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"Beyond being analysts of doom": scientists on the frontlines of climate action

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What happens when scientists become activists? In this paper, we discuss the principles, commitments and experiences of Scientist Rebellion (SR), a movement of scientists, academics, and researchers committed to activism, advocacy and non-violent civil disobedience against the (in)actions of governments, corporations and other institutions, including academic ones. In sharing experiences from the frontlines of direct actions with SR along with the perspectives from individual scientists, coming from a variety of geographical locations, and a range of academic levels and disciplines, we reflect on the need to transgress the boundaries of a system of knowledge production and education that is effectively reproducing the very structures that have led us into climate and ecological crises. This article provides a reflective and critical engagement with Scientist Rebellion, drawing on a range of interviews with activists, as well as material from and about Scientist Rebellion. We conclude with a reflection on the relation between scientists and their institutions, as well as a mobilizing plea to the scientific community to take action.

KEYWORDS

activism, advocacy, transformative change, civil disobedience, climate change, ecological crisis

Introduction

Scientist Rebellion (SR) is a movement of scientists, academics, and researchers committed to activism and advocacy, spanning from non-disruptive forms of activism all the way to non-violent civil disobedience. SR is one of the many grassroots organizations that developed as a response to the global inactivity of governments despite our scientific understanding of the severity of the climate and ecological crises. While the world's governments are well-aware of the issues, measures to halt practices contributing to climate change and biodiversity loss have been inadequate. Political institutions are still entangled in endless debates around the topic. Rather than focusing on strategies to prevent or mitigate the ongoing and impending changes to our climate, political actors more often than not prioritize economic interests. This politicization has largely led to gridlock, with hard-to-pass legislation, while business as usual continues to push us beyond our planetary boundaries (Rockström et al., 2009; Steffen et al., 2018; Persson et al., 2022).

The crisis has led scientists to take up a more frontline role in making the public and governments aware of how inaction could lead to a "ghastly future" (Bradshaw et al., 2021) for our planet and human societies. Scientists across disciplines have joined forces in this endeavor, using a combined collective understanding of social behaviors, ecological principles, health impacts, and even economic solutions to make the public aware while also remaining inclusive to all (Gardner et al., 2021; Capstick et al., 2022).

In this Perspective article for the *Activating Academia for an Era of Colliding Crises* collection, we provide views from the frontline of transformative change among scientists, through interview material as well as documentation of past actions and activities from all around the world. SR has held multiple non-violent actions across the globe. Many actions taken by scientists are largely intended to raise awareness among the public, as targeted disruptions against a specific field, or to give a largely underrepresented group means to amplify their message. SR and its members use practices championed by other movements and improve upon them in order to get government entities to take concrete, decisive and radical action against the effects of climate change and ecological destruction.

Academic activism and direct action—Structures, principles, practices

Scientist Rebellion follows the framework, principles and values of Extinction Rebellion.[1] First and foremost, SR enables action. SR principles include the right to (non-violent) action and horizontal organization. The "right to act" enables action by encouraging any form of non-violent protest aimed at making the public aware of political inaction against climate failure. SR actions support the demands and the methods of other grassroots non-violent climate movements (*Last Generation*, *Debt For Climate*, *Extinction Rebellion*, and *Fridays For Future* among them); numerous collaborations with such groups are currently active. It is important to underline that SR does not see its role as a vanguard in this collective push for change; rather SR acts as an organic part of the rich landscape of climate activism.

The term horizontal organization refers to the global group operating in a self-organized manner, with no hierarchy or leadership. Although members are predominantly academics, researchers and scientists with academic titles, SR does not emulate academic hierarchies. SR members assemble in different formations to discuss and plan different activities, spanning from public petitions,[2] teach-ins (Videnskab, 2021), strikes (Under Dusken, 2022) to direct, non-violent civil disobedience (Thompson, 2021). Importantly, there are no predefined ways of performing these: all activities stem from the ideas and interests of the people organizing them.

FIGURE 1
Scientist Rebellion activists disrupting the World Health Summit in Berlin, Germany, 16 October 2022.

SR began its activity in September 2020, when two activists targeted the UK's Royal Society with a paint-throwing and paper-pasting action (the activists have recently gone to trial and have been acquitted [see e.g., (Pressenza, 2023)]. Through other actions the group has quickly grown, and less than a year later, over 100 scientists from 15 countries joined the first global action with educational disobedience projects, paper pasting and hunger strikes.[3]

In summer 2021 SR leaked the IPCC WG3 report (Hartz, 2022).[4] The watering down of the report by policymakers before the final publication led to the second global rebellion in April 2022 (El Salto, 2022; Euronews, 2022; Scientific American, 2022). The series of global actions from November 2021 (linked to COP26), April 2022 and October 2022 represent the largest mass arrest of scientists in recent history (Thompson, 2021; Democracy Now!, 2022; DW, 2022; El Tiempo, 2022; Infobae, 2022; The Guardian, 2022; see Figure 1 for an image from a SR action). Currently, SR has active members in around 30 countries.

Perspectives and reflections

What happens when scientists step out of the lane of conventions, norms, and institutional expectations and pressures, to join a growing number of researchers, scientists, academics and citizens in direct action?

For this article, we conducted a number of exploratory, semi-structured interviews with activists in Scientist Rebellion. Our sampling was necessarily small ($n = 8$), given the scope of this piece, but purposive in covering scientists in different countries (e.g., Italy, Germany, Uganda, Sweden, Tanzania), different roles (high-risk/frontline, back office), different levels of academic seniority (full professor, post-doc, doctoral student) and different positioning

1 Extinction Rebellion Principles. Available online at: https://rebellion.global/about-us/ (accessed April 6, 2022).

2 Scientist Rebellion Positions and Demands. Available online at: https://scientistrebellion.com/our-positions-and-demands/.

3 Scientist Rebellion Past Actions. Available online at: https://scientistrebellion.com/past-actions/.

4 Scientist Rebellion IPCC Report Leak. Available online at: https://scientistrebellion.com/we-leaked-the-upcoming-ipcc-report/.

(e.g., full-time university employee, full-time activist). The list of respondents, as well as the questions, are available upon request. The interviews were transcribed and then processed with an open thematic coding approach. To protect respondents' privacy, their names have been changed to common names in their respective contexts. In addition, we included reflections from the group of authors, all activists themselves. We recognize the possible bias this positioning might bring, but insist on the value added of demystifying academic activism by sharing these perspectives.

These interviews shed light on the concrete, embodied practices, experiences, and contradictions of academic activism, giving voice to people who have engaged in them. While these are of course idiosyncratic for each respondent, a range of core themes emerged throughout the interviews. In the following, we cluster these along the broader lines of *becoming*, *belonging*, and *boundaries*; that is motivation and pathway to becoming part of SR, reflections on roles and practices in it, as well as external/internal boundaries and contradictions of academic activism highlighted in the interviews.

Becoming academic activists

Many scientists have expressed a shared sense of urgency as one of the initial motivations to join SR. As Marco puts it, "I was desperate to find something in which I could contribute". While the drivers and barriers to academic activism are multi-layered, a deep-seated frustration with the roles of scientists in the climate and ecological emergency propels individuals to action. Hannah explains: "I was seeing all these other academics saying, yes, they are supporting Fridays for Future and they will provide data and analysis and, you know, science communication as usual. [..] But I don't want to be just a data analyst of the Doom". Marie shares a similar feeling: "I published papers on sustainability in the health care sector and on record with health, but I think the awareness of the public is higher since I did some civil disobedience actions". While several respondents had been participating in or at least been in contact with Extinction Rebellion before, there are also people who have never been active in any social movement prior to SR. Often, establishing contact with others in SR has come about through actions or personal connections. Overall, there is still a certain threshold of reaching out to activists, even just to get more information. To facilitate contact, Scientist Rebellion is holding online induction meetings and personal meetings for interested people in some contexts. For several respondents, from the moment they joined meetings, that first action opened up an important process of going beyond the "isolation," "frustration," and "despair" many had increasingly felt in their respective academic environment. Engaging with the predominantly horizontal practices and dynamics of an activist group that connects across disciplines, countries and academic hierarchies can initially be a confounding or even challenging experience, in particular as scientists are increasingly socialized and disciplined into atomized, competitive social and academic practices. Importantly, the term "activist" here is one of self-identification, rather than external recognition or stigmatization. For Scientist Rebellion, the question of how academic subjectivity is constituted is also predominantly resolved on the basis of self-identification, although for some actions or initiatives there is a deliberate mobilization of "professional" academics.

Belonging and participating

Academic activism unfolds on a spectrum of roles, practices and commitments. Our respondents take very different positions within this spectrum. Highlighting these multiple roles within Scientist Rebellion is crucial for discussing academic activism, as most media, and also most observers within academia, tend to focus exclusively on the frontline activists and high-risk, arrestable actions. This is perhaps inevitable, given the civil disobedience commitment at the core of SR. As Marco puts it, "it's not enough that we put our papers, our articles on the way of the climate breakdown. We also need to put our bodies in the way". At the same time, not all bodies can be on the streets, and not all scientists can be on the frontline. Acknowledging the range of roles, contributions and responsibilities is an important process for participating in organized academic activism. Distinctions such as back and front office, and low and high risk actions help clarify levels of involvement. For academic activists like Leon, who says "I basically take part in actions, but I'm not an organizer", others take on tasks to facilitate these actions, including care and regenerative practices within the movement itself. Writing and disseminating statements, letters, and press releases in support of actions; maintaining communication channels; social media work; giving interviews or talks; developing visual material; managing financial structures; these are all essential tasks that people in Scientist Rebellion take on, more often than not on top of their scientific/academic employment. Lina's summary of her roles is a university's wishlist of upskilling for academic impact: "So I did social media work. I did press work. I wrote press releases, I did interviews, I planned actions, I executed actions. I set up different teams. I hosted a gazillion meetings. I wrote letters. I gave talks. I prepared talks. I developed talks, communications, you know, stuff like this". There are people who decide to reduce their scientific work time e.g., during actions, and there are several SR activists who have decided to significantly reduce, or altogether leave their paid employment to concentrate on activism, with the possibility to receive volunteer living expenses. It cannot be overstated though that most people in Scientist Rebellion indeed do their activism next to and also often intertwined with their own research. Activism does not *replace* research—if anything, it enhances it with a stubbornly realistic reflection on what science and knowledge production can mean.

The collective sense of community, organization and actions is a vital part of organized academic activism. Amaya states this very clearly, highlighting the "feeling that there are people really willing to do a lot for the cause and that we can actually pull things off, even with difficulties and even if we were fewer than we initially wanted to be and all that. I think that was a very positive experience for me and that gave me a feeling of *yes we can do things*". This sense of belonging with a group, as well as agency beyond academic/scientific conventions is repeatedly echoed by the activists, regardless of context and beyond one's immediate positioning. For Aadila, scientist and activist from an African context, "the most important part to me as a scientist, rebellious activist, was [..] the whole support that I was getting from the global

team, you know, you feel like, yes, I got this and I have people behind me". Leon, full professor in a European context, reinforces her statement: "You meet the best people out there in Scientist Rebellion. They are the best people that we have. And it's great to collaborate with them, to meet them, to do things with them. This is really extremely rewarding".

Activism is more often than not the consequence of an intensive reflection process on the structures and institutions of knowledge production. The pathologies of the modern, "hopeless" (Hall, 2020) university are well-known, in particular to early career scholars faced with precarity, competitiveness and a shrinking job market. The processes of individualization that are endemic to neoliberal academic institutions are openly questioned in SR activism which is instead based on what anthropologist Graeber (2014) calls "prefigurative politics". Like other activists and movements in a horizontal tradition, SR activists "strive to create social relations and decision-making processes that at least approximate those that might exist in the kind of society we would like to bring about" (2014, p. 85). In openly refusing certain institutional norms, SR activists take a variety of different roles: from participating in actions to pushing for sustainable practices within their institutions and using SR platforms to question scientific financing structures.

With their activism, members of SR explore different ways of pushing academia beyond its current harmful limits. There are many ongoing conversations with different positions on institutions and systems of knowledge production (see e.g., Oreskes, 2019; Maxwell, 2021; Urai and Kelly, 2023). SR also mobilizes academic repertoires for actions; Racimo et al. (2022) here offer a helpful overview with examples of practices embracing advocacy and activism in academia. In particular teach-ins have been important tools for outreach (for example see e.g., Videnskab, 2021).[5] Ultimately, academic activists reject the assumed binaries between systems and tools of knowledge production and education, and the social and economic power relations on which they are based. As Lina highlights: "[it is] frustrating that we should be leading the way as academics or as universities, and we are not doing that, I mean we are going in the other direction in many ways, collaborating with companies that are destroying the planet basically like big oil companies or mining companies or weapon industry, it is just crazy". Through active defiance of institutional, neoliberalized structures and practices, SR members seek to build alternative ways of shaping the scientific community, ways which build upon solidarity and horizontal structures.

Boundaries

With all the headlines created by Scientist Rebellion, with all the successful acts of challenging norms about the roles of scientists, the most obvious boundary to be transgressed by academic activists in Scientist Rebellion might well be considered civil disobedience and concomitant legal, professional and political consequences.

And yet it is rather fundamental to acknowledge that for the people who decide to engage in activism, one of the main boundaries is the trade-off between having time for their scientific work, and the time required for activism. As Leon puts it: "the biggest obstacle and frustration for me is that activism eats up so much time". Even before considering other consequences, it seems many scientists simply struggle to find time for activism. A question of prioritizing, one might think—and given the climate and ecological emergency destroying livelihoods and lives, these priorities might need to be reevaluated. At the same time, just as not everybody can take to the streets, not every scientist can afford to spend precious time and emotional/psychological resources on activism. In SR we acknowledge the boundaries that each person carries, and the different levels of risk individuals can bear. In keeping with the theme for this research topic section, we highlight the need for inclusion in SR practices. For actions, this e.g., means reflecting on risks, intended and unintended, and which consequences they can have for different individuals. Scientist Rebellion seeks to indeed *activate academia;* at the same time, we need to recognize *colliding crises* also in the different ways in which people can contribute, and the intersecting power relations in which they act. Centring equity is a fundamental principle for the movement.

There is a very real risk of backlash against academic activists from their institution and/or academic community. Not that this inevitably takes place; many of our respondents also received support from colleagues, albeit mostly unofficially. But as, e.g., the case of Rose Abramoff (New York Times, 2023), who was fired from her position as a researcher at a public laboratory due to an action where she unfurled a banner at an academic conference in an act of disobedience, shows, academic activists face the possibility of significant consequences to their careers, their reputation, and their legal and personal situation. For Marco, for instance, this meant that "the director of my institute decided to do all of what they could to prevent me from taking civil action, civil disobedience". Navigating this choice between rewarding, meaningful engagement in activism, and backlash in different forms is a recurrent theme in discussions with academic activists.

Managing group dynamics as well as the fluidity and openness of horizontal organizing constitutes another boundary, if not contradiction of academic activism, in particular in a cross-cutting, multi-layered group such as Scientist Rebellion. More often than not, scientists are not socialized into solidaristic, communal practices. Like in all social movements, dynamics and power relations have to be reconciled with one's sense of agency, belonging and personal interests—in particular for people who have internalized personal narratives of excellence and individual intellectual merit. Aadila here highlights "the lack of unity among scientists because everybody wants to be seen as them above the other person". Scientific disagreements, strategic differences, personal dislikes and communicative misunderstandings exist among academic activist groups, and managing them while under intensive pressure for time and resources can be challenging.

The fluctuation of activist engagement among scientists and researchers can be understood against this background. In particular for Scientist Rebellion, with a strong outward focus on civil disobedience, activist retention and activist burnout are challenges. Despite the enormously successful mobilization since its establishment, whether outreach to and recruitment of more scientists can be sustained remains to be seen. As Marco suggests,

5 Bard College 2023 teach-in website (2023). Available online at: https://gps.bard.edu/world-wide-teach-in-2023?utm_campaign=World-Wide-Teach-In&utm_source=Custom-URL.

FIGURE 2
Scientist Rebellion activists in a demonstration on the streets of Dar es Salaam, Tanzania, 23 October 2022.

"We need to change the way we approach academics. We must be much more open to academics joining as they are without doing any civil disobedience". The question of strategy and tactics, in the short and medium term but also with a long-term perspective, looms large for academic activists, just as it does for any social group engaging in direct action.

Moreover, for a global and horizontal movement, Scientist Rebellion is navigating power relations that risk reproducing the inequalities in access, funding and safety between activists in the Global South and Global North. As Afiya points out with regard to actions taking place, e.g., in the relative political safety of Europe, "Scientists should not do it from where they are. Let them go down and really visit those affected regions" (see e.g. Figure 2). Reflecting on one's own privilege and positioning within global systems of knowledge production could be considered challenging by some. For academic activists in MAPA communities, the pathways to and consequences of activism are very differently constituted.

Concluding reflections

One of the fundamental contradictions of contemporary systems of knowledge production in academia is that those people who possess privileged access to cutting-edge science on the ecological, climate and social consequences of anthropogenic practices are expected to remain bound by those same norms and institutions that have not been able to make any decisive interventions in the global ecological crisis. In this article, we have offered perspectives and background on a group of academics, *Scientist Rebellion*, who seek to break with this essentially tragic situation. Using SR as a focal group, we have explored how academic activists reflect on their own uncomfortable position within institutions that are more preoccupied with maintaining the status quo than acting on the basis of the mounting scientific evidence. We have also traced their progression to activism, their struggles and what sense of belonging activism has brought them.

As the climate crisis unfolds, we expect and hope to see more and more scientists joining the ranks of activism, embracing its whole spectrum. We also hope that more and more academics will come to see the division between activism and research as ultimately untenable. While we focus on actions that will produce more immediate results given the urgency of the situation, we also recognize the need to transform our institutions of knowledge to better advocate for such action. Both emerge from hope, curiosity and passion for the world we inhabit. The same world that, as philosopher Merleau-Ponty wrote (Merleau-Ponty, 1962), "is the homeland of our thoughts," and the source of all our wondrous science, now needs every single one of us.

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The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

Written informed consent was obtained from the individual(s) for the publication of any identifiable images or data included in this article.

Author contributions

All authors receive equal credits for the article. We have worked on this text collectively in our shared sense of urgency in the climate and ecological emergency.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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