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This is a contribution from *Review of Cognitive Linguistics 12:2* © 2014. John Benjamins Publishing Company

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INTERVIEW

Metaphor studies in retrospect and prospect

An interview with Gerard Steen

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J.G.: Much of your work over the last twenty years or so has focused on the identification and study of metaphor. What first interested you in metaphor and how has this interest been sustained over the decades?

G.S.: My interest in metaphor started in the notorious British 'Winter of Discontent'. I was a student of English language and literature visiting the University of Birmingham on a Harting scholarship in 1979 while all of Britain were rioting against the Labour Government and there was snow in the streets from Christmas until Easter. My aim in spending my year there was to find out whether I wanted to continue with my studies in English. I had grown disappointed with the way English language and literature were taught at home in the Netherlands, because I did not see the point of talking about the quality of books, poems and plays as an academic endeavor. The language side was not much better, because in those days in my department there was still a lot of philology – I learned Old and Middle English and read excerpts from the complete Middle English canon in the original – while modern linguistics was dominated by the battle between the Chomskyan formalists and various descriptive structural-functionalists, leading to university courses on models of grammatical structures that had little to do with studying the complexities of language use in spoken and written discourse. I formulated my frustrations about the academic study of both language and literature to one of my teachers by asking: 'But what does all of this have to do with real people?'

Even though I was hosted by the Department of English Language and Literature, I originally went to Birmingham to study in the Centre for Contemporary Cultural Studies, a high-powered left-wing unit dominated by sharp historians and social scientists like Stuart Hall and Raymond Williams who, with hindsight, were busy laying the foundations for contemporary cultural studies and Critical Discourse Analysis. Within two weeks I decided that this was way over my head

and capabilities in English. I went back to the English language and literature side of campus, where I became a member of David Lodge's graduate seminar. This is where I found out about Lodge's books on metaphor and metonymy and style in literature, in particular his Modes and modern writing (Lodge, 1977). At the seminar, which was attended by Masters and PhD students and members of staff, I was happy enough to witness his introduction into Britain of German reception theorists Hans-Robert Jauss and Wolfgang Iser. In a private tutorial I was reading Jonathan Culler's Structuralist Poetics (Culler, 1975) and then the Birmingham University Bookshop had a book on display that was to change my academic life: Douwe Fokkema and Elrud Ibsch's Theories of literature in the twentieth century (Fokkema & Ibsch, 1978). Even though Margaret Thatcher won her first election on the day I left Birmingham to come back to Amsterdam, I am still immensely grateful for the basic insights and questions that I gained there.

What all of these books and discussions showed me was the explanation of my discontent with the study of language and literature as I had experienced it so far. What we need in the humanities are good theories that can be tested in methodologically responsible ways. Moreover, such theories need to be compatible with what we know about human behavior, in reading, language use, cognition, social interaction, and so on. I found it extremely exciting that this could even be done in literary studies, as was shown by Fokkema and Ibsch who had chapters on Russian Formalism, Czech and French Structuralism, Marxism, semiotics, and reception theory. What was more, Ibsch turned out to be the Professor of Poetics in my home university, one floor up from the English Department, offering a full blown two year Masters program in precisely all of these issues. That I had never run into her before during my bachelor program was indicative of the way things were organized in those days, and not just at VU University Amsterdam.

So, when I came back, I took up two Masters programs, one in Poetics, and one in English Language and Literature, from September 1979 on. In that context I was shown Ortony's *Metaphor and thought* (Ortony, 1979) and Lakoff and Johnson's Metaphors we live by (Lakoff & Johnson, 1980) by one of my teachers. The combination of the behavioral perspective in psychology (Ortony) and the cognitive perspective in linguistics with behavioral aspirations (Lakoff and Johnson), with attention to the specific role of metaphor in literature, sealed the deal: metaphor was going to be my case study for experimenting with empirical work in the humanities, whether in poetics, linguistics, discourse analysis or cultural studies. This turned into my PhD thesis, later published in book form as Understanding metaphor in literature (Steen, 1994), supervised by Elrud Ibsch.

J.G.: So, why the focus on metaphor and why was that so intriguing to you within such a varied program of postgraduate study?

G.S.: I guess the easy answer is: have a look at the hundreds of books, articles, book chapters and papers that have been published about metaphor since 1980, responding to the innovative proposal that metaphors are in fact essential for human life and culture. But what in all of that research is so special? To me, the bottom line is the scientific question whether metaphor is different than other language use, or not. Before the cognitive turn at the end of the seventies, the predominant view of metaphor was that it was very different and fundamentally highly creative and special (although we still need some good historical research to reveal the precise dynamics of that view in relation to its counterpart that also was around for a long time, with Vico and Nietzsche as the most impressive spokespeople). As we all know, there are some outrageous and flamboyant metaphors in a lot of classic texts in Western literature, philosophy, oratory and so on, and it was precisely their difference from regular language use which was held to be metaphor's distinguishing characteristic.

When formal semantics and pragmatics emerged in the wake of formal syntax in the sixties and seventies, interest in regular metaphorical expressions also increased, as part of the more general interest in indirect meaning that presumably required additional processing. This also drew the attention of psychologists. Important representatives in the late seventies, including George Miller and Robert Sternberg, saw metaphor as a form of analogy, feeding into to Dedre Gentner's analogical structure mapping theory and its computational model MacFac (Gentner, 1983), which later on yielded the Career of Metaphor Theory (Bowdle & Gentner, 2005) (which I regard as the most important psycholinguistic contribution to the debate). This development in psychology therefore changed the question about the alleged special nature of metaphor into a broader one, whether analogy is different or not. This was a question that many psychologists answered by saying that similarity and analogical reasoning lie at the basis of all learning and cognition (witness the then important edited volume by Vosniadou and Ortony, Similarity and analogical reasoning) (Vosniadou & Ortony, 1989). This is a position that could and can also be found in linguistics, including in cognitive linguistics. It suggested that, in spite of some spectacular exceptions in the talk of poets, patients and politicians, metaphor might be completely natural and even fundamental to all language use, not because it is metaphorical but because it is just one form of analogy. This would make all metaphor completely natural and not different or special at all. This is a position which has been developed in various forms since 1980.

J.G.: It's interesting then, isn't it, that the analogy perspective on metaphor never really got off the ground as a central issue in cognitive linguistics? Why do you think that is?

G.S.: This is due, of course, to the immense effect of Lakoff and Johnson's *Metaphors we live by*, which created its own terminological and conceptual variant of the analogical framework that came to dominate subsequent cognitive-linguistic metaphor research. A genuine theoretical and empirical comparison between analogy and metaphor has never really become important in cognitive linguistics, which I think is a shame given the central and fundamental position of analogy in psychological and computational research.

On closer inspection, however, the question about metaphor and analogy reveals another difference. For analogy can build sets of correspondences between categories that are located within the same domain (Amsterdam:Holland :: Copenhagen:Denmark) or in different domains (Amsterdam:Holland :: head:body). And even though cognitive linguists like to claim that cross-domain mappings are just as natural, fast and effective as within-domain mappings, I am not sure whether this has ever been put to some decent experimental test. This is crucial, for it can only be denied that metaphor is 'not different' if it can be shown that it works like all analogy.

I have always been skeptical. To take the obvious cognitive linguistic example: why would people derive the metaphorical 'argument' meanings of words like attack, defend, position, and so on from the non-metaphorical 'war' meanings of the same words if they have the metaphorical 'argument' meanings already available in their mental dictionaries? And mind you, we are not just talking about 'war' and 'argument' meanings as conventionalized lexical senses, but according to classic cognitive-linguistic theorizing we are talking about conceptual frames and domains that are activated and used to draw inferences about online situated meanings – we are talking about accessing and employing knowledge structures. To me this goes against the whole notion of a usage-based linguistics in which people learn and change patterns through usage events, from their early age on (cf. Tomasello, 2003). Experimental psychological evidence collected by Rachel Giora, in particular, shows that the salience of conventionalized metaphorical senses is often higher than the salience of their non-metaphorical counterparts, which makes the need for a cross-domain mapping approach as a theory of online processing highly questionable. I believe that we do not need cross-domain mappings or figurative analogy to understand utterances like 'Lakoff attacked Glucksberg, but that we just need lexical disambiguation strategies that apply to metaphorical uses of words in just the same way as to other polyvalent uses of words and constructions.

In this way, most metaphor may be just the same as all other language use, but for very different reasons than was proclaimed by early cognitive linguistics: they are just cases of polysemy that happen to be diachronically motivated by

metaphorical language change but do not require synchronic resolution by metaphorical thought. At the same time, though, this position has also revealed that some metaphor may be very different indeed. This is when it is used deliberately as a metaphor, inviting or in fact forcing people to set up a cross-domain mapping during their online comprehension and interpretation of utterances. This typically happens in simile comprehension and was first described as such in Bowdle and Gentner's (2005) Career of Metaphor Theory. It led to my discovery of direct metaphor as a more encompassing category in which simile takes an important position, which then in turn led to my proposal of the deliberate use of metaphor as metaphor (Steen, 2008). This takes the study of metaphor outside language and thought and into communication, where it can be employed as a rhetorical device making people truly understand one thing in terms of something else.

J.G.: So, you do believe that metaphor can have a special function in discourse and that this view need not necessarily be incompatible with a view of metaphor as a natural phenomenon?

G.S.: When metaphor is used deliberately, I do believe that it functions as a special device in communication, making people think outside the box of the target domain and review that from another box inside some source domain. This has complex relations with discourse intentions, what people attend to, and how this is done unconsciously and consciously. To me, this form of actual thinking outside the box is the true power of metaphor, and it is special. This is typically true of novel metaphor, which in actual practice does not get produced very frequently. That novel metaphor may then be conventionalized and disappear as metaphor in thought and language is also true, and this is what future research needs to get a clearer view of. This research priority also applies, conversely, to the revitalization of conventionalized metaphor as metaphor in communication and the genre contexts within which that happens. A lot of the available evidence presumably supporting the classic cognitive linguistic stance that all metaphor is processed by constructing a cross-domain mapping may in fact be based on this special case of deliberate metaphor use. These are the issues that are high on the agenda in my research group at the VU Amsterdam metaphor lab.

Deliberate metaphor use is special. It takes us back into a reconsideration of intentions, attention, and consciousness in language and discourse, a configuration of central themes that have many more general ramifications, as can be seen from the work by for instance Chafe in Discourse, consciousness, and time (Chafe, 1994). It requires a full-blown theory of language in discourse via genre, as we will now see. This is the most exciting thing about doing metaphor research that I can think of.

J.G.: Literary language is notoriously messy linguistic data: it often contains multiple voices and perspectives; it carries different values for different readers and writers; it often plays with different levels of reality and fictionality. So why do you regard dealing with such messy data as important for the development of linguistic theory and method?

G.S.: I do not think that literary language is notoriously messy data. I think it is complex data. To me, 'messy' has to do with random error that is solely due to accidents during performance. Literary data, by contrast, should be taken as due to the application of manifold conventions and their creative exploitation. They may look messy, but in actual fact they are highly complex semiotic structures that are constrained by regularities that we need to identify, describe and explain. There may be accidental freedom and novelty in the language structures and functions that can be observed, but their presence may be limited and we can only determine what counts as free and novel if we first obtain a clear view of the various factors making up the baseline complexities.

Your examples of messiness include variation in voices and perspectives, variation between readers and writers, and levels of reality and fictionality. To me all of these are regular aspects of discourse that are reflected in language, as you are suggesting yourself. The distinction between discourse and language is theoretically important: language is the semiotic system that enables expression in ordered series of written and spoken utterances (an approach eloquently expressed in the work by Ron Langacker) whereas discourse is the process in which people produce and receive coherent sets of utterances in distinct situations in order to perform joint activities (think of the work by Herb Clark). Discourse is what language behavior is all about, and it is discourse which is reflected in the structures and functions of language because language serves as an instrument designed and utilized to achieve successful discourse. In actual practice, people commonly focus on aspects of discourse, not of language, and they have a hard time shifting their attention from discourse to the structures and functions of language, as any instructor in rhetoric and composition can confirm.

J.G.: OK. So, literary-linguistic data only appears messy, but this is enough to discourage many researchers from dealing adequately with the aspects of literary discourse which you note. Why would you say it is nevertheless important to do this, and how might it best be accomplished?

G.S.: I have argued that such aspects of discourse need to be modeled and researched via the notion of genre (Steen, 2011). I hold that all language users engage in any concrete language activities by attuning them to activated mental models of distinct genres, including, for instance, reading a poem or a short story

or a novel. Such a mental model for genre comprises people's knowledge of and expectations about what it is for them to be successful in reading for instance a poem, however that success is defined for them. This is a view that has been around in twentieth-century poetics in various forms, and its empirical investigation and further theoretical development has been one of the most exciting endeavors in the humanities.

If cognitive linguists aim to develop usage-based models of aspects of language, their view of usage should not remain limited to immediate linguistic and situational contexts of production and reception. From a behavioral, ecological perspective, usage events of sounds, words, and more encompassing constructions are ultimately constrained and directed by the properties of the genre event the linguistic usage events occur in. The fact that literature is a domain in which text producers are allowed maximum freedom to play with the structures and functions of language is one of those genre properties. Readers of poetry know that poetic language use may be different than non-poetic language use, and this is precisely the reason why they participate in poetic discourse. This is an important message produced by twentieth-century theories of literature, and it can be generalized to all types of discourse - in that respect, literature is not special but makes specific use of generally available semiotic, conceptual and communicative options and potential in language use (as is also held by cognitive linguists, stylisticians, and poeticians - compare the well-known example in Peter Stockwell's Cognitive Poetics) (Stockwell, 2002).

We need to model and research that knowledge in terms of discourse features on the one hand and their possible reflection in language structures and functions on the other. This means that we have to have relatively independent partial discourse models of for instance different domains of discourse (literature versus law, science, etc.), different participants of discourse (in terms of e.g. identities, roles, relationships, expertise, etc.), different types of discourse (narration, argumentation, exposition, etc.), different contents of discourse (a hot news item, commentary on a sports match, a love poem, family news, etc.), and so on. This has to be done independently of their expression in language, as such models apply across different languages that may then be compared on their constant and varied reflection of aspects of discourse – as is the general trend in discourse analysis and Contrastive Rhetoric.

Good empirical research in the humanities that focuses on people and what they do is in dire need of good encompassing and explicit theoretical models of all of these details. Literary discourse is one area which keeps alerting us to new subtleties in language use that may remain hidden in other domains of discourse but have to be included in such models. Only then can we propose systematic links between the structures of usage events and their functions in discourse which can then be empirically investigated. We also need to compare such a model of poetic reception with the knowledge and expectations the same language users have about language use in other discourse events, such as watching a commercial, listening to a political speech, or attending a plenary talk at a conference. Each of these types of discourse events is guided by a genre profile that people construct and maintain during their lives as language users, building a repertoire of genre knowledge that guides their verbal behavior when they engage in such an event which can then explain the linguistic structural-functional variation between events. How much of that variation can be explained and how much is free and undetermined is an empirical question of some importance.

Formulating an encompassing theory about all this requires a comparative approach across genres, which in fact has grown over the past two decades in a number of complementary ways. This did not always take place with reference to the notion of genre: grammarians, discourse analysts, sociolinguists, stylisticians and applied linguists have all come to this area of investigation from different angles. One outstanding example here is the work by Douglas Biber, with his Longman grammar of written and spoken English (Biber, Johansson, Leech, Conrad, & Finnegan, 1999) and his work on Register, genre and style, co-authored with Susan Conrad (Biber & Conrad, 2009). He has been influential on the work by Elena Semino as one of the most prominent literary stylisticians influenced by cognitive linguistics (see her Metaphor and discourse (Semino, 2008), and her recent Figurative language, genre and register, co-authored with Alice Deignan and Jeanette Littlemore (Deignan, Littlemore, & Semino, 2013)). What is important for future progress here is that linguists, including cognitive linguists, need to work more on explaining the different levels of aggregation and abstraction that are involved in the relation between discourse and language.

This is what we attempted to do in my 'Metaphor in Discourse' project, with Lettie Dorst, Berenike Herrmann, Anna Kaal and Tina Krennmayr. Even though our sample from the BNC Baby is only just 200,000 words, it showed us surprising patterns between academic discourse, news, fiction, and conversations. It revealed, for instance, that academic discourse has the highest number of metaphor related words, with fiction coming only in third place. But it also revealed that, when we focus on simile and other direct expressions of cross-domain mappings, the tables are turned, and fiction comes out as most metaphorical (even though this type of expression is only one percent of all metaphor related words). This is the kind of quantitative background (which is publicly accessible as a free resource now) that we require in order to do better qualitative descriptions of single texts or oeuvres, as I have tried to show for poetry in Steen (2014, in press).

J.G.: How would you evaluate the current state of the art of metaphor identification and analysis? What do you feel have been the most important achievements in the field over the last twenty years? And what remains to be done?

G.S.: Metaphor identification and analysis are intimately related. From a cognitive-linguistic perspective, the nature of metaphor resides in the set of correspondences that gets projected across the conceptual source and target domains; this requires all-out analysis. In my opinion we have not come very far yet in developing testable theories and reliable methods that can decide why a particular expression is an expression of which distinct underlying cross-domain mapping. This is still just as acute an issue as it was in 1980 upon publication of *Metaphors we live by*. One reason is of course that we do not have a validated master list of conceptual metaphors, even though attempts to construct one were bravely made in the early nineties.

J.G.: Why do you think such attempts were abandoned, and what does this day about the nature of metaphor identification and analysis?

G.S.: At the moment, researchers have to rely on their case-by-case argued analyses with no clear guidelines for criteria of inclusion or exclusion and no clear procedures for testing inter-analyst agreement. With the novel distinction between primary and complex metaphor, this problem has been considerably aggravated. Indeed, the whole situation seems to have become more complicated, too, as is to be expected as a result of more than thirty years of theory and research. On the one hand linguists have become interested in identifying metaphor in linguistic expressions without making any claims about the nature of the underlying conceptual structures, as has been advocated by the Pragglejaz Group (2007). This was further developed in my own group leading to a 16-page identification manual called MIPVU (Steen et al., 2010). This is especially interesting and urgent in the context of other languages than English, reliance on tools like dictionaries and corpora, and attempts at automating metaphor identification at the level of word use. There are still many practical obstacles that have to be overcome which require a lot of important work that can also backfire on the current state of the art as developed for English.

To give one example, for English we have adopted fairly clear guidelines for determining what counts as the linguistic unit that has to be analyzed for metaphorical use, that is, the lexical unit (with more or fewer complications depending on the approach that is adopted). However, these guidelines become problematic when you shift the perspective to languages that are freer in their creation of new lexical units by productive morphological rules governing compounding, of which German is a representative that is surprisingly close to English. Languages

that are even freer in their productive combination of free morphemes will present an even bigger problem. This is one reason why metaphor identification is in fact an interesting problem for linguistics in general – if we want to compare metaphorical use at the same level of expression, how do we align levels of expression between distinct linguistic systems? And are these levels of expression used in the same ways for the same purposes between languages? These are deep questions with more general ramifications than may be expected at first sight when people hear about the problems attending metaphor identification. On the other hand the distinction between deliberate and non-deliberate metaphor use in communication requires yet another approach to metaphor identification and analysis, in addition to conceptual and linguistic metaphor identification and analysis. How do we identify those metaphors that are presumably intended to be used as metaphors, by their producers and receivers? And can we do this independently of their conceptual mapping and their linguistic form? It is these questions that are now becoming just as important as the questions over conceptual metaphor identification and analysis.

My own view of what remains to be done is governed by the principles outlined above. I believe that metaphor is a matter of language use which displays three dimensions: we can observe metaphor 'in language', 'in thought', and 'in communication. Each of these dimensions requires its own criteria for identification and analysis, but each of those dimensions and criteria need to integrated within a single, encompassing model of metaphor that is based in a clear definition. Since I regard the classic cognitive-linguistic definition of metaphor as a cross-domain mapping as the most productive and influential definition that is available, I think we need to stick to that definition as long as remains possible in the face of the evidence.

Given that we are talking about a cognitive-linguistic approach here, I also think that that definition is a semiotic definition, treating language, thought (and communication) as the functional use of linguistic, conceptual and communicative sign structures in utterances. The reconstruction of those sign structures is essential for deriving predictions about possibly related psychological and social processes of use, but, as has been noted increasingly over the past decade, we have to remain cautious of committing a structure-process fallacy (e.g. Gibbs, 2006), as not all structure is fully re-enacted in processing. To return to our previous example, the fact that attack in 'Lakoff attacked Glucksberg' can be identified as metaphorical at the level of language which may be connected to some cross-domain mapping argument is war at the level of thought is one thing; however, this does not necessarily mean that the process of producing or comprehending attack in this metaphorical sense requires an on-line cross domain mapping during cognitive processing. People may not go to their knowledge domain of 'war' in order to set up the contextually needed sense of 'argumentation' for attack.

As a result, what can be identified as metaphor in the sign structures of language, thought and communication does not have to be identifiable as metaphor in the psychological processes related to lexical access, concept activation, and interactive move. It is precisely part of a desirable division of labor between linguistic and psychological or social-scientific research to produce linguistic or semiotic identifications and analyses of metaphor that are valid and reliable in order to then investigate their behavior in processes of individual psychology and shared interaction. This is a division of labor that has been misunderstood on both sides of the divide. There are psychologists like Glucksberg who discount metaphors that do not require cross domain mapping during processing. And there are many cognitive linguists who typically assume that all metaphors require cross-domain mappings in processing no matter what.

This is the reason why linguists need to be more concerned with the quality of their metaphor identifications and analysis. Psychologists and social scientists have high standards when it comes to measuring phenomena or to manipulating them for experimental purposes. Closer to home, if we ever wish to outsource metaphor identification and analysis to computational linguists, we need to be as explicit and consistent as possible. I do not think that there is any reason why this would be impossible, and ground breaking attempts in the computational community are currently under way, which is rather exciting. In order to advance this kind of automation as well as interdisciplinary collaboration, which involves basically nothing more than increasing the scope of generalization and validity across studies, linguists need to play the game at the same level of ambition. In particular, they need to produce explicit identification procedures of their own, or reports of their use of available procedures, and examine how reliable they are in applying these procedures as part of their regular practice.

It has taken some time for cognitive-linguistic researchers to accept that metaphor identification can take place at the level of language without making reference to some underlying cross-domain mapping. And indeed, there are problems with making this claim, as we cannot forget that verbs like attack and defend have been analyzed as belonging to the argument is war metaphor. It is precisely the aim of the linguistic identification methods MIP and MIPVU to reconstruct why it is possible that such verbs may be related in some contexts of use to some underlying cross-domain mapping. The development and application of MIP and MIPVU are therefore tentative first steps in the right direction. When computational programs begin to mimic this kind of analysis with sufficient scope and success without resorting to knowledge about postulated conceptual metaphors but simply on the basis of patterns of usage, we are really getting somewhere.

The next step of this program would then be to reconstruct the underlying cross-domain mapping of which the metaphor-related word or expression is an expression. I am convinced that this should be a matter of analogy, as hinted above, and I have used George Miller's seminal article 'Images and models, similes and metaphors' in Ortony's Metaphor and thought (Miller, 1979) as the core of a five-step procedure that can reveal how this works. It is dependent on the input from the above-mentioned linguistic metaphor identification procedure as Step 1, the development of which was my motive for founding the Pragglejaz group in 2000. Developing the next steps will probably remain my lifelong ambition, which I have enjoyed working on with my first group of PhD students between 2005 and 2010.

The original idea of the five-step procedure was getting us from metaphor in language to metaphor in thought. This has now been adjusted to the new model for metaphor which requires a dimension for communication. It turns out that this adjustment is highly productive for further theorizing about the nature of different types of metaphor in language, thought and communication. For instance, it suggests that there is an intimate relation between the conceptual dimension of metaphor and the way it projects source domain referents into the situation model, on the one hand, and the communicative dimension of metaphor and the way it elicits the experience of metaphor as deliberately used.

J.G.: So, which theories and approaches within current cognitive linguistics do you think will prove most useful in achieving the goals you've identified over the coming years?

G.S.: The program I should like to realize I first sketched out in my 2011 article in this journal, 'The contemporary theory of metaphor - now new and improved!' (Steen, 2011). The gist of that proposal is that we need to set out from the three-dimensional model of metaphor that comprises metaphor in language, metaphor in thought, and metaphor in communication. Each of these dimensions of metaphor deserves treatment in its own right and needs to be connected to the other dimensions. Every metaphor has linguistic, conceptual and communicative properties and the combination of these properties constrains or even determines the structure and function of a metaphor in the processes of discourse. This three-dimensional model of metaphor can be researched from different perspectives that are traditionally divided between disciplines, for good reasons. The structural-functional perspective is a semiotic one which includes linguistics, which includes cognitive linguistics, and it focuses on a reconstruction of signs, sign structures and their meanings and functions. The process perspective is an approach that focuses on individual processes (psycholinguistics and cognitive

and social psychology), processes shared between individuals (social sciences at a micro level, like ethnomethodology, interactional sociolinguistics or conversation analysis), and social processes shared across sets of individuals (communication science, cultural studies). All of these approaches are often seen as part of discourse analysis, but this, too, may be too narrow a view for we also need to look at these processes as part of long-term processes of acquisition and maintenance and attrition, areas that in metaphor research have been given short shrift in comparison to synchronic system and use.

I believe that a narrow view of cognitive linguistics, which would focus only on metaphor in language and thought and only from a linguistic and psychological perspective, is not enough. If this view is adopted of cognitive linguistics, we can capture only part of what metaphor is all about. What we would miss is the whole notion of discourse metaphor, for instance, which has to do with the use of a prominent metaphorical expression that gets picked up and developed between people and between discourse events as an important phrase providing access to an underlying conceptual cross-domain mapping that gets exploited in different and sometimes diverging ways over time. Examples are the greenhouse effect and carbon footprint. We cannot describe and explain how these work and have worked without getting into social processes of interaction at the micro-level of single discourse events or the macro-level of series of discourse events. These discourse events, moreover, may cross domains, like between science, media, and politics, as has been amply shown in the work of Iina Hellsten, Andreas Musolff, Brigitte Nerlich, and Jörg Zinken (see, for example, Musolff & Zinken, 2009). What I think should happen is research into the interfaces between the macro and micro levels of the social processes, and between both of these and the psychological processes. This requires ground-breaking collaboration between cognitive linguists on the one hand and psychologists and social scientists on the other. Fortunately, cognitive linguistics is now opening up to the social dimension of all language use, but it would be good if we could interest some researchers who were trained outside linguistics.

J.G.: This is a really interesting notion. Which other disciplines do you see as offering potentially productive perspectives on metaphor and how might such cross-disciplinary collaboration work?

G.S.: This kind of work could explore the notion of metaphorical model as a culturally accepted notion. Collaboration with anthropologists and historians would be highly desirable here. This was attempted in the late eighties and early nineties with researchers like Naomi Quinn but did not seem to get much follow up among anthropologists and historians. Perhaps James Mischler's recent book called

Metaphor across time and conceptual space (Mischler, 2013) can serve as a new point of attraction. I would be particularly interested in exploring the diverging status of metaphorical models within and across cultures, as official, contested, implicit and emerging. It seems to me that the linguistic, conceptual and communicative properties of many metaphors are rather related to the cultural status of the encompassing metaphorical model that they belong to.

This is also related to the recently postulated distinction between complex and primary metaphor. I suspect that the more encompassing cultural models, presenting life or love as a journey, business and politics as war or sports, and organizations as plants or machines, are all complex metaphors that are related to culturally familiar scripts, scenarios, stories and arguments. Some of these have acquired allegorical qualities and have been depicted as such in all sorts of art forms. Visual and multimodal metaphor research will have an important role to play in investigating the details of these phenomena.

In contrast to complex metaphors, however, primary metaphors seem to be of a rather different order. They are based in correlations between subjective and sensory-motor experience, which suggests that they are based in association as opposed to analogy. One important question is whether this means that primary metaphor is in fact primary metonymy: 'up' correlating with 'and' therefore standing for 'up', 'big' correlating with 'and' therefore standing for 'important', 'close' correlating with 'and' therefore standing for 'intimate'. Experimental research by psychologists like Pecher (e.g. Pecher, Boot, & van Dantzig, 2011) has shown that these correlations are psychologically real, even outside language. But this does not mean that these are primary metaphors, or cross-domain mappings that are based in some form of analogy. Nor does it mean that these correlations are used as mappings in language processing. For instance, the activation of sensory-motor areas of the brain upon hearing metaphorically used sense or motion words may simply be a by-product of lexical access and even concept activation for polysemous words. It does not mean that those source domain concepts are needed or used for constructing the intended meaning of the utterance. Close collaboration between (cognitive) linguists and experimental psychologists will have to build a more precise model of what these processes may all imply.

This endeavor will also have to include higher levels of cognition. I have always found it striking that there is little interaction between cognitive linguists and discourse psychologists in the area of metaphor comprehension. Only very few studies engage with metaphor as a problem for discourse processing in the tradition of cognitive and social psychology that may be represented by van Dijk and Kintsch (1983) and their followers (cf. Macnamara & Magliano, 2009). With the rising interest of metaphor as a device for framing, this will have to be an important target for immediate future research. In that respect, most cognitive

linguists seem to be more language than discourse oriented. The recent attention for dynamic discourse modeling in research by Cameron, Cienki, Gibbs, and Müller is a good pointer, but we need closer connections with state-of-the-art discourse processing models as researched and discussed in for instance the Society for Text and Discourse.

Finally, all of this is needed in order to create a more robust foundation for promoting an applied cognitive linguistics and for a sound application of metaphor studies. One stimulating development in this context has been the foundation of RaAM, the International Association for Researching and Applying Metaphor founded by Lynne Cameron and Graham Low. Cognitive linguistic influence is great there, but it is also being influenced and stimulated itself by the presence of applied linguists and discourse analysts who have more of a societal agenda. This kind of interdisciplinary forum increases theoretical and methodological awareness which will eventually promote the empirical quality and therefore applicability of cognitive linguistic research.

J.G.: You once asked 'How empirical are the British?' Does this still matter to you? And how empirical is everyone else these days?

G.S.: My question 'How empirical are the British?' was the title of my first paper at an international conference. I had been working on my PhD on metaphor in literary reception for six months, and was becoming obsessed with the difference between empirical research and other research, typically labeled as hermeneutic. This was an issue in poetics, as I noted before, which had been derived from a broader and much more notorious clash in sociology, in Germany in the sixties. There, critical rationalists Karl Popper and Hans Albert were debating the nature and function of scientific knowledge with Frankfurt School giants Theodor Adorno and Jürgen Habermas. In Germany, this was picked up by Siegfried Schmidt and Norbert Groeben, who founded IGEL, the International Association for the Empirical Study of Literature. My supervisor Elrud Ibsch was one of the Dutch champions of this approach, just like her husband Douwe Fokkema: they brought Popper, Kuhn, Feyerabend and Habermas into the discussion of Dutch poetics and raised the question whether literary studies could be swayed away from hermeneuticism without turning positivistic. Ibsch directed my thesis as Fokkema did Rolf Zwaan, and we both came out more empirical and less poetic than anyone could have foreseen.

'How empirical are the British' was the question I asked at my first Poetics And Linguistics Association (PALA) conference, which began as an offshoot of the applied linguistics movement in Britain emerging in the seventies. I was hesitant about the empirical quality of linguistic text analyses, since a lot of those studies did not really abide by the rules of social science in terms of reliability and validity of form and content analysis. This has not changed much since, so the best one can say for such research is that its empirical quality needs to gauged against the measure of qualitative research, which in actual practice does not seem to be on everyone's mind very much.

The empirical quality of theory and research is extremely important to me. It is the hallmark of scientific knowledge, and it is the special quality of knowledge that every scientist should strive for. We are not asked for our subjective knowledge, our personal opinions, or our best-informed guesses. What we are asked for is solid knowledge, the scope and limitations of which are clear and the reach of which has to be as broad and general as possible. There is no one else in our society who has this task, and it is a fundamental one. This is particular so when we want to apply this knowledge in interventions regarding language use in education, training, management, and so on – this has to be done on the basis of solid research, which means empirical research.

Scientific knowledge is characterized by just one property: whether your theoretical claims are testable, and whether your research has done everything it could to perform the strictest tests possible in investigating the consequences of your claims. In the social sciences, entire methods and techniques courses are devoted to this problem in standard bachelor and master programs. In the humanities we still do not seem to bother enough. We have courses in theories and approaches, but research methodology and the techniques that can be applied are still lacking. I feel that this is a remnant from older eras and that we need to move on as fast as we can. If we want to make the humanities into a serious scientific discipline that is regarded as such by both other scientists as well as extra-academic society, we need to show that we play the same game and produce the same high-quality product.

In my view, interdisciplinary work of the kind just mentioned, with neuroscientists, psychologists, communication scientists, and computer scientists will simply enforce this kind of change. We are building big databases for language and media artifacts for both cultural heritage as well as scientific investigation. Searching such databases for research is only possible if we have precise and testable claims that we want to examine in methodologically attuned ways, for the optimal use of such resources is costly in terms of time and expertise. This also holds for lab space and time and equipment in psychological research. We do not all have to become cognitive and social scientists, but we do have to do our own work in similarly cutting edge ways, now that we have the opportunities. To me, this is the most exciting development that we will witness in the next decades.

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