

The Travelling
Scientist's Itinerary

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Introduction

Flying is great for academia.¹ It is of importance for individual academics: to conduct research, to establish networks, and to pursue a career. You are not just a scientist – you are a travelling scientist.

Flying is of even greater importance for Earth’s atmosphere: for life forms, for weather patterns, for global warming. You are not just a scholar – you are a carbon-intensive scholar.

Flying is of greatest importance for telling this story about how academics took part in the beginning of a new epoch in Earth’s history. The plane you are boarding lifts off from the Holocene only to land somewhere else in the Anthropocene.²

The word Itinerary [I-tin-uh-ru-ri] stems from the Late Latin *itinerarium*, “account of a journey”. In the nineteenth century, it referred also to “sketches for a planned route”.³ Fellow traveller, the purpose of this itinerary is to provide you as scientist, scholar, and academic with some sketches for thinking, feeling, and conversing about the future routes of travelling. Our point of departure is to begin asking an increasingly pressing question, namely: *what does it mean to be a travelling scientist?*

Scholars are travellers

Academics have identified as travellers for hundreds of years. The western university model was a republic of letters powered by an army of moving feet. Young scholars travelled to gather data, disseminate results, and to use their physical presence to strengthen intellectual relationships. Travelling was time-consuming, arduous, and potentially dangerous.⁴

The advent of commercial aviation in the twentieth century changed the university as an international institution. Boosted by jet motors, the travelling scientist's pace hastened, reaching farther to be present briefer.

Booking and packing, get to the airport, check-in, baggage drop, wait in line, security control, boarding, lift-off and touch-down. The flight gate is now your gateway to an academic career. Like tooth brushing two times a day, you learn to govern yourself through certain procedures. We have always been travellers, but travelling has changed.

Travel log, Nov 3 2015, 09:12

“Turning down opportunities because of the carbon footprint impact is great - and is a very good way to get people thinking it all through. I declined all air travel for 12 months a few years ago and it was hugely insightful.”

“I cannot say I have made any unnecessary travels; they have all gone to relevant conferences and meetings. However, I do believe that there will be a lot of potentially unnecessary travelling for me in the future.”

Travel log, Dec 12 2015, 10:38

“I certainly do enjoy a good conference and meeting interesting colleagues, but I do not think work travelling lets you e.g. see much of new places. You usually tack back and forth between a conference center and a hotel.”

On Carbon Emissions

The Intergovernmental Panel on Climate Change (IPCC) estimated that no more than two tonnes of carbon dioxide (CO₂) per person per year should be emitted to keep below an increase in the world climate of two degrees Celsius.

Here is an example of carbon emissions based on the travelling of an academic institution oriented towards environmental concerns, the Division of History of Science, Technology, and Environment, based at the KTH Royal Institute of Technology in Stockholm. During the year 2013, a staff of 25 employees made 56 international flights, which is the equivalent to 2.2 international flights per person. If using the internationally accepted CO₂ calculator of the International Civil Aviation Organization (ICAO), the staff's trips generated approximately 25 tonnes of CO₂/equivalents, or 64 tonnes if including the Radiating Forcing Index of 2.5. The emissions translate to between one and two tonnes of CO₂ equivalent per person per year.⁵

KTH have begun to systematically study carbon emissions from academic travelling.⁶ The assessment so far suggest that staff at the Division of History of Science, Technology, and Environment is similar to that of other research environments. Travelling scientists who fly to and from KTH would have to refrain from most other emissions for the remainder of that year so as not to contribute to a warming climate.

Rationales and Dilemmas

Flying in academia is part of a carbon-intensive scholarship for which there are several rationales and dilemmas. Flying has instrumental value for living up to standards of an academic life. It is a symbol of prestige that someone is willing to pay for you to travel.⁷ While some travel more than others, all fly - from the PhD student to the professor. Academics move through an environment where reduced travelling is understood as reduced competitiveness on the job market. Forget publish or perish - you fly or die.⁸

The rationales for flying are not confined to the restless pursuit of a career. You may ask why on Earth are so many conferences arranged in Bali? And what you at present label as an important conference will turn out to be anything but important if confined to travel there in a Fiat Panda.⁹ You want to get away, look out another window and see new landscapes, away from commuting, employers, and family. What is important is not the conference presentation but the coffee break. Not the debate but the dinner. Not the topics but the tapas.

One should not ask if the rationale for a carbon-intensive scholarship is business or pleasure but find out how and in what ways it is essentially both.

Flying makes the travelling scientist complicit in a larger act of slow violence.¹⁰ While aware of an impending catastrophe, it is difficult to react to events that are unfolding in slow-motion.

The dilemma for the academic community is to rethink one of its oldest traditions: a travelling scientist as the moving feet in a republic of letters who with aviation became a carbon-intensive scholar. It is easy to point fingers, that academics critical of flying are hypocrites if they too fly. But hypocrisy could be used as common denominator, to serve as a shared point of departure.¹¹ An ordinary activity, like boarding a plane, is at the same time an opportunity to express grief, loss, and anger. It is by turning rationales for travelling into dilemmas that the travelling scientist as a carbon-intensive scholar can be understood as one of many endangered species in the Anthropocene.

The dilemma of carbon-intensive scholarship touch upon a narrative disagreement about who we are. The first narrative speaks about building Babel, to trust human inventiveness, to create smart technologies that shape the world's destiny. The second narrative warns against impending Apocalypse and mirror regret over irresponsible use of technology, for which restriction is the only remedy. The two narratives draw up two paths to either go further into a carbon-intensive economy or to cut back and prioritise among the emissions piling up.¹² If we are locked in a balance act between flight miles versus scholarly output, one could argue that academics should fly more, not less, since by flying we quickly disseminate knowledge to those who need it. Or one could stress our need to walk the talk and avoid flying.¹³ The narrative disagreement of carbon-intensive scholarship remind us that being a travelling scientist is about asking how travelling is part of our scholarship.

Travel log, Feb 18, 2016, 09:36

“In many countries, including Sweden now, internationalisation is a big topic and as part of this, universities try to attract international scholars. Part of what makes them international is their range of connections which (...) means they travel a lot.

(...) Hence, many people, including myself, travel internationally at weekends to commute home to their families and partners.”

“Lastly, although technology is often cited as making travel unnecessary, I have yet to experience a properly functioning online academic event, conducted internationally.”

Travel log, Feb 18 2016, 09:37

“I envy those of my friends and colleagues who carelessly travel by air just for fun. I too would like to go on a “girls weekend in Barcelona”. I too would like to spend February in Goa.”

“I have seen the world, it’s not that. But global warming has made my world smaller, and I would lie if I said that I don’t find it agonising.”

Survey

During 2016, the project conducted a survey on various aspects of academic travelling that required leaving the city or region where one was currently based. 75 individual respondents were selected for analysis.

The respondents believed that being a scientist, scholar, or academic would involve long-distance travelling. Most respondents, two-thirds, had in the last year travelled internationally up to five times. The rest travelled more than this, some as many as twenty times. Two-thirds of all travelling was by airplane. Few of our respondents, less than three percentages, had in the past year not travelled at all.

Most respondents identified time as important when travelling. They prioritised getting from point A to B in the shortest time, at the cheapest price possible, over other aspects like comfort, safety, or environmental concerns.

Although most travelled to present conference papers or to do fieldwork, respondents felt such trips also served communal purposes. Travelling established networks, maintained previous contacts, and enabled meetings with distant colleagues and friends.

Respondents believed that a limit on travelling would affect network building negatively while they also believed that similar restrictions would ease their overall workload.

So what could change travelling behaviours? The respondents suggested three main areas: development of new digital communications; increased environmental awareness among scholars themselves, and; policies that regulate or directly reduce annual flying.

Regardless of these changes, all respondents believed that if they received a new academic position this meant they would be travelling more. One step up in the academic hierarchy is one step closer to the boarding gate.

Travel log, Feb 27, 2016, 10:04

“To stop travelling is not really an alternative, but with longer stays the journeys could be fewer.”

“there is also a contradiction in the visions of internationalization and sustainability that has to be addressed on all levels.”

Travel log, April 22, 2016, 15:38

“Sometimes I suspect that my reason for working in academia is that it gives me the chance to continue my nomadic behaviour. I am writing this from a table at a café in a city where I don't live, on a stopover to another city in which I don't live, coming yesterday from a third city in which I don't live, either.”

“One of my best travels recently was by train to Berlin (...) on the way back have deeper conversations with a colleague from my home department than I would otherwise have given time for, resulting in unexpected and productive collaborations (...) I would like to embrace the slowness itself. Can I commit to slow nomadism?”

Workshop

On April 26, 2016, the KTH Environmental Humanities Laboratory organized a workshop for students and scholars from several universities to discuss how the next generation of travelling scientists meet and communicate.

Participants were invited to imagine a future where long-distance travels are time-consuming, airplane tickets far more expensive than now, and travelling is conducted in an increasingly anthropogenic world. The questions first focused on how ideas and discoveries would be exchanged in such a future. Participants were then asked how such academic exchanges could be re-evaluated within the present-day conditions.

From these discussions, participants differentiated travelling into aspects relevant for future conversation. Travelling was identified as a set of *practices*, for which there were several *rationales*, and, which in turn were based on certain *moralties*. These aspects helped participants specify how and why they travelled as well as what feelings that flying evoked. From increased awareness of what travelling meant personally there could come possibilities to make new policies for academia in general.

Lastly, participants believed travelling to be only one source for carbon emissions. Future conversations include how universities may decouple its research and investments from fossil fuel industries.

Toolkit

This itinerary provides you with a small toolkit. The toolkit is a condensate of ongoing discussions at the KTH Royal Institute of Technology on what it means to be a travelling scientist. Upon arriving at your next destination, the toolkit may come in handy for continued conversations. So together with your fellow travellers:

1. Exchange reasons for why you travel.
2. Think of a handful of different ways in which you can travel as part of your academic work.
3. Describe what characterises a *necessary* conference or field trip.
4. Explore what you consider to be other significant contributions of carbon emissions by academia.
5. Learn about the conditions, limits, and opportunities for your colleagues to travel.

The Itinerary's Background

The Travelling Scientist's Itinerary is based on the project *Travelling Without Borders*, conducted by the KTH Environmental Humanities Laboratory at the Division of History of Science, Technology, and Environment. The aim of the project has been to explore why members of academia travel and to envision means for developing alternative travel policies for the university as an institution. The project team consisted of Marco Armiero, Johan Gärdebo, David Nilsson, Kristoffer Soldal, and Sverker Sörlin. The project was funded by KTH-Sustainability at the KTH Royal Institute of Technology in Stockholm.

Project Activities

Debate article, "klimatforskarna förvärrar utsläpp", in the Swedish newspaper *Svenska Dagbladet*.

Workshop at Dome of Vision, KTH Royal Institute of Technology in Stockholm.

Online survey on academic travelling and collection of travelling confessions from academics.

Article, Gärdebo, J., Nilsson, D., Soldal, K, "The Travelling Scientist. Reflections on Aviated Knowledge Production in the Anthropocene", *Resilience: A Journal of the Environmental Humanities* (Nebraska University Press, 2017).

References

- ¹ The Travelling Scientist's Itinerary is based on *Travelling Without Borders*, a project by the KTH Environmental Humanities Laboratory. All claims, when not directly citing others, refer to activities documented as part of this project. For further references, see Gärdebo, J., Nilsson, D., Soldal, K., "The Travelling Scientist. Reflections on Aviated Knowledge Production in the Anthropocene", in *Resilience: A Journal of the Environmental Humanities* (Nebraska University Press, 2017).
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- ⁴ Tamson Pietsch, *Empire of Scholars: Universities, Networks and the British Academic World, 1850 - 1939* (Manchester University Press, 2014) ; Simon Schaffer, *The Information Order. Isaac Newton's Principia Mathematica*. Hans Røising Lecture. *Salvia Småskrifter*, no. 11 (Uppsala University, 2008) ; Sverker Sörlin, *De lärddas republik*. Om vetenskapens internationella tendenser [The Republic of letters. On the international tendencies of science] (Liber-Hermods, 1994).

- ⁶ David Nilsson is credited with providing examples of carbon emissions from travelling in 2013 by the Division of History of Science, Technology, and Environment at the KTH Royal Institute of Technology.
- ⁶ Campi magazine, “Färre tjänsteresor ett måste för miljön [Fewer work-related trips are necessary for the environment], <https://campi.kth.se/nyheter/farre-tjansteresor-ett-maste-for-miljon-1.703405>.
- ⁷ Miya Christensen and Jenny Jansdotter, “Cosmopolitanism and Intellectual Mobility: Spatial and Communicative Consideration”, *International Communication Association* (May, 2017).
- ⁸ Yolande Strengers, “Fly or die: air travel and the internationalisation of academic careers,” *DEMAND. Dynamics of Energy, Mobility and Demand* (June 4 , 2014a) ; Yolande, Strengers, “Meeting in the Global Workplace: Air Travel, Telepresence and the Body,” in *Mobilities* (2014b).
- ⁹ The example of participating in essential conferences by travelling there in a Fiat Panda is credited to Kevin Anderson, “Hypocrites in the air: Should Climate Change Academics Lead By Example?,” in *Kevinanderson.info*, April 12 (2013).
- ¹⁰ cf. Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Harvard University Press, 2011).
- ¹¹ cf. Meghan Walsh, “It’s the end of the world - how do you feel?,” in *Ozy* (October 26, 2015).

- ¹² Mike Hulme, *Why We Disagree About Climate Change. Understanding Controversy, Inaction and Opportunity* (Cambridge University Press, 2009).
- ¹³ Brendan May, “Why More Environmentalists Should Fly,” in *The Guardian* (November 5, 2013) ; cf. Kevin Anderson, “4 Responses to *Fly or Die: air travel and the internationalisation of academic careers*,” In *DEMAND. Dynamics of Energy, Mobility and Demand* (June 9, 2014).



