



A YEAR OF FALSE STARTS  
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I sat down to write my Wiko yearbook entry at least ten different times both during and after my fellowship, and thus have amassed a collection of introductory paragraphs (or, in a few cases, sentences) that remain abandoned in a folder on my desktop. Each was deserted either because it was too grandiose (setting me up only for failure) or else too banal (not coming close to capturing the complexity of my year at the Wiko). With hindsight I can now see that this collection of false starts for my entry is in fact the most accurate reflection of my time in Berlin.

Before I get to my final (complete) entry, a small taste of the sentences that were abandoned either as is or after a continuing paragraph or so:

- i) Either everyone or no one will write about how COVID-19 affected life at the Wiko. By the time we arrived, it almost felt normal. And indeed, when we began – fully vaccinated, protected, impenetrable to the pandemic around us – it felt momentarily like we had escaped;
- ii) In the fantastical playgrounds (*Spielplätze*) of Berlin, I learned to let go;
- iii) My mother is an intellectual, and much of my identity growing up was formed as rebellion against that very status. How then would I do surrounded by intellectuals at an institution that was built around the very idea of intellectuality?;
- iv) After the most chaotic and turbulent few years of my life, the simplicity of life at the Wiko was a desperately needed healing balm;
- v) I will not miss nightly Zoom calls to California, but will very much miss my morning walk from Villa Walther to my gorgeous office retreat, where I luxuriated in thought until being served a delicious lunch in the company of the most wonderful fellow Fellows I could have imagined.

The thing about false starts, it turns out, is that they aren't failures. They till the soil of the mind – create a fertile and ripe imagination that is primed to fully nurture the right seed of an idea when – at last – it falls to the ground. In my day job as a scientist, teacher, manager, grant writer, reviewer, dog walker, wife, and mother, I rarely – if ever – have time for false starts. And the most meaningful gift the Wiko gave me was the time to waste on them.

The first few months of life in Berlin involved finding our footing; getting the kids settled in school, finding the best dog walks around the Grunewald, and settling on a schedule that worked for a two-scientist family. There was COVID to contend with, as well. Deciding how much risk to take every day, taking our tests and watching the reassuring absence of a band appear, and of course walking around the Thursday evening champagne gathering and opening all the windows despite the chill and occasional funny look were all part of the less normal aspects of our year. But mostly, I used the first few months of my fellowship as a time to rebuild myself from the exhausted shell of a researcher – and human being – I was (or felt I was) when I arrived.

The pandemic had stolen most of the joy from my job. I had been teaching online, giving departmental seminars and conference presentations as monologues alone in my makeshift home office, and meeting students and postdocs at regularly scheduled interviews through my computer screen rather than spontaneously as a result of new and exciting data in the lab. And all of that was when the kids weren't home from school due to a sniffle that required a trip to the COVID test center and a three-day wait for PCR results. Let's just say that when August finally arrived, I could not have been more ready to leave Berkeley and head to Berlin.

We came to the Wiko with a preschooler who joined the local Kita across the lake and learned how to fight better (in German) with a stick, a first-grader who had the magical experience of celebrating her entry into education with a *Schultüte* as big as she is, and a dog who cost as much to ship to Germany as a horse (despite only resembling a small pony). From the moment we arrived, we all felt at home. The staff and environment could not have been more conducive to feeling that way, and we never even spoke of Berkeley until many months later. For the first time in many years, I had spare time to think. And I did.

The colloquia each week had their desired effect – they made me think of my own work differently, inspired me to try new approaches to scholarship, gave me ideas for better ways to present ideas and challenge the audience, and made me laugh, cry, and – think. My fellow Fellows taught me to question even the most basic things I thought I knew and took the time to explain things on a level that I have never experienced elsewhere. Were it not for my having visited the Wiko as a “partner” ten years earlier, I wouldn't have believed that a full hour of questions was possible after each talk – and when it came to my own talk, I worried that the content would be too narrow or dry for active debate. But week after week, the discussions played out in unexpected and exciting ways through the lenses of disciplines and with the shared goal of discovery. Of everything I will miss at the Wiko, the questions sessions after talks will be at the top.

In between the amazing meals and parties, nightly Zoom calls with my group back in California, and school runs, I spent my fellowship exploring two related sets of ideas. The first, as originally planned, was based around the question of the holobiont, in this case defined as a eukaryotic organism and its microbiome. Through reading, chatting with other Fellows, and thinking (the clear theme here), I began to lay out a series of questions, predictions, and experiments that we could use to ask whether hosts and their associated microbial communities can be considered in the same way that we – as a field – have

studied genes in a genome. The time afforded by the Wiko fellowship gave me the courage to revisit my old Population Genetics and Quantitative Genetics textbooks and notes from graduate school to see whether we can apply the same statistical frameworks for understanding and predicting microbiome diversity. This project had many false starts, and I won't know for some time whether and in how many ways it will succeed. But I am returning home with a bank of new ideas to explore with my group and am confident that I have a far better understanding of what is possible than I did a year ago.

The unexpected project was the result of an *Annual Reviews in Virology* paper that I had committed to writing before knowing I would join the Wiko. I had promised to write a review about how bacteriophage viruses can and do impact microbial populations, communities, and microbiome function. But this was a topic that I was already tired of before even beginning (I had been thinking and writing about it for too long). As I dragged my feet ever closer to the impending deadline, I remembered an old paper I loved in graduate school by Peter J. Hudson, Andrew Dobson, and Kevin Lafferty in which the authors put forward the idea that parasites in an ecosystem can be considered a sign of good health! The premise is quite simple: parasite diversity is an indicator of host diversity, and if there are lots of different parasites around at relatively low densities, that suggests the presence of many different hosts at even higher densities. Despite its intuitiveness, this idea has been remarkably hard to test in natural systems and so remains more of a hypothesis than knowledge. However, with the increasing number of datasets from microbiomes across plants and animals that have resulted from so-called "Next Generation" sequencing approaches, I thought this would be an ideal testbed of the prediction. I pitched the idea to fellow Fellow Rachel Wheatley, who had come to the Wiko from Oxford as part of the spectacularly cool and relatively new College for Life Sciences. She thought it was interesting, but more importantly, was excited about the idea of collaborating with me on the project. In this case, her enthusiasm, as well as the work of a creative postdoctoral researcher in my group, Dominique Holtappels, is set to ensure this idea does not join the pile of false starts.

Among the other false starts that I will leave fallow for a while and revisit before deciding on their final fates are: two new grant ideas, a collection of short stories (or should I say a collection of short stories that have beginnings, occasional middles, but never ends), numerous watercolor paintings, a hat that remains half knit, and three novels that I am "in the middle of" reading. But all of these wonderful false starts gave me the creative energy and joy to: write (and receive) a large National Science Foundation training grant;

publish a paper on critical windows of microbiome development with my colleague, very dear friend, and fellow Fellow Jess Metcalf; coauthor five papers with members of my group back in California; complete my *Annual Reviews in Virology* manuscript; make life-long friends from across the globe; and right a generational wrong by giving my children the gift of the German language that I never received.

My time at the Wiko was everything I had hoped it would be and more, but – unfortunately – despite all of the false starts, there was no false ending.