuals such as Richard Dawkins and Stephen Pinker. The

latter ideal is exemplified in environmental politics by the 'eco-modernist' movement, advanced by agencies such as the Breakthrough Institute. But in any case, the capacity for science to stand outside of politics, as autonomous and self-justifying, seems severely weakened at the present juncture.

While the politicisation of science by populists may be dangerous and frightening, *some* form of politicisation of science (including areas such as climate science) is not only inevitable but arguably welcome at the present historical juncture. Indeed, theorists of the 'anthropocene' have argued that the separation of human history from natural history is now over (Chakrabarty, 2009), and theorists of the 'capitalocene' that the very idea of 'nature' as a mechanical objective domain was an early modern invention that served the needs of capital (Moore, 2015). The riddle that the anthropocene poses is that the human and non-human worlds are no longer ontologically distinct from one another, and yet it is modern science that has established this (Latour, 2013; Hamilton, 2017). Science must abandon its claim to be politically autonomous, without this generating a wholesale legitimacy crisis for scientific expertise, of the sort that many populists seek to exploit.

The rise of populism, both on the left and the right, has been dangerous and damaging in many ways, but has nevertheless served to focus attention on the uneasy relationship between expertise and democracy. Under these conditions, it is no longer adequate to claim that expert knowledge of nature is simply 'objective', and to leave it at that. The political moment forces renewed reflection on the relationship between science and democracy, and on how they might co-mingle more effectively (Wark, 2015). One question this poses is whether there are ingredients of populism that might contribute beneficially to the political

re-positioning of expertise, at this critical historical moment. If we can see beyond the more alarming cases, such as Trump, might there be something to learn from the populist critique of 'elites', about how green politics might prosper and 'nature' might be politically re-conceived? While the genealogy linking post-structuralist philosophy and contemporary populism is often drawn far too crudely, there is nevertheless an underlying truth to the claim that many of the purveyors of modern reason have often been exempted from public accountability or democratic norms. Moreover, this exemption (in combination with capitalist growth) has evidently contributed to the ecological condition we now face, by presenting the non-human world in value-free, infinitely exploitable terms (see Brennan, 2000). Populism has helped to weaken the divide between 'science' and 'politics', in ways that are often alarming, but could *potentially* be beneficial if it contributes to a new type of compact between expert elites and democracy.

How and where do the logics of populism and of environmental care overlap? One immediate answer lies in the sense of urgency that are features of both today. Part of the appeal of populists (at least in their rhetoric) consists in their promise to act *now*, to circumvent the empty talk of 'liberal elites', and deliver what 'the people' need. Of course, this risks tipping into illiberal or even Fascist politics, that sidesteps legal and constitutional procedure. Meanwhile, a key feature of the major environmental risks facing the planet today is how little time there is to deal with them, as in the case of the IPCC's 2018 claim that there was just twelve years to act to avoid catastrophic levels of global warming (Lynch & Veland, 2018). Our ecological condition should trigger a sense of emergency, potentially summoning up new forms of 'state of exception' (Agamben, 2005). One way in which the climate 'emergency' has been welded together with political tactics of an 'exceptional'

nature is in the 'Climate mobilisation' movement, which seeks to model climate policies along the lines of wartime mass mobilisation of economic and civic infrastructures. This type of emergency response, at national and international scales, is one possible manifestation of what 'green populism' might mean.

More pressingly, there are already indications of how ecological politics can be wedded to nationalism, potentially synthesising a new wave of 'eco-fascism'. The businessman, politician and intellectual Herve Juvin, who exerts influence over Marine Le Pen, has argued that Europe must become re-founded as an 'alliance for life', which reconnects Europeans with their own territory, and rejects migration and tourism (Juvin, 2019). Environmental and climate concerns are entering the policy platforms of a number of nationalist parties in Northern Europe (Arnoff, 2019). It is not hard to see the potential synergies between a fascist and an environmentalist worldview, in which shrinking resources (including land) are hoarded and biological-cultural hierarchies re-asserted. A defence of 'nature' becomes a basis on which to abandon commitments to certain *types* of human, such as the refugee (Penny, 2019). Frase's science fictional scenario of 'exterminism' is the extreme telos of an economy organised as a negative-sum-game (Frase, 2016).

While it is eminently possible to envisage forms of exceptional and violent sovereign action in the face of environmental emergency (Mann & Wainright, 2018), popular mobilisation in the face of environmental threats is the more hopeful alternative. The popular revival of the 'Green New Deal' signals how technocratic and democratic visions can be welded together, around a sense of urgency and the deep unsustainability of the status quo. Theorists of 'ecological democracy' and 'environmental citizenship' have explored various ways in which

values of environmentalism and participation can be combined and fused (Dobson & Bell, 2005; Schlosberg et al, 2019). While participatory democracy and activism are not the same thing as 'populism', the latter denotes a particular resistance towards the technocratic and culturally separate power of elites, which appears to have a special moral and emotional resonance today. Such a project is not *necessarily* authoritarian or nationalistic, but can be legitimately rooted in the democratic construction of a 'people', and not just in demagogic rhetoric (Mouffe, 2018; D'Eramo, 2013). Rather than abandon the problem of mass popular mobilisation, for fear that it is necessarily exclusive or nationalistic, the question is how the current ecological moment might be the basis for an inclusive idea of a 'people'. The contention here is that, even if this is not without dangers, it is a more hopeful path towards environmental justice than simply relying on technocratic governance. It therefore holds lessons for how scientists and social movements might co-operate, that are of value to both.

This paper uses the frame of 'green populism' to consider how the relationship between science and politics might be re-imagined, in a time when the state and fate of 'nature' is of fundamental importance to political life and its future. To do this, it turns to the work of Hannah Arendt, for whom the tension between science and politics was fundamental to the identity of both. Arendt can scarcely be read as endorsing populism, and yet she was acutely aware of how political agency was conditioned by common mortality, and threatened by naturalistic ideas of 'the social' or 'behaviour'. What has changed ontologically in the Anthropocene is that the mortality and agency of the natural world has come to the fore, in contrast to the eternal, universal and mechanical laws of nature that were the original concern of modern science. In relation to Arendt's work, this poses the question of whether

expertise might be brought more firmly within the common world of political action, by reorienting it towards the rescue and recovery of such a world.

The paper is structured as follows. The next section considers the de-politicising nature of modern science, and the 'unworldliness' of Cartesian reason, as defended by Weber as the 'vocation' of modern science, but criticised by Arendt as a retreat from political life. I then turn to the question of populism, and its crucial characteristic of 'anti-elitism', that finds expression in a rejection of modern aspirations to objective representation. The third section considers what a 'populism for the anthropocene' might look like, that took seriously Arendt's critique of 'unworldly science', and brought science back into the sphere of living and dying beings. The paper concludes with some normative and political implications of this argument, emphasising how care for mortal beings is an ethic that potentially infuses a politics of both humans and non-humans.

Science and unworldliness

The 'scientific revolution' of the 17th century established a new perspective on the non-human world, which treated it as ontologically separate from the realm of human freedom, values and culture (Latour, 2013). The rationalist Cartesian tradition privileged *a priori* mathematical laws, which determined the geometrical movements of objects in space, and were knowable to disembodied human reason. The empiricist tradition that emerged with learned societies and mercantile communities privileged human experience, but nevertheless depended on strict measurement devices and recording standards in order to

codify and discipline it. In both cases, the perspective of modern science depended on a strict distinction of the knowing mind from the realm of the objects that appeared before it.

The 'nature' that is known by modern science has a mechanical and ethically empty quality. Natural objects have no intrinsic value or meaning, which is also what makes them available to exploitation by capital (Moore, 2015). At the same time, because nature is ontologically distinct from human freedom and culture, the pursuit of scientific knowledge becomes separated off from ethical or political inquiry. While modern scientists adopt strict disciplinary methods, scientific knowledge offers no answers to ethical questions of how to live or whether life has any meaning. As Weber emphasised, modern science cannot even provide evidence of its own intrinsic value, but must proceed with a wholly dutiful commitment to its own methods (Weber, 1991). This is the famous 'disenchantment of the world' that Weber saw as characteristic of modernity, and which poses the threat of nihilism.

The critique of disenchantment emerged with reflexive modernity, as reason became turned upon itself from the late 18th century onwards (Habermas, 1987; Foucault, 1984). Within this critical tradition, I want to highlight the arguments of Arendt, which echo aspects of Weber's, but which trace the problem of scientific separateness back much further. Arendt's genealogy of 'objectivity' begins with Homeric narrative, which portrayed wars from the unusual perspective of the disinterested observer, the start of a "curious passion, unknown outside Western civilization, for intellectual integrity at any price" (Arendt, 1993: 263). According to Arendt, this passion was intensified by Plato, who imposed a schism between the activity of politics and the philosophical study of truth. The

former has a worldly character, in which political actors seek 'immortality' through exceptional deeds, whereas the latter has an unworldly quality, which departs from the sphere of human activity in search of 'eternal' laws and truths (Arendt, 1958). Political action, for Arendt, arises between beings conscious of their own mortality, who seek to transcend death through heroism in the eyes of others. Given that a polity outlives us, we can achieve immortality through memorable words and deeds, that live on as legends. Philosophy, by contrast, has been a turning away from finitude and mortality altogether, in favour of an immersion in the infinite and the timeless. It renounces the flux of politics in favour of the certainty of truth.

In Arendt's account, modern science radicalises the Platonist attack on the realm of politics, by identifying timeless laws that underpin everyday worldly life. Crucially, the same mathematical principles that explained the movement of the stars could also now explain the natural world inhabited by humans, and indeed human activity itself. With the formation of statistics in the late 17th century, 'society' was envisaged as obeying its own immanent, rational laws of behaviour, in a way that was no different to the planets or other aspects of nature (Arendt, 1958: 46). Thus, where philosophers since Plato had previously found refuge from the political realm in order to seek truth, modern science devours the space of political action by identifying the universal truths and laws that run through it. The human world, where politics necessarily takes place, is reduced to the status of any other object in an infinite universe, a mere specimen governed by timeless laws (Arendt, 1958: 258). Modern science is oblivious to the unique nature of the earth, as the only habitat of human beings, and to mortality as the shared condition of embodied human beings. Via Cartesian doubt, modern reason breaks free of the earthly, mortal limits of humankind.

Arendt's understanding of rationalist disenchantment is of a gradual withdrawal from an ephemeral world of politics and appearances, in pursuit of certainty and permanence. Political heroism seems to offer a viable escape from mortality, bestowing immortality via commemoration and legend in the political community. But if polities themselves are mortal (the lesson that Arendt sees in the fall of Rome), then the conditions of this immortality are themselves finite. The withdrawal from politics towards a disembodied realm of timeless, abstract reason, is a quest for a more dependable source of permanence. What scientific logic offers is certainty, founded on Cartesian doubt, but there is a loss of worldly meaning and action in the process. Existential certainty is achieved in reason, at the loss of a common and singular 'world' of shared appearances.

A consequence of the unworldliness of modern science is that it necessarily abstains from acknowledging various kinds of worldly or political questions. Firstly, in order for science to be value neutral (in the way that Weber defended), scientists must maintain a sense of obliviousness to the consequences of their actions. What Weber saw as the 'vocation' of science is to commit to method alone, with no sense of the direct consequences for humanity. This vocation places no value in any particular human life or lives, and treats death as meaningless. The study of statistics, for example, was initially preoccupied with studying trends in mortality and natality; however it could only identify the 'laws' of population by abstracting away from the meaning of any particular birth or death. The particularity of lives and deeds is necessarily overlooked. In Weber's account, modern science diverts attention away from individual lives and experiences, towards a more abstract universal goal of 'progress', which extends indefinitely into the future. Equally, the

Cartesian separation of human from non-human worlds doesn't simply assert the autonomy of the former, but represents nature as without intrinsic value and amenable to endless violent exploitation (Moore, 2015; Hamilton, 2017). As the meta-value, 'progress' over-rides all local or intrinsic values.

This does, however, pose an awkward question once 'progress' threatens the very conditions of human life. Modern science may be blind to the value of particular human lives, but can it still be blind to the necessary conditions of human life? Arendt argued that it can:

The simple fact that physicists split the atom without any hesitations the very moment they knew how to do it, although they realized full well the enormous destructive potentialities of their operation, demonstrates that the scientist qua scientist does not even care about the survival of the human race on earth or, for that matter, about the survival of the planet itself.

(Arendt, 1993: 276).

The technological innovations of the twentieth century, including the atomic bomb and space travel, radicalised the question of the purpose or vocation of modern science. The principle of disembodied, Cartesian reason was no longer just an ascetic ethos, but disavowed and endangered the basic physical conditions of human life. This is the contradiction that the dawn of the Anthropocene highlights, namely that modern science has been willing to acknowledge and defend its own methodological preconditions, but not its existential ones (Latour, 2018). The question that Arendt's work poses, in the face of the

existential risks of the Anthropocene, is how do scientists respond once *the venture of science itself* confronts its own mortality.

Secondly, the vocation of modern science involves a silencing of political and social questions regarding the organisation, governance and practices of scientific activity itself (Latour, 1987). Historians of science have shown how the scientific revolution was dependent on various political, institutional and technical preconditions. Experimental methods were developed within the confines of carefully restricted societies and clubs, which had to argue for their political right to dictate truths about nature, in the face of both theological and political opposition (Shapin, 1994; Shapin & Schaffer, 2011). Norms of record-keeping and measurement were needed in order for observations to be converted into 'facts' that could be distributed and recognised via international networks of expertise (Poovey, 1998). Statistical data were first collected with the backing and funding of the sovereign state, often in colonial settings (Desrosieres, 1998).

While modern scientific reason might relentlessly question its own methodological and epistemological preconditions, it is wilfully oblivious to its social and political ones. A refusal to confront the politics of expertise (whose knowledge counts? How is inconvenient knowledge suppressed? How will research be funded? Who will receive public recognition for a given discovery?) has allowed modern expertise to sustain an image of itself as 'apolitical', and without need of public justification. In Latour's terms, the scientific establishment is 'janus-faced', presenting itself on the one hand as a mere vessel for the truth that belongs to nature or society, and on the other as a heroic force of political

progress and enlightenment that deserves ample political and economic support (Berger & Luckmann, 2011; Latour, 1987).

The deconstructive, genealogical and 'social' study of science that developed from the 1960s onwards challenged this exceptionalism, by placing modern science back into a cultural and political history. Once politics and culture are brought back into the picture, questions of power, rhetoric, historical accidents, private interests and meaning start to appear within expert communities that had denied the significance of these things. Viewed this way, the successes of modern reason can be understood partly in terms of political strategy and control, in successfully creating and sustaining consensus within tightly restricted communities. One crucial means of achieving this is by strictly delimiting the public that participates in consensus-formation, to those who are deemed to have the appropriate moral character and credentials. Thus, entry to the earliest experimental societies (which granted the right to witness experiments being performed) was delimited to those of good social standing, allowing each participant to trust the 'good word' of any other (Shapin, 1994). As Latour puts it, "The Moderns are those who have kidnapped Science to solve a problem of closure in public debates" (Latour, 2013: 129). Scarce moral resources, of reputation and educational accreditation, remain basic building blocks of how scientific facts are established, combined and supplemented.

From this more anthropological perspective, the tension between science and politics is not merely 'vocational' or philosophical, but concerns the pragmatics of how (if at all) to bring controversies to a close. Arguments over the 'politicisation' of science (where dissensus is injected into expert communities), or conversely the 'de-politicisation' of politics (where

experts seek to impose consensus on policy), point to the blurred and shifting boundary between matters of fact and those of deliberative value judgement. Scientific issues start to 'heat up' where they become pervaded by normative controversy, and experts become increasingly expected to mediate or influence democratic deliberations (Callon et al, 2011). Meanwhile, politics becomes increasingly technocratic and hollowed out, where particular policy issues are delegated to rarefied expert communities to resolve (Fischer, 1990; Mair, 2013). In an effort to steer between a surfeit of technocracy and a surfeit of democracy, different models of 'governance' are developed to produce policies that combine space for deliberation with respect for expert consensus.

The 'elitism' of experts?

The term 'populism' has become both ubiquitous and contentious. But its key characteristics have been usefully identified as follows:

A thin-centered, ideology that considers society to be ultimately separated into two homogeneous and antagonistic camps, "the pure people" versus "the corrupt elite," and which argues that politics should be an expression of the volonte generale (general will) of the people.

(Mudde & Kaltwasser, 2016).

In drawing this moral distinction, populists seek to do two things. Firstly, they hope to erase distinctions between ostensibly separate centres of power and authority, such as opposing

political parties, the media, senior public administrators and technocrats, the judiciary and business leaders. The term 'elite' emphasises the various cultural and social qualities that are shared *across* different power nodes, in the higher echelons of public life (Mills, 1999; Khan, 2012). These cultural privileges, especially indicated by elite education, are deemed more significant than any economic advantages. By attacking 'elites', populists emphasise that liberal systems of accountability are a sham, and that senior decision-makers are acting in concert with one another. Consensus on policies and rules is actually a symptom of the closure and cultural homogeneity of the 'elite'.

Secondly, by opposing 'elites' to 'the people', distinctions within the latter are also eroded. Since its emergence in late 19th century Kansas, populism has never been understood as a class-based political phenomenon, but unifies various interests, including petit bourgeoisie, farmers and workers. Populism rests on the assumption that there is some sort of 'general will' that is shared by this morally virtuous mass, but which is thwarted by existing systems of representative democracy including established political parties (Mudde & Kaltwasser, 2017). Populism drifts towards nationalism or fascism where the identity of 'the people' becomes founded in exclusionary national or ethnic categories, and 'elites' are accused of favouring minority groups or immigrants. The assumption of a homogeneous 'people' allows far-right populists to accuse dissenters of being 'enemies of the people' and inauthentic (Mueller, 2018). But a 'left populism' is also feasible, where 'the people' includes anyone who wishes to join a movement, to *construct* a people anew, and to mobilise against 'the elite' (Judis, 2016; Mouffe, 2018). Left populism seeks to introduce dissent to areas of economic policy-making, which had previously been controlled by elite expert consensus.

I want to highlight an additional quality to populism, which will help to illuminate its potential threat to the authority of *both* experts and professional politicians: it consists of a critique of the multiple forms of *representation* on which liberal societies and government depend. This grants it its weak but undeniable family resemblance to post-structuralist critique, and its critique of liberal democracy. The Hobbesian ideal of a sovereign judicial state representing the public interest is cast into doubt, as only some combination of direct democracy and charismatic leadership is viewed adequate to articulating the authentic popular will. Institutions that offer to represent society in terms of objective facts, including statistical agencies, journalists and social scientists, are suspected of serving the interests of their own cultural milieu. Political parties become viewed as machine-like and bureaucratic, while civil servants and regulators are viewed as politically partial. Educational divides in liberal societies, especially between graduates and non-graduates, have become one of the major cultural rifts that populist parties exploit (Runciman, 2018; Goodwin & Eatwell, 2018). The rise of social media has broken the control that professional editors and broadcasters have over the circulation of public information, meaning that access to the public sphere is no longer so restricted by systems of accreditation.

In seeking to understand the emotions that mobilise people, potentially towards violence, Arendt observed that “if we inquire historically into the causes likely to transform *engages* into *enrages*, it is not injustice that ranks first, but hypocrisy” (Arendt, 1970: 65). This is a crucial insight in making sense of the anger and resentment that drives populist movements. What is morally abhorrent about elites is not that they are flawed or self-interested as such, but that they *purport* to transcend personal interests or tastes, because they *purport* to be acting in a representational capacity. As Hochschild discovered in her

ethnography of Tea Party sympathisers in Louisiana, government officials and liberals are loathed because of their phoney claim to be acting on behalf of everybody (Hochschild, 2016). By contrast, a ruthless businessman or enraged celebrity politician makes no pretence to represent the whole. They may equally make little claim to public duty or virtue, meaning that their flaws and misdemeanours do not count against them in the same way as their opponents' are deemed to. Viewed this way, what is suspect about 'elites' is their claim to be able to act in the general interest, as impersonal representatives of the public and reporters of facts, rather than merely from their own local and personal perspective. The vocation to impartiality or objectivity – to seek a view from nowhere – is a recipe for hypocrisy, seeing as it starts from a denial of the embodied, cultural nature of every human perspective on the world.

Evidence from surveys on trust tend to show that the professions viewed with greatest cynicism in liberal democracies are journalists and politicians (see Funk & Kennedy, 2019). Trust in scientists, including climate scientists, holds up reasonably well. However, universities increasingly find themselves drawn into political controversies that are fuelled by populist rhetoric against 'political correctness' and the values of a 'liberal elite'. While individual experts might be viewed as uncorrupted, right-wing populists inculcate a view that academic culture is oblivious to particular national interests, and governed by a set of 'liberal' or 'global' interests that transcend local or national culture. This can manifest itself in viciously nationalistic terms (as in the elimination of the Central European University from Hungary in 2018) or forms of conspiracy theory (such as claims about the pervasive influence of 'cultural Marxist' ideology on American campuses). Studies have shown, for example, that populist support across Europe is correlated to the spread of the 'anti-vax'

movement (Kennedy, 2019). Climate denialism is encouraged by efforts to paint climate scientists as members of the liberal elite, as anti-capitalists or as hypocrites who gladly live the lifestyles that they criticise in others (e.g. James, 2017).

And yet an engagement with conservative epistemology demonstrates that there is also a more nuanced dimension to the critique of elite knowledge, that plays a part in the sensibility of populist support. In her study of 'rural consciousness' in Wisconsin, Cramer found that scientists from Wisconsin University were viewed as aloof and arrogant when conducting research on local rivers, showing no interest in the testimony of those familiar with the rivers. One rural Wisconsite told her:

They don't want anything to do with ya. They think they're smarter than ya. Got that book learning. People go to college they come out dumber than they went in. They got the books there, those books, it's not like the experience.

(Cramer, 2016: 126)

As pragmatist philosophers have argued, the emphasis on objective and representational knowledge ('knowing that') can mean a devaluing of practical and embodied knowledge ('knowing how') (Wittgenstein, 2001; Polanyi, 1969). This is often a conservative critique (e.g. Hayek, 1944; Scruton, 2014) but it has also been made in defence of local democracy and autonomy, against the power of technocratic and colonial forms of expertise that govern from a distance (e.g. Scott, 1998; Flyvbjerg, 2001). As science studies has shown, concepts of 'nature' and 'the environment' are artefacts of cognitive cultures and traditions that see such things from afar, via the instruments of science, based in metropolitan

centres, rather than expressions of those who live with the natural environment, who may not see their experiences of 'nature' reflected in objective facts about it. As feminists, critical race scholars and indigenous scholars have long reminded us, delineations of expertise involve strict hierarchies and delineations of whose empirical experience of the world is to count as 'objective', and whose is merely 'subjective', with a critical role for technologies of measurement and observation in distinguishing one from the other. But if we're to acknowledge that there is a politics to this distinction, then we must also recognise that this has possible implications for the status of facts in democracies (Latour, 2004). The claim that a specialist minority is able to represent reality in a "non-interpretive" fashion, that is central to the epistemology of the 'modern fact', needs questioning (Poovey, 1998).

What Nixon refers to as the 'environmentalism of the poor' speaks to the same epistemological and political issue, though with an emphasis on the destructive post-colonial dimensions of capitalist exploitation (Nixon, 2011). The long-distance, 'slow violence' enacted by arms-length corporate investments and accidents afflicting the global south damages not only 'nature', but also lived epistemic and political life-worlds that cannot then be repaired. Against a notion that 'environmentalism' is a rationality of the developed north, which is imposed on the global south, Nixon demonstrates how knowledge and care for the environment is manifest in local vernaculars, especially in the texts of 'activist writers' seeking to represent what is being lost. Literature performs the work of environmental representation that objectivist expertise does not or cannot.

Recasting populist rhetoric in Arendt's terms, we might understand the critique of elites, including of experts, more as follows. Those individuals who deal in facts and figures are

exempting themselves from the common world of politics, in favour of attention to universal and eternal methods and rules. More acutely, they are turning away from a sphere of embodied conduct defined by mortality, 'rare deeds' and commemoration, in favour of a commitment to abstract, disembodied and eternal principles of reason. As Weber accepted, the vocation of modern science is oblivious to the meaning and tragedy of death or destruction, locating it instead within an infinite time horizon of endless progress. As Latour's work has indicated, there *is* something hypocritical about the modern scientific vocation, which seeks to hold up every facet of physical and social nature to observation, other than the actions of scientists themselves (Latour, 1987). Expertise *does* possess cultural and political privileges in society, that protect centres of knowledge from democratic interference or moral judgement. All of this is a normative precondition of capitalist devastation dressed up as 'progress' or 'development', which moves too quickly and at too much distance to ever be accountable for its full consequences. Arendt's observation that it is hypocrisy, not injustice, that is most likely to "transform *engages* into *enrages*" is revealing here.

In Arendtian terms, the political appeal of the populist leader, in contrast to the scientific expert or technocrat, is that they appear to dwell in the common world of action – where humans are born and die – rather than in a world of timeless, universal laws and immutable facts (Arendt, 1958). If a leader appears uninterested in 'facts', this only reinforces their status as a political actor, in a common world of appearances. We needn't sympathise with or believe the liar in order to understand their appeal. Arendt argues:

There is hardly a political figure more likely to arouse justified suspicion than the professional truth-teller who has discovered some happy coincidence between truth and interest. The liar, on the contrary, needs no such doubtful accommodation to appear on the political scene; he has the great advantage that he always is, so to speak, already in the midst of it. He is an actor by nature; he says what is not so because he wants things to be different from what they are - that is, he wants to change the world... our ability to lie - but not necessarily our ability to tell the truth - belongs among the few obvious, demonstrable data that confirm human freedom.

(Arendt, 1993: 250)

The difficulty for anyone seeking to constrain political action and argument within the terrain of 'facts' is that this can appear like a denial of political possibility – not simply a constraint on democracy (as is the typical populist critique of technocracy) but a turning away from the 'vita activa' that characterises political life. This produces a profound dilemma in facilitating the co-existence of politics and truth, without one eradicating the other.

To be sure, Arendt was not on the side of the liar, merely noting the specific advantages that such a person possesses in the field of political action and rhetoric. If the political 'expert' seeks to close down the space of political action too far, then the lying demagogue seeks to do the reverse, and to deny the real constraints provided by what's true (Arendt, 1993: 264). As Arendt argued:

The political attitude toward facts must, indeed, tread the very narrow path between the danger of taking them as the results of some necessary development which men could not prevent and about which they can therefore do nothing and the danger of denying them, of trying to manipulate them out of the world.

(1993: 259).

The scope of political action is real but not arbitrary or limitless.

Climate science faces a particularly acute problem here, in that it deals with an object that exceeds unmediated human sensibility. The consequences of global warming are now entering everyday experience on a frequent basis, yet the object known as 'climate' only exists thanks to networks of satellites, computer models and weather stations around the globe (Edwards, 2010). As a set of objective facts, climate is as far removed from the political world of shared experiences and appearances as is possible, seeing as they exist at the scale of the global. The epistemological implications of the Anthropocene, however, are that natural science is no longer a project of objective representation of a non-human domain, but an unavoidably political exercise in managing a single unfolding of human-natural history, that constrains us as a matter of existential fact. As Latour argues, there is no longer a binary division between 'universals' of scientific enquiry and 'particulars' of culture and politics, but rather – for the first time in human history – a problem stemming from the fact that humans are a terrestrial species. Thus, while Arendt argued that satellite images of the earth from space represented the ultimate denial of political action (representing the planet as just another value-less object in an infinite universe), the Anthropocene demands a new scientific vocation that rests on the common needs of an

inescapably terrestrial species, which carries a particular responsibility for the threats it now faces (Hamilton, 2017).

Populism in the Anthropocene

Reflecting on the intersection of health policy and democracy in the time of Trump, the health policy scholar Ted Shrecker has argued that “we can and should envision an alternative populism, organised around a rubric like: ‘Stop, you’re killing us!’” (Shrecker, 2017). Shrecker refers to the mounting evidence of how social and economic policies in the global north since 2008 have been leading to risks to public health and, in certain populations, reduced life expectancy and rising mortality rates (Whyte & Cooper, 2017). The ‘enemy’ that such a populism mobilises against are political threats to life itself: elite institutions that refuse to accept the existential danger at hand, and business interests that exploit the delay.

One thing that stands out from the survey evidence on trust in professions and institutions across liberal democracies is that medical professions, and especially nurses, retain very high levels of public confidence, compared to other sources of expertise (Gallup, 2018). We might speculate that, following Arendt, the expertise and authority of medical practitioners do not suffer from the political problem of unworldliness, that besets scientific expertise and technocracy. Arendt’s work points to why this might be: by focusing on and caring for the human body across the cycle of birth, life, loss and death, the medical gaze remains fixed on the sphere of action where human beings appear before one another as unique and

irreplaceable. The dramatic progress of medicine from the seventeenth century onwards was clearly driven by scientific progress, treating the body as a specimen of physical matter which obeyed scientific principles. However, the culture of therapeutic care – and its inevitably psycho-somatic dimensions – points to an aspect of the medical vocation that is unlike the value-free scientific vocation defended by Weber, in which “death is meaningless”. The quest for scientific certainty and truth is blended with an engagement with the world of human suffering, loss, memory and mourning.

The dawn of the Anthropocene highlights the ontological equivalence to the human and non-human worlds, albeit with a particular responsibility accorded to humans in effecting the natural disasters that now confront human and non-human history (Hamilton, 2017). ‘Human’ and ‘natural’ history converge into a single field, as the separation of nature from culture, science from politics, is no longer tenable. This nevertheless poses the question of how the non-human world is to be introduced to politics and represented as a matter of concern. My proposition is that, echoing Shrecker’s claim, the very safeguarding and mourning of life itself can become the basis of a possible populism, in which expertise becomes modelled around the ideal type of the nurse rather than of the classically modern scientist. And yet, in the Anthropocene, the care for life cannot stop at the bounds of humanity, but must extend beyond that. As Hamilton argues, anthropocentrism is unavoidable given the unique role played by human beings in bringing us to this geo-human point in history, but at the same time the project of caring for the non-human and desisting our violence against it is now an ethical injunction that should supplant the scientific ‘vocation’ towards infinite ‘progress’ (Hamilton, 2017: 143). The modern conceit, that the value of ‘progress’ can be oblivious to rare deeds or losses, is no longer tenable. On the

contrary, recognising and publicising the meaning of specific losses, through rare deeds and mourning, is integral to the politics of conservation. “Stop, you’re killing everything!” should be the cry.

From an Arendtian perspective, the crucial quality of the Anthropocene, which brings science and politics back into closer relation to each other, is that notions of ‘universality’ and ‘eternity’ lose their *a priori* epistemological and political status. As Latour has emphasised, the concept of the ‘global’ (which always implies its opposite of the local or national) needs now to be supplanted by that of the ‘terrestrial’, a specificity that is common to the human species, amongst all others (Latour, 2018). Meanwhile, the human imprint on the earth system will now last until the end of the planet’s existence (longer even than the planet has existed for to date), meaning that any idea of what is ‘permanent’ or ‘natural’ about earthly existence is now coloured by contingent historical actions, including by scientists of the past four hundred years. As Hamilton argues:

The globe is no longer the "disenchanted" Earth given to us by the scientific revolution. But nor is it "re-enchanted"; it is no magic that pervades it but willed activity.

(Hamilton, 2017: 37)

Not only is the practice of science politically invested in the construction and transformation of nature (as science studies has argued), but the erstwhile objectivity of science has acquired a mortality of its own. Human and non-human worlds acquire a common

existential condition of finitude, and each are shaped by the often violent collisions between the two.

A challenge of a 'green populism' is of how to construct a common political world, in which the lives, actions and deaths of humans and non-humans are granted recognition and meaning. This does not mean subsuming them under general laws of statistics and mathematics, by way of pure technocratic administration. Rather, it means re-imagining centres of techno-scientific expertise in ways that are attuned to preserving the constantly shifting conditions of human and non-human life, that recognises the passage of time and the loss that accompanies it, as ontologically and politically decisive. Epistemic and political authority is therefore rooted in ideas of care and rescue, in such a way that is mindful of the fact that *we don't have endless time*. In renouncing the turn towards 'eternity', that Arendt saw as the anti-political quality of modern science, experts can side with 'the people' and their habitat, recognising the shifting relation between the two, and the irreversibility of the (sometimes traumatic) loss that is felt in this unfolding dynamic. The physical demise and death of the objects of knowledge can no longer be external to the vocation of modern science, and the over-arching, unifying telos of saving the common terrestrial world provides ethical content to the scientific project, of the sort Weber refused (Hamilton, 2017: 48).

The political and practical dimensions of expertise are therefore confronted head-on, and granted the rationale of humanitarian and ecological relief. Forms of emergency intervention are sanctioned on the basis that they pursue a policy of 'non-violence' within the common world of humans and non-humans, that otherwise threatens to tip into a

constant war between the two (albeit one that was initiated by humanity). On this basis, the practices, political authority and privileges of experts connects with some idea of the popular 'general will', not via liberal forms of representation but through a recognition of the material conditions of life itself. This is apparent in contemporary forms of climate action, such as Rising Tide, Climate Mobilisation, Extinction Rebellion and School Strike for Climate, which specifically breach or circumvent legal and institutional norms of democratic representation (Jacobsen, 2018). These forms of social mobilisation have elements in common with non-violent protest and wartime mobilisation, in that they seek specifically to move a mass of human bodies, in solidarity with one another and with the non-humans that need rescuing. Mass mobilisation, which historically has arisen in the context of nations at war, creates a 'people' in a populist sense, but needn't only be organised around nationality or exclusionary identities. What it does require, however, is the sense of urgency that action is needed now, and a recognition of the unique status of the present opportunity. This is what the modern scientific vocation is definitively unable to achieve.

Embedded in such movements, expertise does not purport to be neutral on the question of its own political and cultural preconditions, nor on the lived consequences of its interventions. The scientist no longer absents themselves – ethically, bodily, culturally and politically - from the process of knowledge production, and methods and credentials of knowledge no longer perform the same distancing role between the expert and society, metropole and rural life. As part of a 'green populism', epistemic-political authority does not rest on a withdrawal from the flux of change and loss, but on a capacity to pacify, temper, slow and remember. Social and natural science have equal weighting in this regard, as they trace the passage of time through the movements and changes in the human and non-

human world (Elliott, 2018). The cry of “Stop, you’re killing us!” applies to the fast and ‘slow’ violence that afflicts social ecology. At the same time, it names the institutions and interests (such as fossil capital) that threaten life, positioning them against ‘the people’, as populist rhetoric invariably does.

In practice, what this involves is a joining up of medical and ecological vocations and policy domains. A number of ‘left populists’ are already positioning environmental issues as popular concerns, where they overlap with health and wellbeing. In March 2019, in response to a conservative charge that environmentalism is an ‘elitist’ movement, US Senator Alexandria Ocasio-Cortez replied “this is not an elitist issue. This is a quality of life issue”, before going on to list the lung diseases, lost businesses and threats to life of poor Americans resulting from a failure to take environmental matters seriously. “People are dying”, she argued. In 2019, Britain’s Labour party proposed a ‘Wellbeing law’ that considered health and climate goals side by side. The same year, Labour announced a policy to create an ‘NHS forrest’, planting a million trees around hospitals.

Meanwhile, literary, artistic and qualitative forms of knowledge acquire a new priority, in narrating and mourning the unique and finite experiences of ‘slow violence’, that will destroy irreplaceable human and non-human phenomena and ways of life (Nixon, 2011; Ghosh, 2016). As Nixon argues:

Apprehension is a critical word here, a crossover term that draws together the domains of perception, emotion, and action. To engage slow violence is to confront layered predicaments of apprehension: to apprehend - to arrest, or at least mitigate -

often imperceptible threat requires rendering them apprehensible to the senses through the work of scientific and imaginative testimony.

(Nixon, 2011: 14)

Rendering long-distance, slow processes 'apprehensible' means finding ways to bring them into the sphere of human action and mutual visibility, that Arendt considered the only possible domain of politics. A Cartesian epistemological ideal of neutral representation, which disavows the embodiment and mortality of the mind, is therefore replaced with an imaginative pragmatism that is also a commitment to a common political world of appearances, as its own mode of knowing. Science is no longer revealed 'in action' in some illicit sense, but presents itself as such from the outset. In Arendt's account, political interaction, generating common feeling, is the only ultimate assurance we all inhabit the same world at all: "the presence of others who see what we see and hear what we hear assures us of the reality of the world and ourselves" (Arendt, 1958: 50). The humanities are indispensable in this reality-formation. By contrast, the philosopher and the rationalist are not fundamentally concerned with achieving a *shared public* idea of truth, only a certain one. Is it any surprise if such an ascetic tradition, running from Plato via Descartes, ultimately proves incapable of persuading 'the people' of its validity, when that was never its concern in the first place?

Conclusion: tracing movement

This analysis leaves plenty of questions unanswered. What does science policy look like, once oriented towards a 'green populism'? How does science communication change? What implications does it have for disciplines, interdisciplinarity and resourcing of expert institutions? What forms of governance are required to mediate the inevitable conflicts that arise between scientific consensus and popular dissent? These are problems that far exceed the scope of the argument here, which is focused on the type of Weberian vocation that is needed to attend to 'nature', once it is brought back within the uncertain, mortal realms of *action*, rather than of eternal *truth*.

If we distil the Arendtian orientation defended here, what it privileges is movement of various kinds. The first is of *social* movement, the mobilisations that construct a 'people' through granting it visibility and bio-political form in public space. This element of populism and of activism is, to a greater or lesser extent, a critique or refusal of representative democracy in its standard liberal form. Rather than have the people represented, and then spoken for, the people physically present themselves. The crowd on the street not only symbolises the lives that are threatened by violence and the 'slow violence' of ecological break-down; it *consists of* those lives. That scientists and experts now join such mobilisations, as in the 'March for Science' of April 2017, represents an important statement of shared biology and humanity, offering a non-representational mode of politics that is prior to the representational functions of modern expertise.

Secondly, there are the affective movements, or emotions, that are integral to how populism and mass mobilisation works. Birth, death and loss register their reality affectively, and not wholly logically as facts or numbers. The truth of affective impacts needs

recognising, where the common world of humans and non-humans is recognised – as per Arendt’s argument – to be one of mortal beings (including non-human ones), appearing before one another. The affective impact of epistemic practices on experts themselves needs to be voiced and heard. Equally, to the extent that a vigorous populism may require something to angrily mobilise against, it is worth mulling Arendt’s observation that ‘hypocrisy’ is more enraging than ‘injustice. In what sense might the purveyors of ‘slow violence’ be guilty of ‘hypocrisy’? Reputational insurgencies, which expose companies for ‘green-washing’, concealment and lies, effectively work on this frontier, subverting the game of image-management in a powerful, obstructive way (Feher, 2018).

Finally, there is the slow (and not so slow) movement in the physical world. The ‘rare deeds’ of non-human actors, that were triggered originally by unwitting ‘rare deeds’ by human actors over the modern era. These movements are all ways of tracking temporality and finitude in various ways: of apprehending that which is lost, being lost, or could be lost in the future. That political action occurs against the shadow of death, as Arendt argued, becomes more apparent in the age of the Anthropocene, hence movements such as ‘Extinction Rebellion’. And yet, the climate crisis in particular has also brought the question of youth and future generations into politics, most arrestingly where children take to the streets in protests such as School Strike for Climate. For Arendt, political hope consisted in the fact that action always brings a new world into being, giving birth to something: “Since action is the political activity par excellence, natality, and not mortality, may be the central category of political, as distinguished from metaphysical, thought” (Arendt, 1958: 9). The vitality of a green populism would not only lie in a cry such as “stop, you’re killing us!”, but of new lives entering the world.

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