



OF PARADOXES AND IMMORTAL
JELLYFISH
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When the invitation for a sojourn in the Grunewald, Berlin arrived, I didn't hesitate, I knew my reply would be positive. This is a place that colleagues speak to you about in hushed, reverent tones. In fact, the mere mention of the Wissenschaftskolleg zu Berlin is enough to produce a misty-eyed gaze as former Fellows wistfully reminisce about their time at Wiko. And now, as my own year has drawn to a close, it is time to pause and reflect on what has been a quite extraordinary time in a most delightful place.

I have spent much of the past ten months considering paradoxes, and it strikes me now that this noun is quite an apt way to think of my Wiko Fellowship; the year is full and fast-paced, and yet, time seems to suspend itself so that you have the luxury of

pondering the whys and wherefores – proto-questions that previously simmered under the surface, just out of reach, never quite capturing hold of their full form. Such is the cost of day-to-day university life with its many distractions and countless administrative chores that steal our attention and leave ideas floating. The academic world is a paradox all of its own; most of us find ourselves in this business because we are creative thinkers – ideas and thoughts are our currency – but, trapped inside the walls of a university where we have so many other roles and responsibilities, that the opportunity to flex our minds and brains becomes constrained by our environment.

As I look back on my year here, a tiny, delicate jellyfish (*Turritopsis dohrnii*) found in the deep blue seas off the coast of Japan comes to mind. This curious creature holds a remarkable secret; it has discovered immortality. Somehow it sidesteps senescence and seamlessly transitions time and again from an adult back into a juvenile – it casts off its old habits and begins its life anew. My time at Wiko felt a little like this. Wiko afforded me the opportunity to renew myself, to feel ready to go back out into the world and grow once more. I don't know if, like the jellyfish, I will be able to repeat the process, but what I do know is that to have achieved this even once is a privilege.

My time at Wiko created a space that allowed an enormously productive year in terms of writing. Certainly, 2015/16 has been one of the most productive years of my career to date. During my time at Wiko I wrote eleven peer-reviewed papers that are now published or in revision in a range of scientific journals. I also completed two book chapters for edited volumes, and there are two more that I am trying to complete before I am sucked back into a new semester with its ever-present teaching, advising and participating in committee work. Such productivity was made possible only by the peaceful workspace that a Wiko Fellowship affords. The proximity of home to workplace also underpinned my efficiency. The short walk from the Villa Walther to my office in the Villa Jaffé was often broken with the glimpse of a red squirrel disappearing into a sea of green pine-tree needles, or I would be treated to the graceful swim-by from the cob and hen swans with their bevy of cygnets. And sometimes, my commute would involve a stop in at the Weiße Villa to drop off or pick up a book – a library that rivals any other that I have known and that is home to a team of committed and delightful librarians willing to find the most obscure books and articles. I will miss their skill and assistance greatly.

Papers and writing are one way to measure what can be achieved when given the space and time, but harder by far to evaluate is one's intellectual growth and how this develops into specific research plans. I am leaving Wiko with a new set of ideas for

experiments, a new program of work, if you will. These have been thought about, reshaped and refined through many discussions with Dan Weary and Paula Droege, my two Focus Group collaborators. Their knowledge and curiosity made interactions both stimulating and inspiring. Then there were the unanticipated benefits of having other Fellows with highly relevant expertise and interests; here I'd like to thank Peter Gärdenfors, Laith Al-Shawaf and Dorit Bar-On for some wonderfully stimulating discussions. The Pain Focus Group also benefitted from the guests that Wiko so generously helped us to bring in for short stays. The free exchange of ideas was particularly refreshing – something about the calm Wiko atmosphere greatly facilitates the ease with which conversations begin and then grow. Here, I thank Wiko for allowing us to bring in Jeff Rushen, Anne Marie de Pasille, Sue Healy, Dave Shuker, Mike Mendl, Liz Paul, Adam Shriver and Walter Suarez, and I thank all of them for being gracious visitors willing to share their time and thoughts with us.

The goal of the Focus Group was to address why and when pain hurts. Not just in ourselves, but in other animals. When does an animal experience the hurt associated with an injury, and how can we tell? Pain itself is a paradox all of its own – can an animal respond to something causing an injury and not feel pain? But if the awareness of pain demands a degree of consciousness, does it then follow that all animals that respond to noxious stimuli are conscious? These kinds of question and discussion played out over lunches time and again – and I recognize that some of these ideas rattled a number of my fellow Fellows. I was surprised by this at first, but hearing their objections, or their reasons for wanting to protect consciousness as an exclusively human phenomenon, forced me to be clearer in my explanations about why this cannot be the case – I also learned that sometimes it is OK to agree to disagree!

Fairly early on in the discussions within the Focus Group it became clear that we were interested in understanding when emotions are felt. And here another paradox presents itself – is there such a thing as an unfelt emotion? My fellow Focus Group participants and I believe there is, and it is the capacity to be conscious of emotional states that underlies an awareness of pain and hurt that sometimes, by extension, leads to suffering. Being able to distinguish between felt and unfelt emotions was something we discussed a great deal, and then thinking about how to demonstrate animals have felt emotions absorbed even more of our time. One of the joint papers that we have written this year tackles exactly these issues.

In addition to hosting short-term visitors, Wiko also helped us to carry out two workshops. The first, “Beyond Analogy – Comparative Research on Pain”, was an extremely interesting, and at times tense, debate that highlighted the difference between human pain researchers’ concepts of what can or cannot occur in animals. For me, this was one of the most challenging parts of the year; trying to convince human pain neuroscientists that other animals have the capacity to hurt from their pain was much harder than any of us anticipated – I consider this to be yet another example of a paradox. The second workshop covered the thorny topic of “Animal Experimentation”. I was invited to co-host this with an old friend and colleague – and former Wiko Fellow – Mark Viney. We addressed a number of key questions about how we decide whether different kinds of animal experiments are justified. Paradoxically (I did warn that this would be recurrent theme ...), the discussions around vivisection, which one might expect to be more fraught than the first workshop, turned out to be an exceptionally frank and productive look at what we do in animal research. The participants were from diverse backgrounds, but all provided excellent insights and offered carefully argued opinions. By the end of three days of eloquent discussions, we realized that we were still only scratching the surface of this multifaceted, perplexing topic. But what was discussed clearly had several of the participants thinking in ways that would not have been possible before.

And then, of course, there is Berlin. When not at lunch, in a colloquium, a German lesson or my office, there were the delightful distractions that only this city can offer. I was lucky enough to spend the year with my youngest son, who, having just finished high school, decided to have a gap year in Europe. Together, we explored museums and the Grunewald woods, we went to theatres and listened to concerts, and he was even brave enough to join me at Clärchens Ballhaus more than once! Watching him find his own feet and thrive as an intern working for an NGO was very special, and not something we could have shared so easily anywhere else. I thank Wiko and the other Fellows for inviting Matthew into their worlds. While a little uncertain at first, he soon grew to relish Thursday night dinners for their stimulating and provocative discussions – and he truly delighted in the high-spirited post-dinner table tennis. At Christmas, my eldest son, James, arrived fresh from his fifth semester as an undergraduate at Penn State. Together we ventured into a wintery Berlin, sampling the *Glühwein* and browsing various *Weihnachtsmarkt* stalls. It was good to be together again, even though it was just for the few short weeks of his vacation. And I was glad he had the opportunity to meet several of the Fellows who, like us, had decided to stay in Berlin for the season’s festivities.

A curious trick I learned from one of my more creative graduate students is that looking back at your Google search history from time to time can be an amusing way to gain insights into what has been happening. So I took note of my Google searches at different times in the year; I won't list them here, but I will summarize that the early searches devoted a great deal of time to the BVG web pages searching for the best routes to get from here to there and there to here. And the *Google Translate English to German* option featured heavily in the beginning. By the end of the year, the searches were focused on opera performances, concerts at the Philharmonie and making reservations at restaurants that we had grown fond of as we tried to squeeze in as much as we could into the last few weeks. I was still rather dependent on *Google Translate*, but the search order was now reversed – *German to English*, as I tried to understand newspaper articles or text from the German book I was reading.

Starting the year with the *Deutsch Intensivkurs* was a wonderful way to begin the Wiko experience. For me, some of the closest friendships that developed were forged in our joint frustrations as we wrestled with the Akkusativ and Dativ, with reflexive verbs and prepositions. But there was also much laughter amongst us, and even shared jubilation when one of us mastered a truly spectacular sentence mistake-free – one that could even raise a rewarding smile from Eva von Kügelgen! Here, I wish to recognize Eva for her kind, sincere encouragement and her unending patience. I am extremely happy with how my understanding and my conversation skills grew over the course of the year, and having the support of a caring, considerate mentor makes such a difference. I particularly valued my weekly individual lessons in the Weiße Villa and the fact that it gave me an excuse to pause and greet the wonderful team of Wiko staff on the second floor; thank you for being so welcoming, Vera 1, Vera 2, Andrea, Sophia, Corina and Nina!

When I arrived in Berlin at the very end of August 2015, I was a weary soul who desperately needed to be reminded what it feels like to nurture one's intellectual spirit. I needed to be able to raise my head above water and breathe slowly and deeply. Wiko gave me this in a truly life-changing way and in an environment enhanced by the staff who seem genuinely happy to see you, so willing to help you and never once wince as you struggle to find the right verb order and word endings as you practice your German! I am, and will continue to be, eternally grateful for the year that I spent as a Wiko Fellow.