



TRANSITIONS
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I am sitting on the plane at the moment. I hardly know what to write here. How can a couple of pages possibly do justice to the impact of my experiences of the past year? I guess they cannot. Especially since I am not exactly a proficient writer. I could regale you with my impressions of Berlin and Grunewald and Wiko lunches and Dienstagskolloquia and the amazing helpful and wonderful staff (I am in awe of their incredible patience and good nature), and all that. But I won't: Having read the reports of many of the former Fellows I realise that anything I could, and would, say has been said before, and far more eloquently. What is different about my experience at the Wiko, though, is *me*, so I have decided to share my experiences in maybe a slightly different way: I am young enough, and inexperienced enough, that my autobiography, such as it is, can fit in three

pages. In this way you can understand the context in which my experiences were framed. So, for what it's worth, here it is.

I was born in a small mining town called Savage River that *was* in Tasmania, Australia. It's no longer there, having been removed after the natural resources were exhausted. After several moves I then spent my final formative years in another mining town of some 3000 people, this time situated in central Queensland. The nearest "city" was two and a half hours drive away, and, besides a large coal mine, the town was surrounded only by farmland. During my highschool years there I worked several jobs, variously as a farm hand and a shelf stacker in the local supermarket.

For as long as I can remember I have always felt restless. Luckily I did well enough at school to be offered a place at university (although not good enough to get into a medicine degree, thank heavens). Thus I ended up in a general B.Sc. science program. After experimenting with Biology, Chemistry and Computer Science I was hooked by the allure of Physics. At this time physics was very popular in the media and the genre of "popular science" was just taking off. And so, after a rather lacklustre performance in my first year, I finally started to study. Still, I was restless. I enjoyed my student years but I never felt as though I reached what I wanted.

Several years later I was disillusioned by physics and ended up accepting a Ph.D. position in the mathematics department. Finally I felt as though I'd found my calling. Although, predictably, the excitement of research began to pall and I dawdled aimlessly through a couple of years of non-work before meeting my final Ph.D. supervisor (I changed Ph.D. supervisors several times). There followed a whirlwind of activity and within a year I was done. During those intervening four years I had led a settled and comfortable life and my highest ambition was to settle down in Australia after a couple of requisite years overseas.

After some applications I was offered a position in Bristol, UK, which I readily accepted. At the same time I also experienced some personal dramas. Thus I ended up in Bristol in the midst of a cold dark winter with a suitcase and impractically located accommodation. Despite the dark start, Bristol turned out to be easily the most exciting time in my life. It is hard to imagine the satisfaction of having "made it out" of my country town and gotten as far as the UK. I wasted no time in immersing myself in the social and cultural scene in Bristol. This all came at the detriment of my research.

Today I am astonished that I didn't quit academia then; I was on a clear trajectory down and out. But somehow things picked up and I luckily became motivated again.

This is due, in no small part, to an acquaintance I made at that time, namely, Jens Eisert, whose influence on me is visible to this day.

After a couple of years at Bristol I had the great and, to me, still unbelievable fortune to be offered a permanent position in the mathematics department at Royal Holloway, University of London. Finally I *had* made it, and I expected that it would be my final move. We bought a house, settled down and became comfortable.

But Germany exerted a subtle influence on me. Via Jens Eisert I was introduced to Uli Schollwöck. And thanks to Uli I was invited to apply to the Wiko. Well, I could hardly say no. So I applied and was accepted as a Fellow for 2009/2010. Okay, in the very least, I could enjoy a year away from teaching.

But nothing went quite as expected.

When writing my proposal for what to work on I chose something that I thought was relatively safe and yet still reasonably important. So I hoped I would have some freedom with what to do after I'd written up my proposed (but mostly completed) research. I had decided to experiment with the freedom from external commitments that the Wiko afforded.

Thus, upon arrival, I sequestered myself away from my academic community and worked on something completely different. This experience was interesting yet frustrating. As a theoretical physicist I found that being cut off from my usual academic peers was a disorienting experience. But it was also kind of like a holiday; in interacting with the other Fellows I gained a completely new perspective on things: when exposed to the sheer diversity of academic life that is present at the Wiko it is hard to deny we are all small cogs in the academic machine. Which sounds like a bad thing. But it isn't. I really enjoyed the sensation that we are part of something *bigger*. Also, I enjoyed the sheer *humanity* (and all the good and bad that that entails) of the other Fellows; I felt honoured to meet the wonderful people, and felt arrogant to meet the not-so-wonderful people.

But it was complicated.

There were both good things and bad things. The most interesting and happy result of my stay at the Wiko was that my research took several unexpected turns throughout the fellowship: I began having resolved to change my research dramatically from predominantly physics to predominantly mathematics. And I did apply myself strenuously to that task. But halfway through, in collaboration with Jens Eisert and Uli Schollwöck, we made some rather unexpected breakthroughs on some rather different problems, lying squarely

within the field of physics. So productive was this work that I can see it will occupy my attention for many years to come, perhaps decades ...

If I try to think of any given day during the past year I can't remember many singular events that stand out especially beyond the usual things: interesting talks, pleasant meals, etc. But somehow my impression of the year as a whole is of something more momentous; somehow the sum was greater than the parts. This year marked the beginning of many transitions.

But every end is a beginning.

Thus begins the next stage of my life: at the commencement of my fellowship I was made aware of a position in Hannover that I was invited to apply for. It was a "shot to nothing", so I applied. Incredibly I was accepted and now, instead of moving back the UK we have moved to Hannover.

The future is very unclear to me right now. In packing up all my belongings into a pile of boxes it is hard to feel anything other than melancholy and displacement. I look forward to reading this in a year when I'll know what happened ...