



A HARD TITLE IS GOOD TO FIND DAVID POEPPEL

Born in Freiburg, Germany in 1964, raised in Munich. Education: survived Maximiliansgymnasium Munich, Abitur 1984. Studied Philosophy at Bowdoin College (USA) 1984–86, then moved to MIT. Undergraduate degree from MIT in 1989, Ph.D. in 1995 (Cognitive Neuroscience). Married Amy Mitchell in 1992 and had son #1 (Alex) in 1994. Post-doc at the University of California at San Francisco 1995–97. Had son #2 (Andrew) in California. Since 1998 on the faculty in the Department of Linguistics and the Department of Biology at the University of Maryland College Park. Son #3 (Luke) in Washington in 2000. Since 2000 also Adjunct Professor at the Kanazawa Institute of Technology, Japan. Daimler-Chrysler Berlin Prize 2004. The research attempts to link theoretically motivated concepts from linguistics and psycholinguistics with biologically realistic mechanisms. Examples of tolerable papers on these issues in the journals *Language* (vol. 69, 1993), *Brain & Language* (vol. 55, 1996), *Trends in Cognitive Sciences* (vol. 4, 2000), *Cognition* (e. g. vol. 89, 2003; vol. 92, 2004), *Speech Communication* (vol. 41, 2003). – Address: Department of Linguistics, University of Maryland, 1401 Marie Mount Hall, College Park MD 20742 USA. E-mail: dpoeppel@deans.umd.edu. Web: www.ling.umd.edu/poeppel.

Introduction

From the first moment on, our interaction with the Wissenschaftskolleg and its staff was great. We were determined to spend a year in Berlin, but for no good reason whatsoever we were late with literally every necessary administrative preparation. The Kolleg administration, primarily Joachim Nettelbeck and Andreas Edel, were incredibly *angenehm* and

helpful, quick, understanding, unbureaucratic and uncomplicated. With their efficient support (and with Martin Garstecki, who helped us get our international travel organised within a day, I think), we managed to get the entire family to Germany in the middle of August, 2003.

The intensity of our first few weeks in Berlin and at the Kolleg is difficult to convey. We arrived (all five of us plus our large dog) a few days before the Berlin schools started and immediately had to prepare our boys for the joys of the Grundschule Grunewald. The kids spoke very little German and hadn't the vaguest idea of what was going on. (An attribute of schools here that is hard to wrap one's mind around: the class schedule changes almost every day. "Die erste Stunde fällt morgen aus. Heute fällt die zweite Stunde aus, aber nur für die Drittklässler. Morgen haben die Erstklässler nur drei Stunden." usw. And it is up to the parents to figure out who has to be where, when.) Luckily, the fabulous and bizarre Villa Walther (when will we next live in a building with creepy cement gargoyles looking into our bedrooms??) is close to the school, so you can go back and forth easily. While in the first month this compromised my ability to work with any regularity, it contributed to my deep understanding of Delbrückstraße. After a few weeks of chaos, we began to have some sense of schedule, and the kids became functional. Now, after a year in the public school system in Berlin, they are native speakers of German (i.e., they insult each other in German, using a vocabulary that is, I hope, specific to Berlin playgrounds).

While the kids were learning how to swear and fight in German, Amy was taking the intensive German class, learning where to put the separable particle in a conditional *Nebensatz*. The class in the Villa Jaffé was clearly the major social glue of the year. My office in Villa Jaffé was directly next to the classroom. I have never heard such laughter and fun in a grammar class – and I teach in a linguistics department. It sounded like so much fun that I considered taking the class myself even though I am German. The sounds of Dominique, Nono, Ronnit, Peter, Rossitza, Ousman, Quentin, Amy and the others goofing around and laughing were really infectious. Habt Ihr eigentlich auch Deutsch gelernt?

In my spectacular office (*note to self*: my office was the nicest office I ever had or will ever have; send mail to Grimm and Nettelbeck begging to please, please take me back ...), I focused on three areas of work, two intentional and one accidental. Intentionally, I planned to work on a series of papers based on research in my lab having to do with the neural representation and processing of speech and language. Also intentionally, and in collaboration with several colleagues from the Physikalisch-Technische Bundesanstalt (PTB) in Berlin, I planned a magnetoencephalography (MEG) brain imaging experiment,

a study in which I was able to convince several of my colleagues to participate (Jim, Dominique, Beate – thank you again). This hands-on experimental work was fun and resulted in some papers on the cortical encoding of sound frequency. Unintentionally, I began to think more seriously about interdisciplinarity, especially in my own domain of research, and I began writing a series of pieces with my colleague David Embick from the University of Pennsylvania.

An intense introduction to the interdisciplinary atmosphere of the Kolleg was my Diens-tagskolloquium. I drew the shortest straw and so had to go first in mid-October. As is customary in the sciences, I gave an (inexcusably looong; sorry, fellow Fellows ...) PowerPoint presentation. Among the standard range of reactions (some people thought it was cool, others presumably hated it but had the good taste not to say that to my face), one response was very surprising to me and highlighted the profound differences between disciplinary styles. Specifically, some colleagues were deeply critical about the use of PowerPoint as a presentation medium. The argument was that if one uses PowerPoint to present one's work, the ideas themselves must be – in the worst case – shallow. Let me say, in defence of scientists all over the universe, that using such a medium is practical and effective; so please, dear humanists, social scientists and reading-from-a-manuscript-fans across the academic fields, be tolerant of our approach to conveying information, as we are of yours. Ours just happens to be more unshackled from the words on the paper.

For better or for worse, being at the Kolleg transports one back to stereotypical social situations from high school or boarding school. We fall into our old student roles, and so at the Kolleg, too, are represented (1) the know-it-all geeks, (2) the timid rule followers, (3) the shushers, (4) the stoners, (5) the jocks, (6) the people making snarky comments from the last row, (7) the earnest students wanting to absorb everything, with no irony, and so on. I found this funny, charming, and disturbing.

Materials and Methods

I worked on three types of projects and three approaches were used. (1) When writing the papers on speech and language, based on experimental results from my Maryland lab, I used a lot of hard disk space and my laptop. I sat in the Villa Jaffé and plugged away, occasionally chit-chatting with Wolf Lepenies about basketball. (2) The brain imaging experiments were performed at the PTB at Ernst-Reuter-Platz, using a whole-head 96-channel biomagnetometer. As far as I can tell, the PTB has the best magnetically shielded environ-

ment in the world, permitting us to make interpretable measurements on single trials from the human auditory cortex. Happily, the experimental collaboration we began then is continuing; a new series of recordings has begun in the fall of 2004. (3) My unintended work – so ein Thema wollte ich eigentlich gar nicht bearbeiten – happened during the colloquia (I took more notes on these ideas than on others' talks, I'm sorry to say), during the lunches (I tried to listen and learn while eating too much practically every day), by reading the Feuilleton of the German newspapers (especially the discussion on free will and what the neurosciences have to say about it. *Note to self*: nothing), and by talking to my colleague Dave Embick on the phone every now and then. I began to think about this question: in my field, are there examples reflecting serious, substantive interdisciplinary cross-fertilization, or are we just doing what amounts to cross-sterilization? What are the preconditions for real interdisciplinary insight and explanation? Some of these issues became the topic of my evening lecture in March. Of course, one crucial methodological ingredient for the entire year, lubricating both throats and minds, was the copious red wine we drank (regular Friday morning hangover) as well as the excellent coffee we had day and night.

Results

From the publish-or-perish perspective (the deans'-eye view), it was a terrific year. (1) *Speech and language papers*. With my colleague Greg Hickok from UC Irvine, I finished two articles on the functional anatomy of language for the journal *Cognition* (Poeppl, D. and G. Hickok, 2004; Hickok, G. and D. Poeppl, 2004) and we edited a special issue of *Cognition* (vol. 92, issues 1–2). The main focus of our joint work has been to update the classical brain-language model, which is based on linguistically naïve left-hemisphere imperialism. Three papers on MEG and fMRI brain-imaging studies of auditory processing were submitted (Luo et al., *NeuroImage*; Chait et al., *Neuron*; Boemio et al., *Nature Neuroscience*) and papers on word structure and processing were completed (Beretta et al., in press, *Cognitive Brain Research*; Fiorentino and Poeppl, submitted). Finally, a new line of research on auditory-visual integration in speech began showing results (Wassenhove et al., in press, *PNAS*; Grant et al., in press, *Speech Communication*; Wassenhove et al., submitted, *J Cog Neurosci*). (2) *Berlin experimental results*. The work at the PTB yielded a paper about using latency variation to encode frequency (or perhaps pitch) in auditory cortex (Salajegheh et al., 2004, *NeuroImage*) and we are continuing research with our Berlin colleagues. (3) *Interdisciplinarity*. In two articles (Poeppl and Embick, in press; Embick and Poeppl,

in press) we pick apart what the problems and prospects for real work are. Two of the obstacles in the way of successfully linking hypotheses between the language sciences and neurobiology are what we call (i) the granularity mismatch problem and (ii) the incommensurability problem. In short, these concepts deal with the challenge of how the “alphabets” of linguistics and biology might be linked. We argue in favour of computational models of a certain type. I gave an evening lecture in March partly on these issues (my first or second public lecture in German, so a little hard going, but fun), and John Rieser (prospectively) and Pascal Grosse (retrospectively) gave me extremely valuable comments that have shaped my own perspective on things.

To fulfil the natural scientist obligation to show some numerical data, I summarize some of the results here – in the form of Top (*ungefähr*) Ten lists.

Top Ten Things I will remember, in no particular order. (1) Playing Ping-Pong, especially with Horst Bredekamp, whose excellent footwork is noteworthy. (2) Thursday night dinners, enriched by wine and Rosemary Taylor’s and Robert Pippin’s stories. (3) Regular *Schnaps* in my office with Jim Hunt. (4) Stefan Litwin’s *erste Sahne* lecture-recitals. (5) The kitchen scene at the goodbye party in July. (6) That Thai restaurant that we went to with Stefanie Heraeus and Bernhard Jussen. (7) The tripartite structure of the typical German professor’s colloquium question. (8) The quality of physical space (my office, the Wallotstrasse 19 lounge, Berlin) and mental space (staff, Fellows, Berlin) afforded one by the Kolleg. (9) The attorney cohort. Extremely funny (Fellows and administration alike) and extremely understated. (10) Heike Paul’s and Jim Hunt’s laughter. (11) Reinhart Meyer-Kalkus’ breadth (and height and depth) of interest and enthusiasm for virtually every topic. (12) The fantastic tour of the Reichstag and its art (Danke, Helmuth Schulze-Fielitz).

Top five things I would rather not remember. (1) Too many trips to give lectures. Biggest mistake I made ... (2) Too many reviews/referee reports for journals that I agreed to do. Just say no. (3) Too many rejections of my work, and the ensuing time-consuming arguments with reviewers. (4) Injuring my son Andrew’s face and breaking my arm in a bike crash. (5) The rain. (6) Turning 40.

Discussion

The time and space for work – and play – at the Kolleg constitute such a unique privilege that one cannot help but get stuff done. I suspect I will not have such a productive year for a long time. The range of things made available, from brilliant lectures (Susan James’, say)

to utter schlock, is immensely motivating. What impressed me most about the Kolleg, aside from my fellow Fellows, was the successfully conveyed attitude that the central focus of everyone is the work of the Fellows, each of whose projects is important, worthwhile, and interesting. How is this accomplished? It is because everyone from the Weiße Villa (Gesine Bottomley, Christine von Arnim) to the administration to the support staff (Daniela Wendlandt, Christian Schmitz, and the essential Frau Klöhn and Frau Speder, *zum Beispiel*) makes you feel that your work and success are crucial. And they bring to this difficult social task just the right mixture of respect and irreverence.