1. Crossed Perspectives

Can universities learn to leave behind air travel?

Between Tamara Ben Ari (Researcher)
And Parke Wilde (Researcher)

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At a time when global research is showing that aviation is a carbon-intensive form of transport whose growth absolutely must be stopped, shouldn't universities be the first to set an example? But can researchers, especially the youngest ones, do without these trips for their careers? How can researchers continue to work together and what criteria should govern their behaviour?

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01. Your respective associations are looking at ecological transition initiatives in academic and scientific circles. Why is it so important for universities to do their bit? What are researchers themselves doing, or could do, to reduce their emissions?

Tamara Ben Ari

The idea that staff and institutions need to engage in climate change mitigation is fairly new in the French research landscape. A number of ideas are associated with it and, although leading by example is sometimes cited, I prefer the notion of coherence. Research itself produces a body of knowledge and trains younger generations to live in a world that, ideally, would be more considerate of resources. It is also important to seriously discuss the logic of reducing greenhouse gas emissions (GHG) and what this implies in terms of collective choices and decisions: who makes those decisions, and how? One of the first tasks of the Labo 1point5 project was to build a tool for estimating GHG emissions for research units in France. This was published in 2022 and is currently being expanded, particularly in Europe and the United States, and it is supported by a national database covering as wide a range of scientific disciplines as possible. Currently, more than 900 research units (around 1 in 2 in France) use the GES 1point5 tool. Contrary to expections, purchasing is the most significant factor in units' GHG balances . Business travel comes next (around 20-25% according to our estimates), almost exclusively due to air transport emissions (96%), particularly long-haul journeys (64% of emissions are linked to 10% of intercontinental journeys), for which there is currently no low-carbon alternative. The premise put forward by Labos 1point5, and which I believe has been widely adopted by institutions, is that any options for reducing emissions should be discussed and voted on within research groups, by the staff, who understand their own scientific constraints and objectives, and not in a centralised manner. Some units, for example, have introduced charters or individual tracking. Others have opted for individual or collective carbon quotas. We are currently establishing a complete overview of this through a platform for exchanging and collecting data on the transition of research units (‘Labs in transition’ platform).

P. W

A strength of the Labos 1point5 initiative, as Tamara explains, is its attention to how research and educational institutions can make decisions that lead to ethical and climate-friendly institutional transformation. First, this involves collecting data on research institutions and their emissions. Second, this involves using these data for real decision-making with sufficient attention to the views of diverse stakeholders and the differences in goals and constraints for different research institutions. In both of our contributions to this dialogue, Tamara and I have shared resources that provide examples that have been implemented elsewhere, suggesting a wealth of options that particular institutions may tailor to their distinctive needs.

Parke Wilde

We have a terrific opportunity for universities to demonstrate a key missing piece of the vigorous climate action that the world so desperately needs: the courage to transform industries not just when the change is costless, but also when the change involves some reasonable costs or tradeoffs. University-based researchers often find themselves advising audiences to show more ambition in facing these costs and tradeoffs. For example, experts in urban design find themselves encouraging municipalities to invest scarce dollars in expensive rail transportation projects. Experts in climate diplomacy find themselves encouraging China and India to forego coal in favor of greener energy sources. How can academic communities recommend such changes to other audiences if we are unwilling to transform our own sector? The international #flyingless initiative (flyingless.org) is a loose network of academics that for almost 10 years has been petitioning universities to take four steps: (1) to include all university-related flying in their environmental impact measurement; (2) to support virtual conferencing and low-carbon forms of transport for faculty, staff, and students; (3) to set ambitious goals for emissions reductions in line with the cuts suggested by climate science; and (4) to use their influence with professional associations and funders to reduce flying and promote alternatives to flying. Our petition has 2000 supporters and we serve as a communications hub for more specific low-carbon conferencing initiatives in diverse fields of study. Within academia, a FlyingLess initiative in Germany provides a toolbox for university actions (flyingless.de). A crowdsourced resource guide led by Ryan Katz-Rosene and colleagues provides dozens of articles, tools, statements, and evidence summaries (link). These academic initiatives are related to allied efforts around the world. Focusing more on individuals, the FlightFree movement organizes people around pledges to not fly for a particular time period (flightfree.org). Dozens of community efforts work to limit the local noise and pollution harms from airports (for example, schipholwatch.nl). The Stay Grounded movement connects more than 200 participating organizations (stay-grounded.org).

T. B

C’est en effet une formidable occasion ! D’autant plus que les universités sont des lieux de création de savoir sur la crise climatique, ainsi que sur les coûts et les dangers de l’inaction. Malheureusement, l’observation des politiques institutionnelles en la matière sont décevantes. En se concentrant sur la sensibilisation ou les « éco-gestes », celles-ci témoignent d’une très grande frilosité. Ce constat est également valable lorsqu'on examine les comportements des scientifiques eux-mêmes, dont une majorité considère encore la décarbonation de leurs pratiques comme un risque, notamment pour leur productivité scientifique. Alors, comment pouvons-nous transformer le monde académique en un laboratoire de transition ?

02. Is it possible to change an entire system’s relationship to mobility and time, especially when it is based on strong productivity imperatives that are part of an accelerating world, as highlighted by Harmut Rosa?

Tamara Ben Ari

The mobility of research personnel is highly heterogeneous! Around 10-15% of researchers take 50-60% of flights. The reasons for travel are varied (data gathering , teaching, conferences, administration, examinations etc.). However, the scientific literature suggests that the reasons for traveling are also related to the symbolic or actual rewards that come with it (visibility, citations, funding, positions, etc.). In a recent study, for example, we showed that there is a robust correlation between the number of flights taken and the number of publications or the H-index, an indicator of productivity and scientific impact, and that this correlation holds even when adjusted for age,

academic discipline or gender. Current evaluation requirements are embedded in a form of scientific productivism that facilitates or even encourages the intensive use of resources - for example, having to produce lists of international conferences for individual or collective evaluations. This is a relatively recent phenomenon, and the acceleration you mention can be clearly seen in the increasing number of conferences, journals and publications. And there are many issues associated with this, particularly in terms of integrity. My experience, after four years working on this subject, is that discussions on reducing our footprint, or our use of resources, are inextricable from a wider debate on the prescriptions of higher education and research in terms of evaluation and funding. If we are to rediscover some meaning and become part of a broader movement to transform society, we need to seriously question the social role of research,,as is the case in other public services, so that we can focus on the essentials... provided we can agree on what they are.

P. W

It is wise, as Tamara indicates, to design climate-friendly institutional changes in a way that still meets the research goals and career needs of researchers at the front line. Institutional policies for evaluating research productivity for hiring and promotion decisions can focus on true measures of accomplishment instead of superficial prestige metrics. When considering alternatives to traditional fly-in presentations, researchers should focus not on the options they like least, but on selecting the options that meet their needs and circumstances best. Some researchers may increase their research and writing time instead of traveling for work. Some may maintain friendships and collaborations remotely between in-person events. Some may replace duplicate travel occasions by staying for a longer time on a single trip. Some may recommend a graduate student or junior colleague to give a presentation in their place. Some may plan to work harder on the train or bus while traveling to conferences. Once we start to experiment with the possibilities, the ethical climate action agenda becomes more appealing and realistic for serious researchers and scholars.

Parke Wilde

The great news is that universities can sharply reduce their aviation emissions while still preserving the good we do in the world and the joys of academic life. If climate-friendly university transformation really required sacrificing the contributions universities make to science and the public good, we truly would face a bitter dilemma, but fortunately this is not the case. When I do public speaking about our #flyingless initiative, I often get challenged with a comment that focuses on particular flights the questioner found most valuable: for example, to apply for a career-defining new job, to reach a research site that offers groundbreaking contributions to climate science, or to visit much-missed family scattered by the world’s violence and injustice. Let me assure you, these most valuable flights are not the focus of our initiative. After delivering this reassurance, I often ask the questioner about their other flights: the cross-continental flights to deliver the fourth talk on a panel of speakers in a 60-minute session, where the first three speakers ran over their allotted time. My academic colleagues delight in recounting such experiences, which are widespread. I ask audience members to imagine a horizontal line with a ranking of all their air travel ranked from lowest to highest value per unit of greenhouse gas emissions. Starting with the lowest, what number of flights can we reduce without harming our core goals and accomplishments? Many friends and colleagues respond that they could sacrifice half of their flying without losing what is most essential. Almost 10 years ago, as my awareness of this issue rose, I undertook an experiment to give up unnecessary flying, with the stipulation that the definition of “necessary” should be frank and self-reflective. For example, if a flight were required for keeping my job, or would be my only chance to see my aging parents, I would do it, but modest sacrifices at the margin to professional visibility or

convenience would be tolerated. I was shocked to find that none of my flying was necessary. I haven’t flown since. I know that zero flying is not the right number for everybody, but I still hope this experiment provides useful information for others. Along the way, I have been taught many helpful lessons about a greener approach to academic life. I report these experiences in a lightly satirical academic travel and tourism show called Lifestyles of the NOT Jet Set (link) and in an interactive travel map feature for my university’s online publication TuftsNow (link).

T. B

When I found this initiative, it made me remember Parke's positivity! It takes me back to our first video call in early 2019 (when videoconferencing was still a bit of an novelty), in Parke's virtual room. He asked me about my side of the story, because he liked to find ‘a sense of place’ in these virtual communications. His infectious enthusiasm helps convince people that it is possible to do things differently. But what should you do when this different way of doing things might impact your job prospects or research funding in a highly competitive international scientific field? What do you say to young scientists (who have long wished to give up travelling) when they are struggling with the paradox of research that contributes to the destruction of the objects it studies? When they no longer see science as a means of guiding societies in these times of crisis?

03. Using digital technology rather than face-to-face interactions, to avoid carbon-intensive travel, is one possible solution, but it raises major issues. How can we avoid exacerbating a number of inequalities?

Tamara Ben Ari

Many of the researchers’ testimonies gathered in Labos 1point5 agree that research pushes them to make what they consider to be too many trips, that these trips are mainly made by senior male staff, mostly in the natural sciences, and that the younger generations don't really want to perpetuate this model. More and more studies are exploring the model of virtual conferences, to go beyond a simple substitution. The solution of "local hubs" is gaining considerable support, as it minimises impacts (by optimising travel and modal shift) while still allowing face-to-face contact that favours the exchange of ideas and the development of new collaborations. Furthermore, the effects of inequalities in access based on nationality, gender or disability, which have remained invisible for too long, can benefit from the widespread use of hybrid modes. However, there is a good chance that if the mechanisms that drive scientists to fly unreasonably frequently are not considered in depth, this practice will simply shift to other resources. Substitution cannot therefore be the way forward for transforming research. If we are to put research on a trajectory that is compatible with a balanced life on earth, something profound needs to be called into question. This includes competition between individuals, universities, organisations and countries, as well as links with industry and the relationship with technological innovation. Several current trends in science are challenging not only the modalities and objects of science, but also the way in which they fit in with other types of knowledge, such as sustainability science, for example. There are also currents that seek to connect questions relating to environmental research ethics to those relating to colonialism, gender inequalities or social inequalities. These are important avenues for building a sustainable form of research that can still be practised in the decades to come.

P. W

It is notable that Tamara’s and my contributions to this dialogue both reflect on the opportunity to make long-distance communication more personable. During the pandemic, as many conferences shifted to online formats, I worked with colleagues at the London School of Hygiene and Tropical Medicine as they redesigned their conference in Agriculture, Nutrition, and Health. Led by Joe Yates and Suneetha Kadiyala, we wrote up this case study for Lancet Planetary Health (Yates et al., 2021). With an eye to the important questions of justice in academic meeting, this annual conference always had been located in the Global South, including Ethiopia (2016), Nepal (2017), Ghana (2018), and India (2019), before it moved online in 2020. We measured each event’s aviation emissions on the one hand and desirable outcomes such as participation and participant satisfaction on the other hand. Our intended goal was to estimate the tradeoff as a ratio, for example, of participants lost per unit of greenhouse case emissions saved. We were surprised when our data showed no tradeoff at all. Participation soared in 2020 as aviation emissions plummeted, and participation satisfaction remained high. Of course, our case study had to recognize the very real losses in terms of casual conversation over coffee, for example, but it was striking that most of the aviation emissions always had been for travelers from high-income countries.

Parke Wilde

This is an important question. I never ever tell scholars who are in early career, located in the Global South, or struggling against the unfair gatekeeping of university life in the USA and Europe, not to take a flight that they have judged to be sufficiently valuable to justify the carbon emissions. I trust their judgement. I have far greater concerns for the much greater aviation emissions from more established academics. In the journal Nature Human Behavior, Sarabipour and colleagues (2021) studied 270 national and international academic conferences in-person before the pandemic. Far from effectively nurturing early career and underrepresented scholarship, they found these conferences often replicate the existing structure of privilege. I am particularly inspired by conference innovations that go beyond merely Zoom presentations and experiment with the human and social aspects of conferencing. For example, even before the pandemic, a leading conference series in the field of music and psychology switched to a format of linked in-person hubs, with special emphasis on justice and inclusivity, with sites in Argentina, Australia, the UK, and Europe (Parncutt et al., 2021). In a comparative quantitative analysis in Nature of low-carbon conferencing options, Klöwer and colleagues (2020) found this format to greatly reduce emissions. Overall, we can satisfy our human goals for interpersonal connection, and our thirst for justice and fairness, even while redesigning the role of aviation in academic life.

T. B

I share Parke's view that social innovations have succeeded in showing that it is possible to do without a very large number of international conferences. It seems to me that, while we can almost consider this question closed, others remain complex: how can we decarbonise the major research infrastructures (telescopes, particle accelerators, computing centres)? How and which activities should be reduced? Who can or should decide? Changing the field of academic research so that it is

compatible with climate and biosphere requirements is taking too long, given, as Parke pointed out, the costs and compromises involved. Does the ambition of scientists match the seriousness of the crises that they themselves have largely helped to make visible?

Associated Thematics :

Lifestyles

- Diversity of lifestyles
- Digital technologies
- Work

Policies

- Aviation

Tamara Ben Ari

Researcher

Tamara Ben Ari is a researcher at INRAE, where for nearly 10 years she conducted research into the stability of global agricultural production and the effect of climate change on it. She co-founded Labos 1point5 (www.labos1point5.org) in 2019 with astrophysicist Olivier Berné (CNRS) to estimate, understand and reduce the carbon footprint of research. She then went on to create the Labos 1point5 research group (GDR), which she led for two years with a multidisciplinary team, and which is actively contributing to the emergence of the environmental footprint of research as a field of research in its own right, and whose spin-off into other sectors of activity and abroad is booming.

Parke Wilde

Researcher

Parke Wilde is a Professor at the Friedman School and a leading authority on U.S. food policy and the economics of U.S. federal nutrition assistance programs (https://facultyprofiles.tufts.edu/parke-wilde).

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1 https://flyingless.de/en/

2 https://docs.google.com/document/d/e/2PACX-1vSLG573KG2YrLhpT8SBgTKNvrEUBtTCN_NBVtdEl8jqHK_vY6MhonM4DeiEoMoh18CdyyfNdxCfp6gp/pub
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