



ON CANCER, DISEASE AND THE ART
OF COVERT ENRICHMENT
GUNTHER JANSEN

Gunther Jansen is Junior Group Leader at the University of Kiel in Germany. He is interested in evolutionary medicine, particularly in the genetics of emerging infectious diseases and in the development of evolutionarily inspired antibiotic resistance management strategies. He held a VolkswagenStiftung Postdoctoral Fellowship and did his Ph.D. in Evolutionary Genetics at the University of Helsinki in Finland on the topic of social parasitism in ants. He has further investigated fish phylogenetics and functional morphology at the University of Ghent in Belgium and mud shrimp morphology at the Atlantic Reference Centre in Canada. Further qualifications include a postgraduate degree in Logic, History and Philosophy of Science and one in Pedagogics. Gunther actively participates in scientific exchanges with radio, TV, newspapers and magazines. – Address: Zoologisches Institut, Universität Kiel, Am Botanischen Garten 1–9, 24118 Kiel. E-mail: gjansen@zoologie.uni-kiel.de

I came to the Wissenschaftskolleg as young, ambitious researcher in infectious disease evolution eager to broaden my horizons. Already beforehand, I was deeply impressed by the accomplishments of the other Fellows, uncertain how my ideas and experience would fit into this rich mesh. I was a little anxious, but curious and excited. My first impression of the Wiko experience came about when I presented my ideas. To my surprise, the resonance was enormous. Bruce, Wendy, John and Yuri came with thought-provoking questions that forced me to give better examples and to think about the broader consequences and implications of my proposals outside the immediate realm of science. It was a rare exercise in clearing jargon barriers and explaining complex ideas in a language that

allows enriching discussions with people with very different perspectives. It turned into one of the most stimulating discussions I have ever had. From then on, I felt a deep connection with the community at Wiko. Openness, eloquence, conceptual richness, eagerness to discuss, learn and understand – all these do not suffice to really express what made me feel so appreciated and at home.

One of the features of the Wiko community that impressed me most was how quickly ideas are developed and how much one is stimulated to take them one step further into producing something tangible. I was really lucky to find people such as Carlo, Michael, Athena, Jamie and others with whom I not only shared a keen interest in evolutionary explanations of disease, but also found shared general interests – almost a perfect personal fit. During an early conversation with Carlo on the evolution of antibiotic resistance, I found enormous parallels between how chemotherapy may fail through competitive release of resistant cells and the long-term failure of antibiotic combination therapy. Shortly after, I discussed *in vitro* experiments of resistance with Michael, which resulted in our concocting some experiments that could combine his and my work. This culminated in our first collaboration already before the year was over, during which Clara, a scientist working with Michael in Montpellier, spent two weeks in my lab to research our first collaborative research paper. Our collaboration became particularly savoury, since Michael and I share a passion for the exquisite elixir of the grape, which led to many fine evenings with the simple exaltations of bread, cheese and healthy conversation among similar minds.

During another of the Wiko lunches, I introduced some ideas about the evolutionary consequences of selfish selection on mobile genetic elements to sequester resistance genes – an idea Athena immediately jumped on and convinced me to write an opinion piece about. We ended up submitting the paper together and are now collaborating on several more, exploiting analogies between cancer and infectious disease evolution. Athena's mantra, "Let's look at the big picture here", will be haunting me forever, whenever I think about evolutionary theory.

Lunch after lunch (arguably the only measurement of time at Wiko), I became increasingly involved with the Cancer Focus Group. I learned, deepened and explored the analogies between bacterial and cancer cell biology. This culminated in an invitation to participate in the Workshop on Evolutionary Medicine, an opportunity to work with great focus with the group and with Andrew Read, one of the most impressive coryphées in the field of disease ecology. Being part of an expert panel, sitting next to researchers of

the calibre of Andrew and Carlo, deeply impressed me and will stay with me as a vivid memory – of appreciation, of awe and of ultimately stimulating intellectual endeavour.

But at Wiko life was not all (or: not at all) about cancer and disease. I also benefited from the contacts with artists such as Klaus and Tong, whom I thank deeply for introducing me to their minds, their ideas and the way they come to the creation of art. Klaus introduced me to the dictatorship of sound – its independence of theory, thought or interpretation; a natural phenomenon by and for itself that curiously demands an individual interpretative reaction. This, essentially, is what Klaus calls the last freedom. His concept deeply challenged my natural instincts for rational analysis, including using the vehicle of music theory to approach musical understanding. Klaus thus laid open entirely novel avenues of “living” classical music. With Tong, on the other hand, I discovered the dark side of civilization and economic development. During several field trips we explored ruins of Soviet rocket bases, army compounds and DDR bunkers, strange historical relicts where past efforts were often met with decay and political power with relativism and where time became rather surrealistic. Our adventures are to be continued soon in our next episode: The Forlorn Traffic Jam in the Deep Woods of the Ardennes.

Finally, I need to mention another important impression I gained at the Institute. I took the intensive German course with Eva, in which she not only improved my spelling, but also brought me, for the first time in my life, in contact with primary literature on the Nazi side of the Second World War. Through Eva’s unique mixture of German texts and videos, I was able to deepen my insights into the unspeakably morbid escalation of a meticulous political apparatus. For two months, I was in depressed mode as I wandered through the legacy of Berlin’s history; reading, learning, seeing and visiting places where events of deepest darkness were almost banally planned and executed. My exploration culminated in a lonely weekend trip to Auschwitz. I cannot express the shock of seeing the effective industrialisation the extermination camp bears witness to. This kind of experience, too, added great value to my stay at Wiko.

Experiences of such intensity, intertwining professional and personal development, partly exhilarating, partly depressing – they naturally took their toll. I have to admit I became addicted to the Wiko enterprise. I often returned during the following months, already a former Fellow, enjoying the exclusiveness of an unexpected but welcome vagabond turning up unpredictably. It felt simultaneously awkward and absolutely right. It seemed as if I was visiting my family after having been abroad for too long. But, as Reinhart assured in his venerably amiable way, “Do enjoy it, you belong here, you’re part

of this year's community." That again made me feel welcome, at home and right where I should be. Thank you, both Reinhart and Thorsten, for the supportive conversations, for sharing your experience and your wisdom. I very, very much appreciate it!

The Kolleg is made by its passionate people. They made it possible to discuss everything from Russian literature with Lisa and Yuri to the alternative history of the First World War with my partner-in-nightlife-crime William, or the latest central bank decisions with Gebhard. Never will I forget Kathleen, genuinely the nicest person I have met – and with such energy and enthusiasm for gladiators. Hari, Jenna, Michele, Seth, Ted, such interesting personalities with so many fresh ideas. I should really just list all Fellows right here – thank you all for such an unforgettable experience and for building such an open-minded community. I truly and deeply enjoyed one of the most intellectual experiences of my life. You stimulated and challenged my conceptual framework, my imagination and my interests. It was as if I were a student again, freshly discovering what the human mind is capable of, with sufficient time to explore interests independent of obligations or the drive to produce ... I felt part of the Great Humanistic Project, where everything is up for discussion in a warm, welcoming, harmonious community. At the Wissenschaftskolleg zu Berlin I saw: knowledge is passion.