INTERVISTE

Conversation with Robyn Carston

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Robyn A. Carston is Professor of Linguistics at the University College London and Fellow of the British Academy. She is a leading specialist in the fields of pragmatics, semantics, and philosophy of language. Over the years, she worked on and contributed to developing the framework of Relevance Theory, which inherits key insights from Paul Grice's philosophical pragmatics while also being responsive to the advances of empirical research in cognitive science. She is the author of one of the most influential books in theoretical and cognitive pragmatics, Thoughts and Utterances: The Pragmatics of Explicit Communication (*Blackwell, Oxford, 2002*) *In this wide-ranging interview, divided into six thematic sections, she goes*

over the main themes of her philosophical and scientific work, from early contributions on the semantics/pragmatics divide to current research on lexical pragmatics and the nature of words. She also speaks about possible future avenues for relevance-theoretic pragmatics and shares some insights about her forthcoming experimental work.

Part I: Early steps

1. Good morning, Professor Carston, and thank you for accepting the invitation for this interview. Before delving into the different aspects of your work, I'd like to ask you to share some thoughts about the early steps of your professional journey. How did your interest in pragmatics and philosophy of language come about?

RC: Thank you, Edoardo, for the kind invitation. Well, no one has ever asked me this question before. In fact, it took me a very long time and a lot of twists and turns before I settled on pragmatics as the area I wanted to work on − both the philosophy of language and the cognitive approaches being of great interest to me.

I grew up in New Zealand and I was the first person in my family to go to university. I didn't have a clue about what I wanted to do when I left high school, and no one in my family could talk to me about what it meant to go to university. I hardly knew what a university was, but I did want to keep on studying.

Back then in New Zealand, our undergraduate degrees were very general, unlike in England. That was good for me: I was able to pursue a wide range of interests. I majored in English language and literature, but I also took courses in French literature, mathematics, computer science, art history, and psychology, all in a single degree. We couldn't study anything in great depth, but it gave me a fantastic overview. I found all of them interesting; this was my problem. I was trying to sort out what really mattered to me. I wanted to find a way to study the human mind, the human psyche. What sort of creatures are we human beings? Why do we do what we do? That's why I took those courses in psychology. They were a terrible disappointment to me at the time: it was all "rats and stats"; nothing about the human mind. So, I gave up psychology, and, in fact, I failed that part of the BA degree; I just didn't turn up for the exam. I didn't like it at all.

At that time, there were no linguistics departments in New Zealand. As a part of my English language and literature major, we did one module

on grammar and phonetics, and while studying for that I remember finding a particular book in the library: *Language and Mind* (1968), by Noam Chomsky. I got excited reading this book! It presented language, first and foremost, as a faculty of the human mind rather than some kind of external system that we learn from the environment. This was language as a system of mental rules and representations, interacting with other mental faculties. Great! I realised that this was the kind of subject matter and the approach that I had been looking for when I was trying to do psychology. The beauty of this cognitive approach to language that Chomsky brought in the 1950s and 1960s was both philosophical and scientific; it involved both those ways of thinking that were so important to me.

I first came to the UK from New Zealand in the 1979/80 academic year, and I did the MA in linguistics at UCL. That was a tough year. I did 2-years work in a single year because of my funding. Very hard work but completely absorbing and rewarding. I was very drawn to Chomsky's foundational thinking about language as a system of principles built into the human mind, but that MA covered a whole range of different subject matters within linguistics. In the end, even more compelling than the Chomskian work, were the courses that I did on pragmatics. The subject matter that fascinated me was ostensive communication and comprehension – this kind of "meeting of minds" of a speaker and an addressee. Also, equally important was Deirdre Wilson, who was such a brilliant and charismatic teacher. She was developing Relevance Theory at that time with Dan Sperber, and she was teaching parts of that theory to us as they were creating it. This was really exciting! Of course, she also taught us about existing more philosophical approaches: Grice's *Logic and Conversation* (1975), and works by other philosophers of language including John Searle, Peter Strawson, and Keith Donnellan (I'm still keen on Donnellan's two uses of definite descriptions – very much a matter of pragmatics!). That's the point at which I got hooked on pragmatics rather than going down the syntax track.

2. And what were your expectations and ambitions at the beginning of your career?

RC: Honestly, I don't think I had any particular expectations or ambitions in those early years at UCL. I was learning a lot, searching around for an

area to which I might be able to make a contribution. I had low confidence in myself at that time and very few expectations about academic life, especially myself within it. I can say, though, that whatever vague hopes I had when I came to London, it turned out they were much exceeded by what I found here. I found great teachers, who had a passion for the material that they were teaching. I realised that you could care about this sort of thing; that it was okay to devote large amounts of time and effort to studying, without being viewed as some kind of "weirdo" (as in New Zealand in my teenage years). I was still very unsure that I could be a part of all of that. I thought it was marvellous, but what role could I play? I had no ambitions at that stage. I certainly didn't imagine I would become an academic at a British university. But then, surprisingly, I got a full-time job at UCL in 1985 as a lecturer, quite a long time before I got a PhD – that would be impossible these days! I didn't get the PhD until late in the 1990s, a clear indication, I guess, of my lack of intellectual direction and confidence.

3. You pursued your doctoral studies with Deirdre Wilson between 1986 and 1994, right?

RC: Roughly speaking... I don't remember the dates very well.

4. The first edition of Relevance: Communication and Cognition *(Blackwell, Oxford, 1986) by Sperber and Wilson was published in those years, so you first-hand witnessed the emergence and the early dissemination of Relevance Theory. How do you remember those years of doctoral training in such a prolific and lively academic environment? Is there some personal anecdote you would like to share with our readers?*

RC: Oh, I don't know about personal anecdotes… but you're right. From my arrival at UCL in 1979 until the publication of *Relevance* (1986), we were learning about its development. It was fascinating to follow how Sperber and Wilson developed the technical concept of "relevance", working out the right trade-off between processing effort and cognitive effects, and ideas about the degree and the kind of relevance that an addressee is entitled to expect from a speaker, and so on. All of that was evolving over those years. There was also the explicature/implicature distinction, and the issue that came to dominate my own work: the contribution of pragmatics to the truth-conditional content (explicature) of the utterance. This was a very contentious issue back then: philosophical

semanticists wanted the truth-conditional content of an utterance to be compositional, a matter of the meaning of the words and their syntactic combination, purely semantic. At that time Sperber and Wilson were saying: «No, there's a crucial pragmatic input!». That's what I ended up working on.

In those years, Relevance Theory brought a fresh perspective to a wide range of topics on language use, including non-literal uses like metaphor and irony, the nature of implicatures, ways of thinking about speech acts. Also, quite fascinatingly, there was work on non-verbal, non-linguistic "ostensive stimuli": gestures, demonstrations, vocalisations of non-linguistic sounds. This is perhaps a little anecdotal. I'll always remember this famous example in *Relevance* of the "ostensive sniff": this was a communicative sniff through which somebody is demonstrating to their interlocutor that they are experiencing something through smell (I think they were at a seaside resort). The person was enjoying the smell of the air, the freshness, anticipating all the good things they were going to do. There was an "array of implicatures" that were communicated ostensively – by a sniff! (*laughs*). That was all intellectually intriguing and fun!

Now I'm going to say a few slightly less positive things – just to keep things in perspective. We were a tiny group of students back then; six of us during the MA in linguistics and even fewer when it came to doing the PhD. There was no real research community at that time, certainly not among the students. There were much fewer facilities for doctoral students than there are now. There was no clear structure to the degree or the supervision process. I personally found those very hard years, too solitary and lacking direction, and I remember several of those few students dropping out. You were just largely left to get on with it on your own. I realise that the pressures on students nowadays are very intense – I see that with my PhD students. But I think that things are better now in many respects: there's a much stronger sense of research community, there are graduate conferences, and funding available for students, so they can meet other researchers from other centres (which is so important!). In the UK, there's now a clear structure to the 4 years of the doctoral programme. I think that helps keep people on track.

Well, you know, I'm probably not being completely objective about all this in retrospect… I just came unstuck during those years, a matter of my own psychology probably. I drifted about rather desperately at times. I did manage to do my teaching and my admin because I had the job, but I was very lost on the research side. I effectively gave up on the PhD dissertation for several years. Eventually (long story short), I managed to

pull myself together, in the 1990s, and did finally complete the doctorate – I think it was around 1996. That was a huge thing for me after the struggles of the earlier years. After that, I began to see myself as having a proper academic career. I started to publish more papers and I became more confident and more ambitious. But, all in all, it was a pretty rocky start to an academic career!

Part II: Relevance Theory and the semantics/pragmatics distinction

5. Let's focus now on Relevance Theory, the framework on which you mostly worked during your career. Relevance Theory is typically described as a "post-Gricean" approach to the study of language use. How would you characterize the significance of the "post-" prefix in this context, particularly in relation to the major departures of the theory from Grice's philosophical program in pragmatics?

RC: Pretty literally, "post-Gricean" applies to any pragmatic theory that came after Grice's conversational logic and built on his crucial insights. I'll mention three of these. First, that speaker meaning goes far beyond encoded or conventional linguistic meaning. Second, that speakers are rational agents who observe certain standards of communicative behaviour. For Grice that was the Cooperative Principle and the various maxims; even if you don't hold with the maxims, I think the idea that there are certain standards of communicative behaviour is very important. Third, that understanding utterances, or ostensive stimuli generally, is crucially an inferential process. Of course, there's an important component of linguistic decoding if we're using language, but that is never sufficient. Pragmatic inference always plays a major role. For me, those are the key insights that any "post-Gricean" theory will have, and Relevance Theory maintains all of those.

Some other post-Gricean pragmatic theories keep much more closely to other Gricean precepts. For example, having different conversational maxims that interact in different ways: informativeness, relevance, truthfulness, and so forth. Other theories have maintained Grice's saying/implicating distinction, whose "saying" part is quite close to "pure decoding" – it didn't allow for a great deal of pragmatics at the level of "what is said". Some of them, known as "neo-Gricean" theories, have also preserved other distinctions, such as the one between generalised and particularised implicatures and the one between conversational and conventional implicatures. The names that come immediately to mind in

that area are Larry Horn (2004) and Stephen Levinson (2000), who developed the Theory of Generalised Implicatures using interacting maxims.

But as your question indicates, Relevance Theory departs much more radically from Grice, even though it does build on the three key insights that I mentioned. It has just one Communicative Principle of Relevance; it gives a much greater role to pragmatic inference on the explicit side of communication; it doesn't make any distinction between generalised and particularised implicatures, and it has no category of conventional implicatures. Most fundamentally, it is grounded in human cognition and sees all human cognitive processes as fundamentally relevance-driven. It's not a philosophical theory as Grice's was; it aims to go beyond what he called "rational reconstructions" of pragmatic processes. Moreover, Deirdre Wilson, and especially Dan Sperber, have been adamant that the theory must be answerable to empirical testing. So, to summarise: Relevance Theory is "post-Gricean" and it does build on those key Gricean insights on the nature of communication, but it is a cognitive-scientific theory rather than a philosophical one, and it also doesn't fall in with the "neo-Gricean" theories.

6. Despite not being primarily a philosophical theory, you played a major role in developing Relevance Theory in the scope of the philosophy of language. Your early work focused on a highly debated issue in the field: the boundary between semantics and pragmatics. In your book, Thoughts and Utterances: The Pragmatics of Explicit Communication (*Blackwell, Oxford, 2002*)*, you argue for the fundamental contribution of pragmatic inferential processes in the determination of the truth-conditional content of utterances, thus departing from the standard compositional view in philosophy of language. Can you provide some insights into your view on the semantics/pragmatics divide?*

RC: This is a very tricky distinction. The first thing that we need to be clear about is that there are at least two different notions of semantics. The key notion in the philosophy of language is of semantics as truth-conditional content. The more psychological/linguistic notion sees semantics as encoded linguistic meaning: whatever the language faculty in the mind "spits out" for any given sentence of the language. It comprises the mentally stored meanings of words and whatever meaning is encoded in the syntax of the sentence. These two notions of semantics seldom, if ever, actually coincide. The hearer, whose goal is to grasp the propositional or truth-conditional

content that the speaker intends to convey, will inevitably have to deploy some pragmatic inference to do so. Given these two different notions of semantics, we get rather different semantics/pragmatics distinctions: on the one hand, a distinction between truth-conditional content and implicatures; on the other hand, a distinction between linguistically decoded meaning and pragmatically inferred meaning. The basic distinction in Relevance Theory (the one that I've mostly worked with) is this second one, a processing distinction between decoding and inference – but of course, we recognise the former distinction, even if we don't call it "*the* semantics/pragmatics distinction" (roughly speaking, it corresponds to what we call the explicature/implicature distinction).

I've gotten very involved in long debates with philosophers of language who endorse a minimal semantics, the idea that every sentence uttered expresses a "minimal proposition", as Emma Borg (2004) calls it. This proposition is semantically expressed but is typically *not* what the speaker intends to communicate. I think that the debate went on a bit too long and it got a bit torturous… In the end, I came to the conclusion that the difference between us wasn't really so huge: we both agree that what you get from the linguistically decoded meaning alone is *not* the propositional content that the speaker intends to communicate (which is what really matters if you're doing pragmatics!). Then, the difference between us is just whether or not the linguistic meaning should be construed as truth-conditional (fully propositional) or not. That is not such a huge issue, especially for those of us who are focusing on what is communicated. If semantic minimalists want to maintain that a sentence semantically expresses a minimal proposition, okay, but that is not what the speaker intends to communicate, typically.

I think there is another question in the area of the semantics/pragmatics distinction which is worth thinking about. If we take the distinction to be one between encoded linguistic meaning and pragmatically inferred meaning (as I do), we might ask how sharp that distinction is: isn't it rather blurry? Isn't it constantly shifting around? Well, yes! Given the nature of word meaning as something which is constantly evolving, then the distinction is very fluid and it's probably fair to say that no two native speakers of a language have exactly the same semantics/pragmatics distinction. A word might be semantically polysemous for me; I might store in my mental lexicon several related meanings for a word, while another person might pragmatically infer one of those meanings from the other in the context of utterance, or vice versa. Consider the word "colourful" in English: I think it has to do with

something visual, but some people use it to describe music. I suppose for musicians "colourful" is just polysemous: it has a visual meaning and an auditory meaning. Whereas I have to do a little bit of inferential work to think about what colourful is when applied to a piece of music. That's the kind of thing that I have in mind here. This doesn't mean that the semantics/pragmatics distinction isn't important; I think it is a crucial distinction. On any specific occasion of use, a particular hearer will retrieve some of the utterance's meaning via her stored linguistic knowledge (so via semantics) and some via context-sensitive pragmatic inference.

7. A possible reading of your construal of the semantics/pragmatics divide seems that, when applied to natural languages and communication, this divide could be replaced by the more relevant distinction between syntax and pragmatics, which is somehow similar to what Chomsky (1995: 26) suggested: «[…] it is possible that natural language has only syntax and pragmatics». Is this a proper reading of your view?

RC: Uhm… I've used that quotation. I really like it, but I don't think it's quite like that. I wouldn't say there's nothing that we can call "semantics". I think that what Chomsky himself was disavowing in that quote is the utility of any kind of externalist-referential semantics. He has an internalist position on every aspect of language. For him, there is what the language faculty gives you: some set of representations, which he calls "syntax". Then, there's what the pragmatic performance system does with that linguistic output, which results in a further set of mental representations: explicatures and implicatures.

It seems obvious to me that there is some internalist semantics/pragmatics distinction because there are established or conventionalized senses of words – words whose meanings are stored in our mind (we don't have to figure them out during utterance comprehension), and there are certain constraints on the meaning of a sentence that are imposed by its syntactic structure. Collectively, you can call that a "semantic representation", the joint set of established word meanings and the bits of meaning that you get from the syntactic structure of a sentence. I think Chomsky used to call it "logical form" to distinguish it from syntactic representations, and that's the input to pragmatic processing. That's the kind of semantics/pragmatics distinction that I'm partial to. This is all internalist, all cognitive; it's ultimately a matter of deriving conceptual representations of the external world.

What I most like about the Chomsky quote is not so much that he seems to be dropping semantics from the picture (I think he must surely acknowledge some element of conventionalized lexical meaning). Rather, that quote is one of the rather few places where he mentions pragmatics, and it's probably the only place where he explicitly puts syntax and pragmatics together. He talks about natural language consisting of internalist computations (i.e., syntax) and performance systems (e.g., pragmatics) that access those computations along with other information and beliefs that we have, and carry out their instructions to enable us to talk and communicate. I worry that our work in pragmatics hasn't engaged enough with the very productive work in linguistics on syntax and lexicon that has been done within the generative program initiated by Chomsky. Quite separately, we've been doing productive work on cognitive pragmatics in Relevance Theory. However, there has been very little collaborative work between these two approaches. I read Chomsky's quote as a kind of encouragement to try to draw them together into a broader picture of language, as both a formal computational system and a communicative system. That's what my most recent work on words is trying to do.

Part III. Lexical pragmatics and figurative language

8. We will surely come back to this later on. Let me now shift to a further aspect of your work. In collaboration with Deirdre Wilson (cf., Wilson & Carston, 2007), you have pioneered an innovative research program in pragmatics that aims to investigate the contextual aspects involved in the real-time construction of lexical meanings, which falls in the domain of lexical pragmatics. This approach requires dismissing any definite demarcation between literal and figurative uses of language. Can you provide a more detailed explanation of this particular standpoint?

RC: Deirdre Wilson and I had a project in the early 2000s in which we tried to develop a unitary account of how word meanings are adjusted or modulated in the process of online comprehension. The starting point is the idea that the concept communicated by a speaker with a word is very often not one of the concepts encoded by the word (not stored as part of the word's lexical entry). Rather, a word's encoded meaning provides the starting point for a pragmatic inferential process that will result in the concept communicated by the speaker. Of course, there's an important relationship between the encoded concept and the communicated concept.

The speaker has chosen that word with that encoded meaning because it is the best one available to her to enable the hearer to infer the intended meaning. We often talk about that intended meaning as an *ad hoc concept*: that's the concept that has been pragmatically inferred in a particular context and it might just be a one-off occurrence. It might never occur again, or it may recur; in a few cases, it may eventually become one of the encoded meanings of the word by an ongoing process of conventionalisation (I think that's the source of a lot of semantic polysemy). The *ad hoc* concept might be narrower in denotation than the original encoded concept, or it might be broader, or it might be some sort of combination of the two which ends up with an overlap in the denotations.

Coming now to figurative uses like hyperbole and metaphor, the idea is that these involve *broadening*. For example, if I say about my cat: «Minnie is a princess», it's clear that the denotation of the word "princess" has been extended to include a range of creatures that are not actual princesses. The original claim about metaphors from Sperber and Wilson (1986) was that it is a radical case of *broadening*, or *loosening* of the encoded meaning. Moreover, they said that there is a loose-use continuum that runs from minor cases of broadening (e.g., «My garden is square»: it's very unlikely that my garden is a true square with four right angles), through more noticeable cases, like «France is hexagonal», or «Italy is a boot» as approximations about the shape of those countries. Then, we go to cases of extending brand names. Nowadays, we say «I'm going to *hoover* the bedroom» to mean: using a vacuum cleaner to clean the bedroom. "Hoover" was just a brand of vacuum cleaner; now it has become a common noun and I used it here as a verb ("to hoover"). Then, we get to hyperbolic cases: «I hate my office. It's a cupboard», meaning that it's horribly tiny, too small, not functional. And then, we have metaphorical cases like the "princess" example.

I think that there are two important claims here. First, there's a *single* pragmatic process of lexical adjustment or meaning modulation that applies to all these cases. It's a single process, but it may have a range of different outcomes and we intuitively give certain labels to them: approximations, hyperboles, metaphors, and so on. The second crucial claim from Sperber and Wilson (1986), is that there's no sharp delineation to be made between these different kinds of concept broadening. There's no clear cut-off point between approximation, hyperbole, and metaphor.

However, if we look at central cases of each category, I personally think that they tend to have distinctive characteristics. For instance, hyperboles tend to involve a merely *quantitative* difference from the

encoded concept, much like a broadening along a scale. In the "cupboard" example above, that is a size scale; and hyperboles tend to be evaluative (this one is negatively evaluative). But if I say: «You are the most brilliant person I've ever met», that would obviously be a positive hyperbolic evaluation, again quantitative. In metaphorical cases, the *ad hoc* concept that we derive often results in a more *qualitative* difference from the encoded concept, not merely a quantitative one. In the example «Minnie is a princess», I'm not conveying that she has more of some property than actual princesses; rather, that she has certain stereotypical properties that we associate with certain princesses (e.g., being haughty, spoiled, demanding attention, etc.). And, of course, there are combinations: hyperbolic metaphors like «She is a saint», said of a very kind person.

In my work on metaphor, I've tried to find a way of getting at the difference between hyperbole and metaphor. Metaphor typically involves both broadening and narrowing of the denotation of the original concept: the new *ad hoc* concept PRINCESS* includes certain non-princesses (like my cat), but it excludes certain actual princesses (not all princesses are haughty, spoiled, and demanding of attention). Hyperbole just involves broadening. I agree that there may not be sharp demarcations along the way on this loose use continuum, but there are certain characteristics of the clear cases in each of these categories that we can pull out.

But you were actually pointing to a trickier question for me: you said that in Relevance Theory there is no clear demarcation between literal and figurative uses of words. Uhm... Yes, that's what Sperber and Wilson say, you're right! But I tend to think there is probably a distinction to be made, simply because the metaphorical use involves dropping a key defining property of the literal concept. In the PRINCESS* case, the property of "being a member of a Royal family" is intrinsic to the literal meaning of the word "princess", but it gets dropped when I'm using "princess" metaphorically. If we think of the loose use continuum as having literal meaning at one end, and metaphorical meaning at the other end, then I think there *is* a clear distinction. But there are a lot of intermediate cases along that continuum that don't fall clearly into one category or the other.

I would like to say one other thing before we move on: I want to acknowledge parallel independent work in lexical pragmatics by the philosopher François Recanati, as represented in his book *Literal Meaning* (2003) – quite early on actually. I want to put this down: François has been a really important philosophical influence on my work over many years, and very intellectually supportive too.

9. It's interesting to hear how your view, despite being strongly influenced by Sperber and Wilson, also tends to depart on some specific points from their view. Relatedly, in some of your recent papers (Carston, 2010; 2018), you have reevaluated the relevance-theoretic propositional account of metaphors by emphasizing the need for a deeper exploration of the role of mental imagery in the process of metaphor comprehension. How can mental imagery be integrated into pragmatic theories of metaphor, and what are your insights regarding its role in metaphor understanding?

RC: I tend to think that mental imagery is not an essential component in the comprehension of language, whether literal or metaphorical language. I do think that imagery (especially visual) is often automatically activated in the minds of hearers/readers as a kind of by-product of their standard linguistic and pragmatic processes. It would be surprising if someone described a landscape to me (mentioning the colours, the shapes) and it didn't link up in some way with my visual memories about landscapes. It's part of the way the brain is constructed that mental imagery will be activated automatically when we're using language – not just metaphorical language. Writers can exploit this fact about the way our minds are set up: they can enhance the impact of imagery by producing extended or very creative metaphors. I think those tend to slow down our standard fast process of comprehension. We move on very fast in conversation, so if we use a metaphor, and if some imagery is triggered, it's not usually given much time for people to dwell on. However, with more creative extended metaphors that literary writers produce, the imagery can rise above some threshold of consciousness, and for some people at least, it can become available for inner contemplation. You can actually experience and enjoy this effect of metaphor: it's a highly significant "non-propositional effect".

        When I was reading about the available experimental evidence on mental imagery and metaphor processing, I felt that the experience of imagery during metaphor comprehension was a by-product, a side effect of other processes. It is made more salient in our minds due to factors like novelty, creativity, and extendedness, from which follow a slowing down (i.e., a use of more cognitive resources) in arriving at an interpretation. But even if conscious mental imagery is just a cognitive side effect of these standard linguistic and pragmatic processes of verbal understanding, it can have considerable significance in a number of ways. It can be the most memorable effect that a metaphor has on its audience. I have one example here – the example of the heron. It comes from a guy who goes for a walk, observes the landscape, and writes about what he sees:

[…] a heron launched itself from low ground to our south, a foldaway construction of struts and canvas, snapping and locking itself into shape, just in time to become airborne, […] (Macfarlane 2013, pp. 298-299).

That's a brilliant description, incredibly visually imagistic: you see the parts of this big ungainly bird, the legs, the wings, the neck, and the head, moving into position very awkwardly as it prepares to take off from the ground, to take flight… For some readers (including me) this image is probably the most pleasing and memorable effect of the description. This could well be the effect that the author actually sets out to achieve and wants the audience to experience. In that respect, it's part of the meaning (in a broad sense) that is shared by the speaker/writer and the audience/reader.

I suppose that imagery of this sort could also provide valuable input for the derivation of the propositional cognitive effects that the speaker communicatively intends. Imagery may help to increase the manifestness of an array of propositions that contribute to the relevance of the utterance/the text. These propositions may be accessed by the hearer/reader through mental imagery and accepted as weakly communicated – that's the idea of "weak implicatures", which is very important in Relevance Theory for evocative uses of language. That seems plausible to me for that famous haiku poem (discussed in Sperber & Wilson, 2008):

On a leafless bough
A crow is perched –
The autumn dusk.
                    Bashō (1680), transl. by Joan Giroux (1974: 81)

Here the visual imagery of the poem could make manifest to a reader a vast array of propositions having to do with the landscape, the time of year (winter is coming), the end of a day (it's getting dark), and possibly further associations to do with aspects of human life: old age, loneliness, loss – all of this from a mental image of a crow on a bare branch.

To give a more direct response to what you're asking me: I think mental imagery can contribute to the propositional effects of a metaphor, and it is intrinsically what makes many metaphors aesthetically pleasing and

memorable.[1] I don't think that mental imagery is absolutely central to the study of pragmatics, but it can play these interesting roles.

Part IV. Word meaning and lexicon(s)

10. Let's focus now on your ongoing research about the nature of words and lexical meaning, in which you dedicate particular attention to the phenomena of polysemy and lexical innovation. In some recent papers (Carston, 2019; 2021; 2022; 2023), you build upon a distinction between a formal, syntax-based linguistic lexicon and a pragmatic-communicative lexicon. What is the difference between the two, and why do you consider this distinction to be relevant for studying lexical innovation?

RC: There's been a huge surge of interest in the topic of polysemy recently, and across disciplines: philosophy, linguistics, and experimental psychology. The psychology work has been particularly interesting to me because it seems to support the theoretical distinction between homonymy, where you have the same phonological form but unrelated meanings (e.g., bank/bank), and polysemy, where you have one word with several interrelated meanings. But also, within polysemy, experimental psychologists have found interesting differences between cases that involve metaphorical meanings, which are closer to cases of homonymy, and cases derived via metonymy (these seem to be more closely related than in metaphor). It's a very interdisciplinary area. In my own work, I've tried to bring together work on polysemy within formal syntax and work in lexical pragmatics on lexical innovations that are negotiated between speakers and hearers in a communicative context. It's quite a complex picture; I'm still trying to work out a lot of the details involved.

I've given several talks concerning the two lexicons and some people feel that I've introduced an unnecessary redundancy. Why should there be two lexicons? I think the problem is partly the label "lexicon" (and the related notion of a lexical entry), because we can think about the formal linguistic lexicon as being just a *list of roots*, which is very unlike standard notions of a lexicon. Recent work in generative syntax (which is influencing me) gives no special status to what we, as ordinary language users, think of

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[1] I feel that people with "aphantasia", who are unable to experience mental imagery, are missing out on a significant experience here, even though it seems that they can often grasp the propositional effects of a metaphor and the implicatures that it conveys.

as words. On this view, a complex word like "naturalization" in English is just a phrase, as much as "jump over the fence", or "big red ball". The phrase "naturalization" is made up of a root (√nature) and a bunch of additional grammatical elements, which give us "natural" (the adjective), "natural-ize" (the verb), and "natural-ization" (the noun). This forms a hierarchical structure, typical of human syntax. In this approach to syntax (which I find very appealing), the basic atomic units are not words, but roots. Roots have no syntactic category in themselves, they only become categorized when they are inserted in a syntactic structure. Here's an example: take the phonological form "stone" in English; it manifests as a noun ("the stones"), as a verb ("they stoned him"), and as an adjective ("the stone house"). From a single root (√stone), you get three different phrases from a syntactic point of view. That's what I'm getting at with the linguistic lexicon: it's just a list of uncategorised roots.

Now, the more familiar notion of the lexicon is the pragmatic-communicative lexicon, which stores what we intuitively think of as words: nouns, verbs, and adjectives, units that we manipulate in communication. Words are pretty salient to language users; they are the basis for our creation of new meanings. Let's take the metaphorical meaning of the word "mouse" (e.g., «That woman is a mouse»). To understand "mouse" in the metaphorical case, the hearer accesses the noun "mouse", which denotes the little animal, and they work with what they know about the little animal to derive the metaphorical meaning. What we are using, as negotiators of meaning in communication, are words. Words are stored in this pragmatic-communicative lexicon; not roots, but syntactically categorised phonological forms (and typically, they are polysemous: they have families of meanings).[2]

11. Do you take this distinction between kinds of lexicon to be reflected at the level of the cognitive architecture of our language faculty

RC: Yes, I do think there is an architectural difference, and here I'm just following the Chomskian syntacticians. While the list of roots is a component of the narrow language faculty (i.e., the formal computational system), what I'm calling the pragmatic-communicative lexicon is *not* a component of that narrow faculty. Many syntacticians would refer to the

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[2] Even phrasal units like idioms (e.g., "spill the beans") with a non-compositional meaning are stored in the communicative lexicon.

pragmatic lexicon as "the encyclopaedia" (that's how they distinguish it from the syntactic and phonological systems, i.e., the structural core of language). Chomsky himself – as you know, I'm a Chomsky fan – makes the distinction between the narrow language faculty and the broad language faculty. The latter contains many other components: on the one hand, the sensory-motor systems, which are responsible for the actual production/perception of utterances; on the other hand, the conceptual-intentional systems, which interestingly he sometimes calls the semantic/pragmatic systems of the mind. But they lie outside the narrow language faculty. What I'm calling the communicative lexicon is a component of these conceptual-intentional systems of the mind.[3] So yes, there is this cognitive architectural distinction between the linguistic list of roots and the individual language user's lexicon consisting of all the words/idioms that they know and their multiple meanings.

12. How should we conceive the relationship between these two lexicons?

RC: That's a really hard question. I certainly don't have a comprehensive answer to that; it's something I'm still thinking about. At a formal level, it's perhaps not so difficult: we can think of the narrow syntactic system as interfacing with the pragmatic lexicon. Let's take the word "naturalization" again. From the syntactic point of view, that can be thought of as a piece of structure in a syntactic tree; then, by some means or other, that piece of structure interfaces with the pragmatic lexicon (i.e., it maps onto the atomic concept which is its meaning). We might paraphrase that meaning as "becoming a citizen of a country". Importantly, that's an atomic meaning; it is *not* a compositional function of the meaning of the structure's parts. That meaning is stored in the pragmatic-communicative lexicon – the same goes for any substantive conceptual word (and its non-compositional meanings).

    Although we can give a formal account of how the two systems link up, there are many open questions. The structure "naturalization" and phrasal idioms like "spill the beans" map onto the pragmatic lexicon; a phrase like "big red ball" does not. We need some way of distinguishing the

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[3] I don't use the word "encyclopaedia" because I make a further distinction between the atomic or non-compositional concept and the accumulation of general knowledge about the denotation of the concept, which is what we call "the encyclopaedic entry" in Relevance Theory.

structures that map onto the pragmatic lexicon, and the structures that do not (e.g., "big red car"). That's something that some syntacticians are working on.[4] But the really hard part is to specify how this works in actual online usage: how does a hearer, who is parsing a speaker's utterance, millisecond by millisecond, move between the two systems, by assigning a syntactic structure, accessing a stored non-compositional meaning, and then integrating the structure and the meaning? That's the part that I need to think a lot more about; I haven't seen any work on that.

13. In a recent paper (Carston, 2023), you interestingly point out that "words straddle the syntax/pragmatics divide": on the one hand, they are phrasal entities generated by the syntax; on the other hand, they are meaningful units of communication that are salient for language users. As you already pointed out, your current work on the nature of words builds an interaction between two lines of research that rarely interfaced in the past: the generative program in syntax, and the relevance-theoretic program in pragmatics. How do you perceive the relationship between these two programs?

RC: You're right that there hasn't been a lot of interaction between these two research programs – indeed, between syntax and pragmatics more generally. This is kind of ironic for me, as somebody who has been working in Relevance Theory for all these years at UCL. My department there has been the main home for relevance-theoretic pragmatics due to Deirdre Wilson, who was a professor there for many years; but it's also a strongly theoretical linguistics department, where syntax in the Chomskian generative tradition has been absolutely central for decades. Neil Smith, who has sadly recently passed away, led Linguistics at UCL for many years, and he was a champion both of Chomsky's work and of Sperber and Wilson's Relevance Theory. He managed to keep both as key components of all our degrees, the BA and MA in linguistics and PhDs. He once expressed to me the worry that there was little interaction between the two fields. I can see reasons for that. First of all, the formal syntax is formidably technical – I find it really tough, and I can't keep up with a lot of it. For a non-specialist whose primary research is in pragmatics, it's hard to come to

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[4] I think Hagit Borer has a very good account of this "syntactic domain of content", as she puts it (Borer 2013; 2014).

grips with it, and it's even harder to know which of the various competing theories might be most amenable to interfacing with pragmatics. On the other hand, theoretical syntacticians have not been that interested in language use, production/comprehension performance, and the actual processes that we deploy in online communication. They tend to look at syntax in abstract formal terms, as a knowledge system of the mind. The situation might be changing a bit now, on both sides. I think there is greater openness.

When I began to work more seriously on word meaning, I suddenly realised that in Relevance Theory we've got to go beyond looking at how meaning works for mono-morphemic words (e.g., "run", "dog", and "blue"). When I started to look at more complex words (e.g., "natural-ization", "reaction-ary", "univers-ity", "social-ism"), it was obvious that although they have a lot of internal structure, they have a non-compositional pragmatic meaning. I thought then that here was a really promising area for bringing syntax and pragmatics together. I was lucky because I have a colleague and friend who is an amazing syntactician, Hagit Borer. I was really attracted to her work on roots and syntactic polysemy, and I decided that this was the approach to syntax I would focus on. It has turned out to be highly productive for me to put together what she was doing on syntactic polysemy with what I was trying to do on pragmatic polysemy.

Part V. The future of Relevance Theory

14. This looks an interesting and promising avenue for future research. Beyond that, what are, from your perspective, the main open problems and challenges that Relevance Theory should address in the coming future?

RC: First of all, there is one area in Relevance Theory that led to some very interesting insights in the 1990s/early 2000s, but that seems to have largely disappeared in recent years: the area of procedural meaning. Diane Blakemore (1987), a good friend of mine, did ground-breaking work on that. More generally, she made an important distinction between *conceptual* linguistic meaning and *procedural* linguistic meaning, and she saw it as mirroring a general distinction between mental representation (the conceptual side) and mental computation (the procedural side). Her idea was that while most substantive words (nouns, verbs, adjectives) contribute a concept to the meaning of an utterance, there are other words or phrases that instead provide a kind of constraint on pragmatic inference, i.e., they give

the hearer some guidance on how they should process the upcoming conceptual content. The classic case is the word "but". The truth-conditional content of "but" is not different from the meaning of the conjunctive connective "and", but of course, it does encode something quite distinct. It's hard to pin down exactly what it encodes; it's something like "the next statement is going to be at odds with/somewhat contrary to what has gone before". Take this example:

«He hasn't published much, *but* he's a brilliant teacher».

The first part might lead to the implication that we don't want to employ him. The "but" gives the hearer a little indication that you're about to say something that might go against that implication. «[...] he's a brilliant teacher» might have the implication that maybe we should consider employing him. Blakemore (1987; 2002) proposed the fascinating idea that there's a sort of procedure encoded by the word "but": it doesn't give you a concept, but it tells you how to process the upcoming statement against the preceding statement. She developed this idea for a lot of discourse connectives, like "nevertheless", "after all", "anyway", and the really tricky one: "well". Each of these encodes a procedure, a kind of processing instruction. This idea was picked up in the 1990s by quite a few doctoral and post-doctoral students who came to the UK from across the world. They came with knowledge of lots of different languages, and they applied the notion of procedural meaning to different linguistic elements in those languages. What's missing for me now, though, is any strong theoretical work on that conceptual/procedural distinction – there hasn't been any for quite a while. For one thing, I think we could do with considerable clarification about how we are supposed to tell whether some word has procedural rather than conceptual meaning. It has all become a bit blurry and has probably been over-applied to many different linguistic items. Unfortunately, Diane Blakemore retired from academic life a while ago, and no-one's taken up the challenge of investigating this further. So, that's one thing that it would be great to see happening in the future.

There are many others… Not so much "problems and challenges" perhaps, but there are areas on the brink of making interesting discoveries. One of those is developmental pragmatics: looking at children's developing communicative competence, their ability to infer implicatures and to use language figuratively, and the extent to which those abilities link up with their general theory of mind (i.e., the ability to attribute mental states such as beliefs and intentions to other people). This is a flourishing area and

there's a lot of nice relevance-based experimental and theoretical work being done on young children's language production/comprehension. I have a colleague here at UCL, Nausicaa Pouscoulous, who is a specialist in this area, and one of my former PhD students, Ingrid Lossius Falkum, is running several projects at the University of Oslo on children's figurative language use (metaphor, metonymy, irony). This is an area that is attracting a lot of doctoral and post-doctoral students now, so I think it's going to continue to develop in interesting ways.

I'm going to mention one more area, one which I'm excited about. It's the comparative work that is being done on different kinds of communication throughout the animal kingdom, and the extent to which we do/do not find precursors to human communication in other species. The communicative behaviour of many different species is being investigated by biologists and cognitive scientists (e.g., birdsongs, whales' whistles and click calls, dog-human communication,…), certainly not confined to the communicative behaviour of primates, like chimpanzees and bonobos. However, when it comes to ostensive communication (i.e., the focus of Relevance Theory pragmatics), I do think the great apes are especially interesting because there's some evidence that they can carry out some sorts of ostensive behaviours (or something that seems very like them). They have some ability to take account of what other creatures do/do not know, they seem to have some rudimentary theory of mind, and there's some beautiful work by the psychologist Juan-Carlos Gómez showing that they use communicative eye contact and gaze – at least enculturated apes interacting with humans do (e.g., they look their addressee in the eyes before they point at what they want). I think this is a fascinating area!

To bring it back to Relevance Theory and to crosscut both the areas that I've just mentioned (children's pragmatic development and other species' communication), I believe that Dan Sperber is working on refining/extending the notion of ostensive communication, based on the fact that there are many different ways of manipulating the attention of another person, covertly or overtly. We are starting to look at ostensive communication more broadly than before: it need not always involve a hearer attributing a complex communicative intention to the speaker. There has always been a worry that young children might not be able to do that because communicative intentions are embedded, metarepresentational… Yet kids are good communicators. It also seems that chimpanzees and bonobos don't attribute "communicative intentions" to each other, but they do seem to overtly manipulate the attention of others and to raise expectations of relevance, i.e., that what they're directing the other creature

to attend to is going to be relevant. In a recent paper, Sperber (2019) writes about the interplay between non-ostensive, proto-ostensive, and fully ostensive communication in human interactions, all of them involving different kinds of attention manipulation. He talks about the fluid way in which we move between the ostensive and the non-ostensive in our communicative interactions, and how they may co-occur in the same interaction. This is exciting new work in Relevance Theory, and it promises to build continuity between adult human ostensive communication, infant communication, and the communication of certain other species. So, these are some of the ways in which I see Relevance Theory going forward.

Part VI. Interdisciplinarity and experimental pragmatics

15. From 2017 to 2020, you were the President of the European Society for Philosophy and Psychology (ESPP), a distinguished Society that fosters collaboration between philosophers, psychologists, and linguists. Additionally, you serve as one of the Editors of the Journal "Mind & Language", which offers a broad international platform for interdisciplinary research about topics intertwining language and mind. How do you perceive the impact of interdisciplinarity in the field of pragmatics?

RC: I think the interplay between these disciplines is absolutely crucial to the development of pragmatics. It has always been there since the beginnings of Relevance Theory in the 1980s: Deirdre Wilson brought to its development a strong background and training in both philosophy, which she did at Oxford, and linguistics, which she did at MIT. Dan Sperber was first and foremost an anthropologist but with a very cognitive scientific orientation to his anthropological work, and he has been one of the pioneers of experimental work in pragmatics, along with Ira Noveck and Richard Breheny.

In my earliest work in pragmatics, I was massively influenced by the philosophy of language, not only Paul Grice's work but also more contemporary work, especially that of François Recanati. But there were many others: Kent Bach, Emma Borg, Rob Stainton and Stephen Neale, to name just a few philosophers who have made a major impact in pragmatics and influenced my own thinking. In my more recent work on word meaning and polysemy, I've looked at a large body of work in experimental psychology, some of it directly testing Relevance Theory's predictions

about the processing effort and the cognitive effects of particular uses of language. Overall, I've tried to keep all three perspectives and approaches in mind whenever I've tackled a topic in pragmatics and I'm especially hopeful that I've managed to do that in my recent papers on word meaning. I think the biggest challenge has been to pull in work from core linguistics, i.e. from syntax, along with the philosophy and psychology. This degree of interdisciplinarity makes pragmatics quite a difficult area to work in because for virtually any of the key topics there are at least these three different disciplines that you've got to try to keep up with. All of them are producing a wealth of literature to be read and digested. Then, if you add to that the relevant work on children's development and animal communication as I've mentioned, and the most recent work on the formal computational modelling of pragmatic processes… it can feel kind of endless! But it's also what makes it so interesting and intellectually enriching.

Both the ESPP and the journal *Mind & Language* have provided a natural home for contemporary pragmatics precisely because of their interdisciplinarity. Being involved with both of them has been really important for keeping me exposed to the ideas and the different perspectives of these various disciplines. I've been very fortunate in that way.

16. You have mentioned the collaboration between Dan Sperber and Ira Noveck which more than 20 years ago initiated a real experimental turn in the field of pragmatics. The advent of experimental pragmatics and the collaboration with scholars from experimental psychology, brought pragmaticists to test their intuitions on pragmatic phenomena and to provide empirically testable predictions from their theories. Being primarily focused on theoretical aspects of pragmatics, how do you navigate and engage with the flourishing field of experimental pragmatics?

RC: Well, I struggle along, basically (*laughs*). Over the years, I've learned to read a variety of graphs and different results from experiments; I'm still a bit slow trying to decipher them.[5] But I have a rough idea of what an ANOVA is and what makes an experimental result significant, and I think I can tell a good experimental design from a not so good one...

I've been lucky because I've had access to experimental pragmatics work for many years, first of all through Dan Sperber. I followed his early

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[5] Sometimes at conferences they flash them up on their PowerPoints… I'm still trying to work out what they mean, and they disappear! (*laughs*)

experimental work with Ira Noveck which tested Relevance Theory's prediction about the effort involved in deriving generalised conversational implicatures (such as the well-known scalar implicature cases). The Relevance Theory prediction was that there would be a certain amount of effort involved in this, as opposed to the prediction coming from Stephen Levinson's (2000) default view of generalised implicatures, which sees them as a kind of automatic inference (so not effort-demanding). That is my earliest memory of an important theoretical dispute which got tested experimentally. Then, in 2007, I spent a term in Ira Noveck's lab in Lyon where I was more exposed to the day-to-day work of experimentalists – and it's a pretty hard work, I must say! Then, there is Richard Breheny (he and I are in the same linguistics department) who has been a central figure in developing experimental pragmatics. He is currently the Head of the department, and he has instigated a thriving experimental research program at UCL. He has done very significant experimental work himself: on scalar implicatures, negation, presuppositions, and now he's starting to look at metaphor processing. Largely due to him, experimental work in pragmatics and linguistics more generally has now become a major component of our linguistics degrees. Another important connection for me is the very valuable interaction with Valentina Bambini in Pavia. She's especially oriented towards neuroscientific methodology, such as EEG and fMRI, and she gives me a lot of support on that.

I'm never going to be an experimentalist, but I have a wide range of contacts who are, and I'm lucky that I've been working more closely with them in recent years.

17. Being part of this broader network of researchers with different expertise is also bringing you to embark on more empirically oriented projects, right? I saw that you recently published an interesting experimental paper on metaphor processing (Carston & Yan, 2023), where you suggest that referring uses of metaphors could be more costly than predicative uses. Can you tell us a bit more about this project? Are you planning to conduct further empirical work in the future?

RC: Thank you for asking about that, I'm excited about this whole area. That particular work with Xinxin Yan grew out of our curiosity about divergent results in the existing experimental literature testing the processing effort involved in comprehending metaphorical language. Intuitively, you might expect a metaphor to be more costly to process than a

literal counterpart, because you typically get more cognitive effects/benefits from a metaphor. The Relevance Theory account could be interpreted as "more effort, more effects", so more effects must have involved more effort. Certainly, some experimental studies seemed to show that, e.g., Noveck et al.'s (2001) results showed that metaphorical processing was more demanding of cognitive resources than literal counterparts, but the majority of experiments on metaphor processing indicate that there's very little (if any) processing difference between metaphorical and literal use when metaphor is properly contextualised. Those latter findings led to Ray Gibbs's "direct access view" of metaphor, according to which you don't have to go via the literal meaning to process it, there's a much more direct route to metaphor (so it's not particularly costly). The disparity across the various results was a bit baffling to me, and I thought: "Well, I've got to figure out what's going on here". I did a survey of experimental work on metaphor processing, and I found that the experiments which reported extra processing effort entirely used referential metaphors, e.g., «The little tadpoles can get out of the pool», where "the little tadpoles" is used to refer to a group of children. By contrast, studies that found no significantly greater processing effort generally involved metaphors used as predicates, e.g., «You kids are little tadpoles». Amazing, but it seemed that no one had really noticed this before. With my PhD student Xinxin Yan, we ran some experiments to test our hypothesis that there is a difference between using a metaphor referentially and using the same metaphor as a predicate (each compared to its literal counterpart). We found that there is indeed such a difference, and then we tried to find an explanation for this. I want to emphasise that this particular paper is both an experimental and a theoretical paper (I guess anything I'm involved with will always be like that).

I'm currently applying for funding to extend this empirical work. We need to do a much higher-powered study (the one we did should be seen more as a pilot study),[6] and we also need to test our hypothesis using a range of more sophisticated experimental techniques. We used self-paced reading,[7] but we're planning to do eye-tracking, and maybe also EEG studies, with the help of Valentina Bambini. Furthermore, we're keen to expand this investigation to metonymical uses and to look at referential and

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[6] We've been criticised by the referees because we apparently didn't have enough sets of metaphor stimuli and we needed more participants. It was all a bit of a revelation to me!

[7] This was okay because all the experiments that I'd been looking at had used the same methodology. But they were from the 1990s/early 2000s, and things have moved on a lot in the experimental field.

predicative metonymies. To give an example: «Jane married a pinstripe suit» (predicative) *versus* «The pinstripe suit is a very nice man» (referential), where "pinstripe suit" immediately evokes some guy who works in the city and wears a formal suit. I want to see whether referential metonymies are also more demanding than predicate metonymies and compare them with referential metaphors. I've got the strong hunch that metonymy is a natural tool for reference, while metaphor is not. If I'm right, referential metonymies shouldn't require so much processing effort, but there are existing results in the literature by Ray Gibbs that go in exactly the opposite direction. I'm not convinced, but obviously, this is something that needs to be tested. There's quite a big project ahead of us. So, the simple answer to your question: Am I planning to conduct further empirical work in the future? Yes!

18. This is very interesting and fascinating! We're looking forward to knowing more about this. To conclude this conversation, I'd like to ask you to share some advice for young researchers interested in the field of pragmatics.

RC: Oh, this may be the hardest question of all! At the practical level, if someone is interested in a career as a pragmatics researcher, they should probably get themselves trained in experimental methods. The field of pragmatics has moved massively in that direction, so the chances of getting a job (or funding) now are much higher if you have experimental skills – at least within linguistics and psychology departments (maybe, it's not so imperative in philosophy). As I briefly mentioned before, there's another area of huge growth in pragmatics, which involves probabilistic inferencing using Bayesian modelling. It's especially being developed within what's known as the Rational Speech Act framework, initiated by Michael Frank and Noah Goodman (2012). What I have been very happy to see is how well this framework meshes with Relevance Theory (as acknowledged by practitioners of the approach). There have been some interesting papers recently on Bayesian modelling of metaphor understanding, which have explicitly used ideas from Relevance Theory as their basis. This formal computational modelling of pragmatic processes looks likely to be a major subfield of pragmatics, along with the experimental side of the discipline. To the extent that I'm capable of giving advice, I would say to aspiring pragmatic researchers: you would do well to immerse yourself in this sort of work.

Finally, focusing less on the practical side of getting employment, I would just say the obvious thing: pursue the topics that fascinate you, those that make you feel mentally excited and extended. For me, those will always be theoretical – I would probably not be employable these days (*laughs*). The last very important thing is that you've got to find a congenial research community to work within: it's important to go to conferences, to talk to people. You've got to get your ideas out there, get feedback, be brave and take up the challenges that will come with that feedback. You've got to find people who can push you and help you. That sort of intellectual interaction is crucial, and of course, it's one of the most stimulating and pleasurable aspects of being an academic.

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