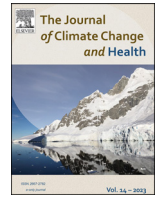




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Perspective

'Are you a researcher or an activist?': Navigating tensions in climate change and health research

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ABSTRACT

Limiting global temperatures in line with the Paris Agreement requires deep and urgent cuts to emissions this decade from across all sectors, including healthcare. Yet, it can often take many years, even decades, for evidence from health research to be translated into practice. This article explores how researchers in the climate change and health field can and perhaps should operate in such an environment. Should they shift towards 'action-oriented' research? Should they pursue alternative pathways, such as advocacy? Should they take to the streets? First, I describe how value judgements can shape scientific research and discourse, and, in turn, policy and practice; I then discuss the recent history of advocacy amongst climate scientists and draw parallels with the experience of health researchers. Finally, I consider some possible ways to navigate the tensions between research and advocacy inherent to climate change and health research. I conclude that greater reflexivity upon the values underpinning our work on can help researchers navigate the challenges we face.

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Main text

"Are you a researcher or an activist?", I was asked at a recent evaluation of my PhD progress. It was an unusual question in the circumstances; not the least given what had been discussed so far: publications, work in progress, teaching, timelines – the usual. The question caught me off-guard. 'I am foremost a doctor, committed to evidence based public health, aiming to produce quality research on climate change and net zero healthcare', I replied. Adding for clarification, 'I do not believe activism would jeopardise either'. The examiner briefly paused, then moved on. The moment passed but the question has dogged me since.

I have been to a handful of protests, but not taken part in direct action. I have engaged in public debate but strive to take a balanced view. I do not consider myself an activist. The examiner was, however, picking up on the kinds of issues I am exploring and how I am exploring them, in particular, a project closely aligned to my research area, in which we explored how to make the Norwegian healthcare sector climate neutral. Our project was funded by a university research initiative supporting 'actionable knowledge to sustainably transform society' and the work was undertaken as part of my employment. We brought together relevant stakeholders and

published a report. When the Norwegian government signed up to the COP26 health programme,¹ this was a success; in a way, partly our success. The examiner's question seemed to be prodding at whether I, as founder and leader of the project, had an agenda? Was this activism [1] behind a veneer of research?

There are clearly tensions between scientific research and activism. Whereas scientific research involves systematic study of phenomena through observation, documentation and the use of evidence, activism seeks to advance a specific cause.² Our project was, I believe, a transparent and fair overview of what is known; however, the question raises several important issues relevant to my PhD research project – which explores different perspectives on fair pathways to low-carbon healthcare – as well as the broader shift in academia towards policy impact and actionable research [2]. A key starting point for my work is understanding how our value judgements can shape scientific research and, in turn, influence policy and practice.

¹ The COP26 Health Programme is an initiative led by the World Health Organisation launched at COP26 climate summit in November 2021 which asks countries to commit to two pillars: developing (1) a climate resilient health system, and (2) a sustainable low carbon health system. (<https://www.who.int/initiatives/cop26-health-programme/>)

² Activism is defined here as "the policy of active participation or engagement in a particular sphere of activity; spec the use of vigorous campaigning to bring about political or social change." [1]

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Weber and the value-free ideal

There is a long-standing tradition within philosophy of science of analysing objectivity, including how researchers' own values can impact scientific results and outputs. In his influential essay on objectivity in the social sciences, published over a century ago, sociologist Max Weber [3] set out four stages in which this can occur:

- (a) the choice of a scientific research problem
- (b) the gathering of evidence in relation to the problem
- (c) the acceptance of a scientific hypothesis or theory as an adequate answer to the problem on the basis of the evidence
- (d) the proliferation and application of scientific research results

Today, the rigour of scientific review and ethical approval processes focus on the generation of evidence, namely (b), but values exert their influence throughout the research process, from the selection of a problem (a) to the application of theory (c) and communication of results (d). Weber's work has stimulated wide-ranging debate ever since on the ideal of 'value-free science' – the view that scientific findings informing democratic political decision making should not be influenced by scientists' value judgements – as well as the extent to which this is achievable or even desirable [3–6].

Support for the value-free ideal is characterised by Roger Pielke's 'Honest Broker' [7]. Pielke describes four idealised roles for scientists in the policy process: the 'pure scientist' consumed with their own research; 'the science arbiter' solely concerned with answering scientific, rather than normative, questions; the 'issue advocate' using science to advance specific policy alternatives; and the 'honest broker' (his favoured position) who presents decision makers with a broad range of alternatives which they can narrow according to their preferences and values (pg. 31). A central concern for Pielke is 'stealth issue advocacy', in which scientists present their role as 'pure scientist' or 'science arbiter' while advancing a political agenda under the guise of scientific authority. This not only limits the policy alternatives open to decision makers but undermines the legitimacy of scientific advice in the long run.

Critics, such as Nelson and Vucetich [8] argue that the purpose of science is not simply to generate facts but to interpret information and synthesise it into knowledge; scientists should be impartial (i.e. open to changing their position on the basis of sound analysis) but not neutral to the findings nor to their responsibility, as citizens and scientists, to advocate. In their view, the forces driving climate change are so favoured by the dominant institutions and policies that abstaining from advocacy is "a *de facto* support for these processes"; thus, far less time should be spent pondering whether to advocate and far more time spent on how to do so appropriately. Simon Donner [9] conceptualises the role of the scientists as a science-advocacy continuum moving from purely objective judgements to normative ethical judgments, steadily increasing the influence of world view, scientific uncertainty and risk to their professional credibility. He advises scientists to spend time finding their own place on the spectrum. Heather Draper [10] has developed a taxonomy of activities specifically undertaken by bioethics researchers, ranging from 'pure philosophy' to 'extreme vested interest activism'. She argues, similarly to Donner, that given the risks and rewards at stake, the decision whether to undertake advocacy is a personal decision and dependant on their research area.

More generally, Capstick and colleagues [11] are amongst the growing number of climate scientists explicitly calling upon colleagues to critically reflect upon their positionality as 'neutral' observers, and question how well "these inherited norms are serving us in a time of existential environmental crisis?". This view reflects

some of the longstanding concerns of Science and Technologies (STS) scholars, namely Sheila Jasanoff [12], regarding the entanglement of ethical, legal and political dimensions of science, the evolving social contract between science and society, and what to do in practice.

The central criticisms of the 'value-free ideal' are thus two-fold: firstly, that it is unattainable – the act of developing and communicating policy relevant findings inherently involves value judgements; and secondly, that the value-free ideal is not, in fact, the ideal – scientists *should* rely on value judgements to both better incorporate ethical aspects when communicating policy-relevant results, including to correct for the historically systematic and ongoing exclusion of groups or ideas [4]. For those who believe the value-free ideal is desirable, if not fully attainable, a key question is how to achieve it?

'Value-free' climate science in practice

A pragmatic approach commonly used in climate science is objectivity through measurement and quantification (i.e. 'mechanical objectivity') [3]. Although quantification does not avoid value judgements in the research process described by Weber – and certainly has its critics [13,14] – the argument follows that it minimises the influence of a researcher's value judgements; trust in numbers replacing trust in individual scientists [3]. A prominent example from climate policy is the Social Cost of Carbon (SCC), often described as the most important metric in climate economics [15].

The SCC integrates different aspects of the climate system and the global economy, including human mortality impacts, to calculate the economic damage of a tonne of carbon emissions. The metric is highly sensitive to social values, including the relative value placed upon early and delayed costs, national and international impacts, and future and present benefits [15]. As such, estimates vary considerably, making it difficult to agree upon the correct starting point. For example, in the USA, a recent re-assessment reached a central estimate 3.6 times the figure used by the current government [16], which is itself 10 – 17 times higher than the figure used by the previous Administration [17].

The ability to reach different conclusions from the same data highlights a challenge at the heart of science-policy discourse which both supporters and opponents of the 'value-free ideal' seek to address. Within the climate literature, this is vitally important to wide-ranging efforts to calculate non-market damages – such as biodiversity loss, ecosystem degradation and human health impacts – inequality of impacts, challenges to adaptation, and low-likelihood but potentially catastrophic 'tail risks' [18]. Philosopher Stephen Gardiner [19] captures this set of conceptual challenges in his description of climate change as a "perfect moral storm" of international and intergenerational challenges compounded by the lack of theoretical tools to navigate the problems we face.

Within academia, different disciplinary perspectives lead to major differences in the perceived urgency and scope of action [18]. As stated by the International Panel on Climate Change (IPCC), responses to climate change are contingent on value judgements and ultimately "a matter of ethics" [20]. However, perplexing as these issues may be, paralysis is not a solution. Climate change is characterised by a narrow window of opportunity to cut emissions and avoid widespread, irreversible climate impacts [21]. A longstanding and increasingly pressing question is, therefore, by what methods are scientists justified in drawing attention to climate change?

Climate scientists raising the alarm

Climate scientists have long bridged the divide between science and advocacy. Perhaps most famously illustrated by the 1988 Congressional hearing of then NASA Director, James Hansen, in which he stated: "it is time to stop waffling" [22]. Yet, he faced dissent from fellow scientists at the time. While agreeing with his message and

appreciating the attention it drew to the issue, they spurned Hansen's "unscientific method" of communicating evidence, which "fails to hedge his conclusions with the appropriate qualifiers that reflect the imprecise science of climate modelling" [23]. Although the bar has shifted from speeches in congress to the relative merits of civil disobedience, the complaint is still levelled at climate scientists today.

This concern, closest to Pielke's 'Honest Broker', holds that the central tenet of trust in scientific authority should not risk being jeopardised through perceived bias or unqualified statements, even if it is effective in shaping climate policy. A growing body of empirical evidence suggests a somewhat more nuanced picture. Climate scientist advocacy is not only effective [11], it can actually increase the credibility of scientists [24], especially when the opinion being advocated is shared by the majority of the public [25,26]. By engaging in acts of protest, scientists seem to help break negative stereotypes of protestors which can enhance acceptability of activism amongst the general public [27], and may strengthen the wider social movement for timely and effective climate action [28,29]. This emerging research refutes the view that scientific advocacy inevitably involves an effectiveness/credibility trade-off [30].

A growing number of climate scientists are questioning whether the traditional scientific approach (i.e. generating evidence which informs policy) can seriously contribute to addressing the climate challenge at all. In a widely read article published in 2021, "The Tragedy of Climate Change Science" [31], International Panel on Climate Change (IPCC) lead author Bruce Glavovic, and colleagues, argued that scientists have been misled, "gaslighted" into thinking the political failure to act on climate change is a scientific failure to generate the right evidence. Climate science has reached a dead end, they argue, "the science-society contract is irrevocably broken" and a "moratorium" on climate research is needed "until governments are willing to fulfil their responsibilities in good faith". For a growing number of climate scientists, the currency of academic success can no longer be publications, but action; real, tangible evidence that the policy landscape is shifting fast enough to avoid catastrophic climate change.

Today, thousands of climate scientists are engaging in direct action, facing arrest, potential jail time and a criminal record [32]. The younger generation of climate scientists are increasingly, and deliberately, visible in their climate advocacy. Writing in *Science* about her combination of climate research and activism, Leehi Yona states that "caring about justice doesn't undermine my ability to conduct rigorous research or cloud my conclusions.", going on to commend junior colleagues who rather than "tiptoe around the edges of wicked problems, step right into the fire" [33]. The loss of trust in science will not stem from us taking to the streets, this argument goes, but from the failure to avert catastrophe.

Health advocacy

It is now clear that climate change presents a major challenge to health and health systems, described by WHO as the "the single biggest health threat facing humanity" [34]. A movement for climate action is now well underway in the health sector, as reflected in the growth of national and international climate and health organisations and special interest groups within professional organisations. These grassroots networks of educated and organised climate-health advocates are speaking out in the media, contacting legislators and lobbying for pro-climate policies, emboldened by the knowledge that the health arguments for climate action resonate with policy makers and the wider public alike [35–37]. From the local level to the global policy arena, there are many ways health professionals can take action [38,39] while elevating the voices of non-expert citizens and community groups often sidelined from these debates [40].

In keeping with the long tradition of medical activism [41], some healthcare professionals are also engaging in non-violent direct-action (or civil disobedience), with the support of prominent voices

in the field [42,43]; donning scrubs emblazoned "Doctor" and stethoscopes while staging 'die-ins'³ in city centres and 'glue-ons'⁴ at the banks funding new fossil fuel projects, making the professional identity integral to the protest movement itself. Direct action, has long been considered risky for professional standing and career progression [44] and critics continue to question whether the infusion of medicine and climate activism undermines professional credibility and threatens the sacred trust between society and the medical profession [45–47]. By contrast, for the activist group *Doctors for Extinction Rebellion*, non-violent civil disobedience is not only squarely within the duties set out by the UK's General Medical Council [48], it is "an evidence based, public health intervention that works" [49]. This claim is supported by the IPCC which states with 'high confidence' that social movements, of which direct action is a part, have played an important role in influencing more ambitious climate policy [11]. In practice there is a catch: since civil disobedience, by design, often disrupts people's lives, there is a perceived risk that this can undermine popular support – a bind Feinberg et al. term "the activist's dilemma" [50]. This tension between awareness raising and building an inclusive, popular mass movement is one reason *Extinction Rebellion*, an organisation previously renowned for non-violent public disruption, announced a temporary shift in tactics in 2023, prioritising "relationships over roadblocks" [51].

As trusted voices in communities across the globe, the health sector has an influential role in forging such relationships for stronger, more inclusive and equitable climate action [52]. Given health professionals often express concern about climate change and recognise their role in bringing attention to the health impacts, a broader question is why more don't more get involved? A global study exploring the views of almost 5000 healthcare professionals found the primary barriers were time constraints (54%) and a lack of knowledge (41%) [53]. Other reasons included believing it would make no difference (31%), little support from peers (22%) and feeling the topic is too controversial (16%). Interestingly, only a small minority mentioned the perceived personal or professional risk (14%). This mirrors the findings of the wider communication research which indicates scientific researchers are more concerned with whether their advocacy will work than what their colleagues will think [54].

Clinician scientists drawn towards climate change and health research are often driven by concerns about climate change and global justice. Strong personal interests are, at times, recognised to be valuable for medical researchers – such as by allowing insights informed by personal experience, or facilitating trusting engagement with otherwise difficult to access groups. However, they are then also more open to the critique of being closed-minded when interpreting the results or disclosing interests. While the worry of being branded untrustworthy may be enough to make some researchers avoid any form of activism at all costs, what about the others that do? What about those who hold a deep conviction that something is wrong – that climate change is a truly exceptional, civilisational threat and traditional academia is too slow for the rapid societal transformation this demands? That the online petitions aren't working; the political process is more interested in mid-terms than mid-century; that we are sleep walking into disaster and the only option left is to 'disobey'?

Navigating tensions

For Weber, scientific objectivity is not about a "statesman-like" balancing of various evaluations, settling for the middle ground – that is for the political apparatus; the role of the scientist is to present the extreme positions with clarity on the relevant facts [55]. Scientists have, in the form of the IPCC, a common reference point on the

³ A form of protest in which protestors lie on the ground simulating being dead.

⁴ Whereby a protestor superglues part of their body to an object in order to cause disruption.

current scientific knowledge, albeit at a challenging science-policy interface [56]. The question is no longer if climate change is happening, or if it is a threat to health, but how to compensate those who are harmed, the appropriate balance between costs and benefits, and the political priority of effective action.

One option open to researchers is to hold resolutely to presenting what is known: the world has already experienced 1.2 °C of warming above pre-industrial temperatures; to have even a 50% chance to staying within the Paris Agreement global emissions must reach net zero by 2050; a failure to act will have widespread human and societal consequences, worsening with each fraction of a degree of warming; and further research will refine projections of the magnitude, location, and time when these impacts will occur. Another extreme is to engage in the policy process more fully and, in the vein of Glavovic et al., lobby governments to “fulfil their responsibilities in good faith” [31].

With the health argument for climate action finding its place on the international stage, we as climate and health researchers are increasingly faced with the same tensions which climate scientists have been navigating for decades. We must recognise that as researchers we operate within a set of constraints, borne out of employment requirements and professional obligations, which are distinct from our wider civic responsibilities. It is here, as researchers, where Weber’s analysis remains most poignant. The type of research questions we ask (a), how we answer them (b), which theories we accept (c) and how we disseminate our work (d) are both fundamental to the research process and inherently embedded in our social, cultural and political context.

Ultimately, researchers operate within the maelstrom of social values – not apart from it. Science has always been political and medicine no less so. As Mary Bassett, former Health Commissioner of New York, wrote in *Nature* at the height of the COVID-19 pandemic, “when we decide that issues such as structural racism, climate change or income inequality are ‘outside our lane’, we betray both the professional reputation of our field and the health of the people we serve.” [57]. Scientist advocacy should be undertaken with care. It is up to each of us to find our place at the science-policy interface; however, refraining from engaging in the policy process is not a neutral act. Greater reflexivity and transparency on the normative assumptions underpinning our work will increase our public accountability and help navigate the tensions we face [2].

Conclusion

I began this article by considering the relationship between science and advocacy in climate and health research, drawing upon my own experience as a PhD candidate. High-quality research will remain vital to informing good climate policy; however, it will not necessarily lead to action at the pace required to stay within international climate agreements and protect human health. As researchers, we must decide how to respond. To gather more evidence; to engage policy makers; to take to the streets? While the fear of jeopardising public trust is a valid concern, inaction can also lead to a lack of trust. In this decisive decade for climate action, ‘staying in our lane’ is not a neutral act, it must be justified. Despite his clear stance against ‘stealth issue advocacy’, Pielke [7] recognised the huge societal value of engagement between science and policy, stating: “if scientists ever had the choice to remain above the fray, they no longer have this luxury”. This work started with a simple question: ‘are you a researcher or an activist?’. It ends with another: must I choose?

Declaration of Competing Interest

The author declares that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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