Croatian Journal of Philosophy
Vol. XV, No. 44, 2015

Cognitive Environments and Conversational Tailoring

ANNE BEZUIDENHOUT
University of South Carolina, Columbia, USA

This paper explores the psychological notion of context as cognitive environment (CE) that is part of the Relevance Theory (RT) framework and describes the way in which such CEs are constrained during the course of conversation as the conversational partners engage in "conversional tailoring".

Keywords: Relevance theory, psychological notion of cognitive environment, conversational tailoring, procedural meaning, framing, centering.

1. *Introduction*

This brief paper is an elaboration on one section of Bezuidenhout (forthcoming).[1] In the longer paper, I explore the relation between two conceptions of context, namely the psychologistic notion of a cognitive environment (CE) that belongs to the Relevance Theory (RT) framework and the formal notion of an index that belongs to the traditional Twentieth-century philosophy of language framework. The purpose of the longer paper is to argue that the RT notion is better able than the formal notion to handle some problem cases involving the use of indexicals that have been thought to put pressure on the formal notion of context. In order to make my case, I had to address the question as to the nature of and the constraints on CEs—that is, contexts in the RT sense. It is this section of the longer paper that I will focus on here, in the hopes that I can say a little more about the notion of "conversational tailoring" that is central to my account of how CEs are constrained.

[1] The longer paper, Bezuidenhout (forthcoming), was presented at a conference on Philosophy of Language and Linguistics, held at the Interuniversity Center, Dubrovnik, Croatia, September 8–12, 2014. I thank the conference participants, and especially Deirdre Wilson and Karen Lewis, for comments on that longer paper, some of which are relevant to this shorter paper, too.

2. *What are CEs and how are they constrained?*

A person's CE consists of all the information that is manifest to that individual at a time. Information is manifest if it is either currently explicitly represented in the individual's working memory (WM) or could be so represented, *under appropriate conditions*. Sperber and Wilson (1986: 39) add that, at the time of representation, the person must accept the information as true or probably true. In a more recent account, Sperber and Wilson (2014) say that information in a CE is more or less manifest depending on the degree of salience of that information and its degree of probability. A CE can thus be pictured as a field of represented or representable information where the manifestness of that information increases along two orthogonal dimensions, as illustrated in Figure 1 below:

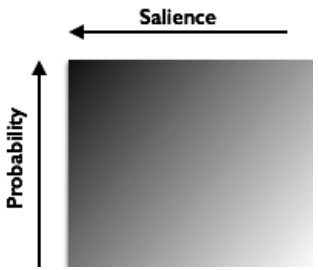

Figure 1: *Degrees of manifestness of information in a CE*

Note that there are two distinct ways in which the term 'manifestness' is being used above. In the first sense, the manifestness of a piece of information is a matter of being currently represented or representable in the WM of some individual communicator. In this sense manifestness is an all-or-nothing matter. Either information can be so represented in WM or it cannot. In the second sense, the manifestness of a piece of information is a matter of degree, depending as it does on the degree of salience that information has for an individual communicator and on the degree of probability that the communicator assigns to that information. The notion of manifestness in the sense of 'being salient' or 'being probable' is a graded notion, as information can be more or less probable/salient. For example, the firmer one's conviction or the better evidence one has, the more manifest (because the more probable) that information will be to you. Clark (2013: 114–116) compares hearing the sounds of rain to actually seeing the rain and says that in the latter circumstance the information that it is raining will be more manifest to you.[2]

[2] Note that Clark is comparing the degrees of manifestness of bits of information across times or across possible situations, assuming that a bit of information (e.g., that it is raining) can be more manifest than that same information is to you at an earlier/later time or than it would be under different conditions. This entails comparing

It might seem strange to have a term 'manifestness' that can be understood as referring both to an all-or-nothing concept and to a concept that admits of degrees. I agree it would be most perspicuous to have two separate terms for these two notions. So I try below to use the term 'representability' for the all-or-nothing concept and reserve 'manifestness' for the graded notion and as a cover term for the dual dimensions of salience and probability. However, I do want to note that there are other terms in English that have a similar ambiguity. The term 'visible' is such a term. For example, a road sign partially obscured by trees and bushes at the side of the road is less visible than that sign after the trees and bushes have been trimmed back. Similarly, the features of someone's face are less visible from a distance than up close. But if these facial features are indeed visible to you, then you can perceptually represent those features, and this applies in both the close-up and the distant situations. In this latter sense, visibility is an all or nothing matter. You either can or cannot perceptually represent the features. What *is* a matter of degree is the fidelity and vividness of your representation. In the close-up situation your percept is likely to be more faithful to the original than in the distant situation and have more phenomenal details filled in.

As noted above, information is manifest (in the all-or-nothing sense) if it is either currently represented in WM or could be so represented, *under appropriate conditions*. The issue now is what should be allowed to count as an "appropriate" condition. If we allow these conditions to be unconstrained, then almost any piece of information would turn out to be manifest to you, given that there is undoubtedly some condition or another under which you would be able to represent that information. For instance, you could explicitly represent arcane facts about quasars, if you were first to undergo graduate training in astrophysics. Clearly, we do not want to allow conditions like this, as we do not want to say that these arcane facts are currently manifest to you.

What is manifest to you now is constrained by what you actually already know—by your *current* store of encyclopedic knowledge. Something that you already know in this sense could be activated in WM and thus is a part of your current CE. We also want to allow that information in your current *physical* environment is manifest if, via the redirection of attentional resources and the (normal) operation of one or

a bit of information represented in an individual's CE with a bit of information represented in another (earlier, later, counterfactual, or possible) CE of that same individual. In a more full-fledged account of CEs, it would be important to add such a dynamic component into the overall account. However, note that, in Figure 1, bits of representable information are pictured as points in a two-dimensional "field" that is the CE of an individual *at a particular time and in a particular situation*. The degree of manifestness of a bit of information is represented as distance from the probability/salience maxima. Figure 1 is too schematic in another way as well; we presumably would want to allow that two distinct bits of information that are represented in an individual's CE can have exactly the same degree of manifestness.

more of your sensory organs, you would become sensorily aware of this information. For example, the hum of the refrigerator in your apartment is manifest to you right now because even though you aren't paying attention to that hum, you would become aware of it if you directed your hearing towards the part of the room where your fridge is located. In addition, information about your interlocutors' informative and communicative intentions, their preferences and abilities, as well as sociocultural information about them (e.g., facts about their social status) will be manifest to you in virtue of your "mind-reading" skills. Finally, interlocutors generally need to keep track of what has transpired so far in the conversation, and thus linguistic information at various levels (e.g., phonological, semantic, and pragmatic) will be manifest to you (and of course it will need to be *mutually* manifest to all the interlocutors in the particular conversational situation if communication in that situation is to succeed). In sum, what is manifest includes encyclopedic, situational, social and linguistic information.

However, even this is still too broad, as we do not want to say that *everything* you know at a particular time is a part of the CE used to understand an utterance by one of your conversational partners at that time. In the 1970s, when Chomsky, Fodor and others popularized the idea of a modular mind, they argued that modules controlling perception and the language module (what Hauser et al. (2002) call the language faculty narrowly conceived) are encapsulated, in the sense that the operations of such modules are sensitive only to domain specific information written in a proprietary code that is manipulated in accordance with module-internal rules, but that the central processor is unencapsulated, in the sense that any piece of knowledge could become relevant for its purposes. This modularist tradition treats pragmatic reasoning as a central cognitive process *par excellence*.

RT in its earliest iterations embraced the idea of pragmatics as part of the central processing system, and of pragmatic inferences as unencapsulated. Where Sperber and Wilson (1986) parted company with Fodor was that, while Fodor believed there could be no scientific account of central processes, Sperber and Wilson thought it was possible to give a scientific account of pragmatics, their RT framework being just such an account. Sperber and Wilson resisted the idea of a "pragmatics module", I believe, because accounts of pragmatics modules on offer in the 1980s appealed to ideas from then existing pragmatic theories (e.g., speech act theory, theories of politeness, and theories of turn-taking in conversation) and simply assumed that the pragmatic processing module (or its sub-modules) operated according to internalized versions of these theories.[3] RT on the other hand was intended to be a single overarching framework to explain all pragmatic processing and as an alternative to theories such as Grice's theory of conversational implicature, Brown and Levinson's politeness theory, and Searle's speech act

[3] See Kasher (1984).

theory. According to Sperber and Wilson, pragmatic reasoning operates according to cognitive and communicative principles of relevance. These principles are conveniently summarized in Wilson and Sperber (2012: 6–7):

> *Cognitive principle of relevance*: Human cognition tends to be geared to the maximization of relevance.
> *Communicative principle of relevance*: Every act of overt communication conveys a presumption of its own optimal relevance.
> *Presumption of optimal relevance*: (a) The utterance is relevant enough to be worth processing; (b) it is the most relevant one compatible with the communicator's abilities and preferences.

The relevance of an ostensive stimulus—and utterances are paradigm examples of such stimuli—is a matter of degree. The greater are the *cognitive effects* of processing a stimulus and the smaller is the *cognitive effort* needed to process it, the more relevant will that stimulus be (Wilson and Sperber 2012: 88). Cognitive effects are modifications of an individual's CE. The information carried by the stimulus will either combine with existing assumptions to yield a contextual implication or will combine with existing information to alter the probability or saliency of that information or will interact so as to eliminate or cancel existing assumptions (Wilson and Sperber 2012: 176, 200). With respect to the effort factor, Wilson and Sperber mention two things that impact it, namely the form in which the stimulus is presented (its audibility, legibility, dialect, register, syntactic form, familiarity, etc.) and the degree to which it taxes the resources of memory and imagination (Wilson and Sperber 2012: 176).

As I said, initially Sperber and Wilson resisted the idea of a pragmatics module. In later iterations of RT, however, they became more receptive to the idea of a pragmatics module, and suggested it is a specialized sub-module of the Theory of Mind module (ToMM) that has been proposed to explain the human capacity for "mind reading"—in the sense of being readily and automatically able to "read" a person's purposive (ostensive) behavior and see it as a manifestation of that person's underlying beliefs, intentions and desires (Wilson and Sperber 2012: 261–278). Since we want assumptions about interlocutors' informative, communicative and referential intentions to be a part of the interlocutors' CEs and hence part of what is *mutually* manifest to them, we want the output from the ToMM to interact with other information in a person's CE. However, precisely because we need more than ToMM output to produce and understand verbal utterances, I would resist the idea of a pragmatics module as a sub-module of the ToMM.

Rather than accounting for the constraints on CEs by arguing that pragmatics is modular and hence that the information that feeds into pragmatic processes is constrained in virtue of being domain specific or encapsulated, the key to understanding how CEs are constrained is to understand the principles according to which CEs are modified in the course of conversational exchanges. We saw above that, according to

RT, a speaker's utterance, which is an ostensive stimulus, is intended to modify the CEs of the conversational partners. Understanding the principles that govern such modifications is important for understanding CEs and their role in utterance production and comprehension. The attempt to shape one's interlocutors' CEs is what I call "conversational tailoring". I have described some aspects of such tailoring in the context of a discussion of generalized conversational implicatures in Bezuidenhout (2015) and in the context of a discussion of presuppositions in Bezuidenhout (2010, 2014).

Not everything that you know is a part of your current CE and hence currently manifest to you. (Moreover, not everything in your current CE is currently activated in the "spotlight of attention". I return to this second issue in the following section). What carves out your current CE from the totality of what you know? This is just the old "Frame problem" raised in early AI research in the 1960s and 1970s. The issue initially arose in attempts to account for commonsense reasoning and conscious deliberation (including scientific theorizing), which modularists such as Fodor believed could never be explained scientifically. However, many of the same issues arise in the context of language performance studies, given the crucial role of pragmatic inferences in language performance. Such pragmatic processing is equally the target of those who believe that non-modular processes are not scientifically tractable.

Given how old the frame problem is, I cannot hope to summarize all the attempts to answer it here. For current purposes, I need merely to invoke the well-entrenched notions of mental frames, scripts, or schemas, which are representations stored in long term memory and that contain default information about typical scenarios we have encountered in the past (e.g., we may have stored a "restaurant" script that contains information about the sorts of things that typically transpire in a restaurant). When one of these scripts is triggered by the current conversational situation, this will already to a large degree shape how you will interpret the actors, actions and events that transpire. Similarly, it has been argued that we operate with various sorts of mental schemas (or heuristics), such as a causal schema that accounts for our tendency to see co-occurring events as causally connected, or a purposive schema that accounts for our tendency to see events (even natural events) as the result of underlying agency or purpose.

These ideas of frames, scripts and schemas certainly explain why not everything you know will be invoked in a particular conversational situation and how information in your CE might be limited to situation-specific information. However, they don't explain what invokes a particular script or frame in the first place. It is on this issue that I think RT has some valuable insights to offer. I will briefly describe two ways in which ideas from RT can explain how particular frames are invoked in the course of a conversation and thus explain how interlocutors are able to shape one another's CEs.

Firstly, the very idea that the inferential phase of language comprehension is a relevance driven process will partially explain why a particular frame is accessed. As we saw above, relevance is a matter of balancing contextual effects and processing effort. Degree of effort is a factor in determining relevance. Thus the more effort it takes to retrieve a frame, the less relevant the stimulus that is interpreted relative to that frame would be (other things being equal). I assume that the processing effort involved in accessing a frame is affected by such factors as recency of use, frequency of use, ease of access (e.g., cases of self-deception may involve blocking access to certain frames; a mother who refuses to read the signs of her son's drug addiction is mentally blocking a way of framing the situation), and so on. And on the flip side, the more contextual effects that are yielded by invoking a particular frame, the more relevant the stimulus that is interpreted relative to that frame would be (other things being equal).

Suppose you are dining in a restaurant with a married couple. As the meal draws to a close, the husband, gesturing towards his wife, suddenly comes out with an utterance of (1):

1. She will pay for it.

You take him to have said that his wife will pay for the meal. After all, you are in a restaurant and maybe you have been thinking for a while about the touchy issue of who will pick up the tab for the meal. So the restaurant script will have been recently activated and be easily accessible. Moreover, the utterance interpreted relative to this frame answers a question that was on your mind and, you reasonably assume, on the minds of the other diners. That is, interpreted in this way, the husband's utterance is highly relevant, and the relevance driven comprehension procedure is likely to halt at this point, without seeking alternative possible interpretations.

Of course, it is always possible that the husband has been silently fuming all evening about his wife's infidelity, which he found out about just before the start of the dinner when the private detective he had hired to follow his wife slipped him a set of photographs of his wife *in flagrante delicto*. Unable to contain himself anymore, he gives vent to his desire for revenge against his wife by uttering (1). In other words, in such a situation, interpreting (1) as the claim that the wife will pay for the meal would involve some sort of misunderstanding, although not one that can be blamed on the interpreters.

This raises an interesting issue that is tangential to my main point, namely whether in this situation the husband's intention to express his desire for revenge is the one that fixes the context for interpretation. I will not pursue this issue here. Suffice it to say that I follow Bianchi (2013), who argues that context-fixing intentions must be ones that the speaker *makes available* to the hearer, in the sense that in the normal course of things a hearer could reasonably be expected to discern these intentions. Intentions that are hidden or opaque are not communica-

tive intentions. The husband had no communicative intentions behind his utterance of (1). If the misunderstanding is detected, some conversational repair can be done and the correct frame for interpreting the husband's utterance of (1) can be made accessible to the interlocutors. Or the husband might exploit the misunderstanding to cover up his embarrassment at showing his emotions in public and let the interpretation that his wife will pay for the dinner stand.

The second RT idea that can help to explain how and when frames, scripts or schemas will be invoked is the idea of *procedural meaning*. The idea is that some linguistic expressions encode procedures rather than concepts. There may also be expressions that encode both concepts and procedures (see Wilson and Sperber 1993, 2012). The notion of procedural meaning "arises from the observation that there are linguistic expressions which can help hearers to follow the [speaker's] intended inferential path" (Clark 2013: 312). Expressions that encode procedures are called procedural markers. One important sub-class of such markers is the class of discourse connectives, such as 'but', 'however', 'nevertheless', inferential 'so', 'because', 'after all', 'moreover', and so on. Many other lexical items and linguistic constructions have been said to encode procedural meanings. For example, prosody, syntactic structures (e.g., it-clefts), interjections (e.g., 'wow' and 'oh'), illocutionary force indicators and hearsay particles have all been taken to encode procedures.[4]

Blakemore (1987: 2002) has discussed discourse markers from an RT perspective, treating them as expressions that guide the interferential phase of interpretation. She argues that they encode rules that indicate the type of CE in which the utterances of which they are a part are to be processed. In this way they guide the hearer towards intended contextual effects and hence reduce the overall effort required to process the discourse. As Clark (2013: 310) puts it, procedural expressions "guide the hearer by making one of the possible inferential connections more salient than others". Such expressions "indicate the way in which the utterance might be relevant and so make particular ways of processing more salient" (Clark 2013: 326).

Consider for example a situation in which a speaker utters the sequence of sentences in (2) below:

2. He's a heavy drinker. His wife left him.

There are several possible ways in which these two sentences could hang together to create a coherent discourse segment. The speaker could intend to convey that the wife's leaving was a consequence of the man's heavy drinking or that it was a reason for his heavy drinking. Or perhaps his heavy drinking and his wife's leaving are just two of the ways in which the man's life is falling apart. There are undoubtedly other possibilities too. Assumptions in the mutual cognitive environ-

[4] For further discussion, see Andersen and Fretheim (2000) and Escandell-Vidal et al. (2011).

ment (including the topic currently under discussion, the identity of the man, what his relation to the interlocutors is, and so on) may make it easy to figure out which of these possible relations between the two events is the one that the speaker intends to be talking about. However, there are ways for the speaker to make it easier on the listeners by using a discourse connective, such as in (3)–(5) below:

3. He's a heavy drinker, so his wife left him.
4. He's a heavy drinker because his wife left him.
5. He's a heavy drinker. Moreover, his wife left him.

In the case of (3), one is constrained to interpret the man's drinking as the reason for the wife's leaving rather than the other way about. In the case of (4), the inferential connection is just the reverse. In both these cases, certain types of scripts or frames are likely to be invoked. In the case of (3), a script about how alcoholic men behave in domestic situations might lead one to infer that the man physically abused his wife while under the influence of alcohol. In the case of (4), a script about how a man scorned by his love would act might lead one to infer that the man sought solace in his local pub night after night and became addicted to alcohol. In the case of (5), a script about people down and out on their luck might lead one to infer that the man has experienced further woes beyond his alcoholism and having been deserted by his spouse, such as having huge debts, and so on.

There is a lot more that could be said about the notion of procedural meaning, about procedural markers, and about discourse markers in particular. There is an extensive literature devoted to all these issues. For current purposes, the main point I wish to emphasize is that procedural markers can help us understand how particular frames, scripts and schemas can be invoked in the course of an unfolding conversation. Procedural markers are used as a way to shape the CEs of one's interlocutors. They are devices for conversational tailoring.

3. *CEs and the center of attention*

In the previous section I invoked the well-entrenched notion of a frame, script or schema as a way of explaining how CEs are constrained and then invoked notions from RT (in particular the ideas of relevance-driven processing and of procedural meaning) to answer the antecedent question as to how particular frames/scripts/schemas are invoked in particular situations. I suggested that by constraining one another's CEs in these ways, interlocutors are engaging in conversational tailoring. In this section I address a second way in which people engage in conversational tailoring. Once having invoked a particular frame, and thereby having made certain information manifest, there is a further question as to which bits of information in the frame are currently activated and at the center of attention. This too requires conversational tailoring.

Although the idea of a bit of information coming to be at the center of attention may seem a simple process, I believe that it is in fact a rather complex matter with multiple dimensions. One way to characterize the process is to think of it as a matter of foregrounding some bit of information in one's CE, which of course presupposes that other information remains backgrounded. The backgrounded information functions partly in an identificatory role, helping to pick out what is at issue (just as something stands out as a figure only relative to a particular sort of ground). Much of what has been treated in the literature as presupposed information could be re-construed as backgounded information. Here I follow Abbott (2000). Thus, the means available to interlocutors to background certain information and, by contrast, to put other information at the center of attention, are just the sorts of devices that have been much discussed in the literature of presupposition. I can't summarize that huge literature here. Bezuidenhout (2010, 2014) makes a start at showing how presupposition triggers can be thought of as devices for separating the foreground from the background.

I will give just one very simplistic illustration here. In the presupposition literature, definite descriptions are frequently treated as presupposition triggers. Thus an utterance of a sentence containing a description of the form 'The F' is said to presuppose the existence of a salient and identifiable F.[5] So consider (6) below:

6. The man in the red shirt looks like he might be able to help us.

Suppose I utter this to you at the entrance to a nightclub in Seoul where we have stopped because we have lost our way. The man at the entrance is checking people's IDs as they enter the club and let us suppose that he is in fact wearing a white shirt. I do not realize that he is standing under a red light that makes his shirt look red from my perspective. The presupposed information that there is a salient and identifiable man in a red shirt is intended to help you identify the man who could help us. Since this information is part of the background that is intended to bring a particular individual to the fore, it does not matter that the information is incorrect, so long as it plays the intended role.[6] It will do this if you are subject to the same visual illusion that I am subject to or if you can see that that from my point of view what is in fact white would look red and make adjustments accordingly.

The use of definite descriptions for this sort of identificatory role is one of the most straightforward ways in which backgrounded (= pre-

[5] Here I follow Beaver and Geurts (2014). For instance, they say and I agree that an utterance of 'It was the knave who stole the tarts' presupposes at least the following: There is a (salient and identifiable) knave. There were (salient and identifiable) tarts. Somebody stole the tarts. The it-cleft construction is another type of presupposition trigger that I do not discuss in the text above.

[6] Note that it is not the flesh and blood individual that is "brought to the fore" or "placed at the center of attention". Rather it is a *representation* of that individual that is centered. What is centered is an element of a person's cognitive environment (CE) and a CE is a mental construct.

supposed) information helps put something at the center of attention. In a more extended treatment I would hope to show that this applies to many other sorts of presupposition triggers too, including grammatical devices such as it-clefts and right- and left-dislocations, phonological devices such as pitch accents and information contours, and many other such linguistic and paralinguistic means that we have for information structuring purposes.

4. *Conclusions*

I have laid out some of the details of the psychological notion of context assumed within the RT framework, namely the notion of context as the mutual cognitive environments (CEs) of the conversational participants. I have also tried to show how the ideas of relevance-driven processing and of procedural meaning can help us to explain the ways in which CEs are constrained in the course of language production and understanding, because they help to explain how in the course of language production and comprehension particular frames, scripts, or schemas are invoked. I then very briefly mentioned some ideas about how information in a CE gets to be at the center of attention. These ideas of framing and centering help us to see some of the ways in which interlocutors are continually engaged in a process of conversational tailoring as a conversation unfolds.

References

Abbott, B. 2000. "Presuppositions as nonassertions". *Journal of Pragmatics* 32: 1419–1437.

Andersen, G. and Fretheim, T. (eds.). 2000. *Pragmatic Markers and Propositional Attitude*. Amsterdam: John Benjamins.

Beaver, D. and Geurts, B. 2014. "Presupposition". In *Stanford Encyclopedia of Philosophy*. http://plato.stanford.edu/archives/win2014/entries/presupposition/

Bezuidenhout, A. 2010. "Grice on presupposition". In K. Petrus (ed.), *Meaning and Analysis: Themes from H. Paul Grice*. Basingstoke: Palgrave McMillan: 75–102.

Bezuidenhout, A. 2014. "Presupposition failure and the assertive enterprise". *Topoi*,. Online first http://link.springer.com/article/10.1007/s11245-014-9265-4

Bezuidenhout, A. 2015. "The implicit dimension of meaning: Ways of "filling in" and "filling out" content". *Erkenntnis* 80 (1): 89–109.

Bezuidenhout, A. Forthcoming. "The role of context in semantics: A Relevance Theory perspective". In S-J. Conrad and K. Petrus (eds.). *Meaning, Context, and Methodology*. Mouton Series in Pragmatics, Berlin: de Gruyter.

Bianchi, C. 2013. "Illocutions in context". In C. Penco and F. Domaneschi (eds.). *What is Said and What is Not*. Stanford: CSLI Press: 131–139.

Blakemore, D. 1987. *Semantic Constraints on Relevance*. Oxford: Blackwell.

Blakemore, D. 2002. *Relevance and Linguistic Meaning*. Cambridge: Cambridge University Press.

Clark, B. 2013. *Relevance Theory*. Cambridge: Cambridge University Press.

Escandell-Vidal, V., Leonetti, M. and Ahern, A. (eds.) 2011. *Procedural Meaning: Problems and Perspectives*. Bingley, UK: Emerald Group Publishing.

Hauser, M., Chomsky, N. and Fitch, W. T. 2002. "The Faculty of Language: What Is It, Who Has It, and How Did It Evolve?" *Science* 298: 1569–1579.

Kasher, A. 1984. "Pragmatics and the modularity of mind". *Journal of Pragmatics* 8: 539–557.

Sperber, D. and Wilson, D. 1986. *Relevance: Cognition and Communication*. Oxford: Blackwell.

Sperber, D. and Wilson, D. 2014. "What is the role of meaning in communication?" Paper presented at the Philosophy of Language and Linguistics conference, Dubrovnik, Croatia, September 8–12, 2014.

Wilson, D. and Sperber, D. 1993. "Linguistic form and relevance". *Lingua* 90: 1–25.

Wilson, D. and Sperber, D. 2012. *Meaning and Relevance*. Cambridge: Cambridge University Press.