

Handbooks of Pragmatics

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Volume 4

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Cognitive Pragmatics

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Preface to the handbook series

Wolfram Bublitz, Andreas H. Jucker and Klaus P. Schneider

The series *Handbooks of Pragmatics*, which comprises nine self-contained volumes, provides a comprehensive overview of the entire field of pragmatics. It is meant to reflect the substantial and wide-ranging significance of pragmatics as a genuinely multi- and transdisciplinary field for nearly all areas of language description, and also to account for its remarkable and continuously rising popularity in linguistics and adjoining disciplines.

All nine handbooks share the same wide understanding of pragmatics as the scientific study of all aspects of linguistic behaviour. Its purview includes patterns of linguistic actions, language functions, types of inferences, principles of communication, frames of knowledge, attitude and belief, as well as organizational principles of text and discourse. Pragmatics deals with meaning-in-context, which for analytical purposes can be viewed from different perspectives (that of the speaker, the recipient, the analyst, etc.). It bridges the gap between the system side of language and the use side, and relates both of them at the same time. Unlike syntax, semantics, sociolinguistics and other linguistic disciplines, pragmatics is defined by its *point of view* more than by its objects of investigation. The former precedes (actually creates) the latter. Researchers in pragmatics work in all areas of linguistics (and beyond), but from a distinctive perspective that makes their work *pragmatic* and leads to new findings and to reinterpretations of old findings. The focal point of pragmatics (from the Greek *prāgma* ‘act’) is linguistic action (and inter-action): it is the hub around which all accounts in these handbooks revolve. Despite its roots in philosophy, classical rhetorical tradition and stylistics, pragmatics is a relatively recent discipline within linguistics. C.S. Peirce and C. Morris introduced pragmatics into semiotics early in the twentieth century. But it was not until the late 1960s and early 1970s that linguists took note of the term and began referring to performance phenomena and, subsequently, to ideas developed and advanced by Wittgenstein, Ryle, Austin and other ordinary language philosophers. Since the ensuing *pragmatic turn*, pragmatics has developed more rapidly and diversely than any other linguistic discipline.

The series is characterized by two general objectives. Firstly, it sets out to reflect the field by presenting in-depth articles covering the central and multifarious theories and methodological approaches as well as core concepts and topics characteristic of pragmatics as the analysis of language use in social contexts. All articles are both state of the art reviews and critical evaluations of their topic in the light of recent developments. Secondly, while we accept its extraordinary complexity and diversity (which we consider a decided asset), we suggest a definite structure, which gives coherence to the entire field of pragmatics and provides

orientation to the user of these handbooks. The series specifically pursues the following aims:

- it operates with a wide conception of pragmatics, dealing with approaches that are traditional and contemporary, linguistic and philosophical, social and cultural, text- and context-based, as well as diachronic and synchronic;
- it views pragmatics from both theoretical and applied perspectives;
- it reflects the state of the art in a comprehensive and coherent way, providing a systematic overview of past, present and possible future developments;
- it describes theoretical paradigms, methodological accounts and a large number and variety of topical areas comprehensively yet concisely;
- it is organized in a principled fashion reflecting our understanding of the structure of the field, with entries appearing in conceptually related groups;
- it serves as a comprehensive, reliable, authoritative guide to the central issues in pragmatics;
- it is internationally oriented, meeting the needs of the international pragmatic community;
- it is interdisciplinary, including pragmatically relevant entries from adjacent fields such as philosophy, anthropology and sociology, neuroscience and psychology, semantics, grammar and discourse analysis;
- it provides reliable orientational overviews useful both to students and more advanced scholars and teachers.

The nine volumes are arranged according to the following principles. The first three volumes are dedicated to the foundations of pragmatics with a focus on micro and macro units: *Foundations* must be at the beginning (volume 1), followed by the core concepts in pragmatics, *speech actions* (micro level in volume 2) and *discourse* (macro level in volume 3). The following three volumes provide *cognitive* (volume 4), *societal* (volume 5) and *interactional* (volume 6) perspectives. The remaining three volumes discuss *variability* from a *cultural and contrastive* (volume 7), a *diachronic* (volume 8) and a *medial* perspective (volume 9):

1. *Foundations of pragmatics*
Wolfram Bublitz and Neal R. Norrick
2. *Pragmatics of speech actions*
Marina Sbisà and Ken Turner
3. *Pragmatics of discourse*
Klaus P. Schneider and Anne Barron
4. *Cognitive pragmatics*
Hans-Jörg Schmid
5. *Pragmatics of society*
Gisle Andersen and Karin Aijmer

6. *Interpersonal pragmatics*
Miriam A. Locher and Sage L. Graham
7. *Pragmatics across languages and cultures*
Anna Trosborg
8. *Historical pragmatics*
Andreas H. Jucker and Irma Taavitsainen
9. *Pragmatics of computer-mediated communication*
Susan Herring, Dieter Stein and Tuija Virtanen

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Part I: Introduction

1. Generalizing the apparently ungeneralizable. Basic ingredients of a cognitive-pragmatic approach to the construal of meaning-in-context

Hans-Jörg Schmid

1. The term *Cognitive Pragmatics*

At the time of writing, on 15 March 2012, the query “cognitive pragmatics” (inserted between inverted commas in a Google search) harvested a mere 714 real (37,400 estimated) websites from the Internet. The majority of these pages related to one of three sources: a book by Bruno Bara (2010) entitled *Cognitive Pragmatics*, a research initiative referred to by that name by Asa Kasher or, indeed, to advance announcements of this handbook and individual contributions to it. At present, then, there is little evidence that the term *Cognitive Pragmatics* is well established, and this provokes the following questions: What is Cognitive Pragmatics? What is the niche it is supposed to fill in the already highly diversified landscape of approaches to the study of language? And why (*on earth*, the reader may well be inclined to add) should a voluminous handbook be devoted to this so far apparently rather marginal field of inquiry?

Cognitive Pragmatics can initially be defined as dealing with **the reciprocal relationship between pragmatics and cognition**. Considering that pragmatics is concerned with “meaning-in-context” (Bublitz and Norrick 2011: 4), it follows that Cognitive Pragmatics focuses on the **cognitive aspects of the construal of meaning-in-context**. This pertains to both language production and comprehension, and it specifically concerns one of the key questions that pragmatics has set out to answer: What are the cognitive abilities and processes required to be able to arrive at “what can or must be said” in order to get across “what is meant” and to arrive at “what is meant” on the basis of “what is said”? This conception of Cognitive Pragmatics is, to a large extent, compatible with that proposed by Bara (2010: 1), who defines it as “the study of the mental states of people who are engaged in communication”. However, the present conception of Cognitive Pragmatics is, on the one hand, more specific than Bara’s in that it focuses on the “construal of meaning” rather than on “communication” as such, and, on the other hand, more general in that it does not talk about “mental states”, but “cognitive aspects” in general. The present purview of Cognitive Pragmatics is also much more restricted and focused than the one demarcated by the journal *Pragmatics & Cognition*, which

seeks to explore relations of all sorts between semiotic systems as used by humans, animals and machines, in connection with mental activities: logical and causal dependence; condition of acquisition, development of loss; modeling, simulation of formalization, shared or separate biological and neurological bases; social and cultural variation; aesthetic expression; historical development. (quoted from <http://benjamins.com/#catalog/journals/pc>, accessed 15 March 2012)

2. The concept of Cognitive Pragmatics

For some linguists – especially those who study what is called the “core” of grammar with the aim of producing formal representations of its structure – the idea of there actually being a linguistic discipline that goes by the name of *Cognitive Pragmatics* may well be a rather hair-raising thought. The interbreeding of two approaches to the study of language, the cognitive-linguistic one and the pragmatic one, each of which is notorious for defying all attempts to formulate hard and fast rules and generalizations, can only result in a hybrid that epitomizes adhocness, slipperiness and vagueness. This understandable reaction precisely pinpoints the challenge that Cognitive Pragmatics and the current Handbook are facing – the challenge, as it were, of generalizing what appears to be ungeneralizable. While cognitive processes are, by definition, carried out in individual minds, which renders them to a considerable extent idiosyncratic, and while pragmatic processes are, again more or less by definition, context-dependent and thus largely unpredictable, the aim of this handbook is to identify **the general cognitive-pragmatic principles and processes** that underlie and determine the construal of meaning-in-context.

A second group of linguists – those with a “pragmatic” bent – are maybe not unlikely to observe that, in a sense at least, the expression *Cognitive Pragmatics* is a tautology. And, indeed, reading some of the classics in the pragmatic literature such as Grice’s (1975) account of implicatures and how they are worked out, or Searle’s (1975) description of the ten steps which hearers have to go through in order to arrive at the interpretation of indirect speech acts, the impression that *pragmatics* has been *cognitive* all along is clearly substantiated. The title of Sperber and Wilson’s seminal book *Relevance: Communication and Cognition* (1986, 2nd edition 1995) and their formulation of a *cognitive* principle of relevance alongside a *communicative* one provide further support. Nevertheless, there can be no doubt that neither the “narrow”, “Anglo-American”, nor the “broad”, “Continental [European]” strand of pragmatics (Huang 2007: xi; cf. Bublitz and Norrick 2011: 3) is rooted in psychological or cognitive-science approaches but rather in philosophical, action-theoretical and sociological ones. The major markers of what a given scientific approach is like, i.e. its research questions and topics, methods and argumentation patterns, indicate very clearly that scholars and researchers who work in the field of pragmatics traditionally do not target psychologically plau-

sible, let alone “realistic” models of the construal of meaning-in-context, but prioritize criteria such as the parsimoniousness, elegance and descriptive and explanatory power of a theory.

To be sure, the classic pragmatic theories have spawned a range of approaches that are firmly placed in cognitive-science and cognitive-linguistic frameworks. These can indeed be considered as being distinctly *cognitive-pragmatic*, even though this term has not been applied to them so far. The following survey does not even try to do justice to this body of work, since this mission will be accomplished by the chapters of the Handbook (which also include references to relevant publications):

- Firstly, the rich body of experimental and theoretical publications by Herbert Clark and his collaborators on a wide range of cognitive-pragmatic topics such as common ground, shared knowledge, reference tracking, conversational collaboration and many others has to be mentioned here (cf. Chapter 13).
- Secondly, originally inspired by the claims made by Searle, Grice and others, Seana Coulson, Raymond Gibbs, Rachel Giora, Sam Glucksberg, Anthony Sanford and their collaborators have contributed substantially to our understanding of the construal of meaning-in-context through their work on the processing of figurative, idiomatic, ironic, humorous and other non-literal uses of language (cf. Chapters 9 and 17). This is complemented by the work by Lynn Cameron, Alice Deignan and others on the discursive and pragmatic dimensions of metaphor (cf. Chapter 16).
- Thirdly, the work by Suzanne Beeke, Dorothy Bishop, Louise Cummings, Daniela O’Neill, Ann Reboul and others in the field of developmental and clinical pragmatics has been invaluable, not only for developing therapeutic strategies for the treatment of cognitive-pragmatic deficits and developmental disorders, but also for obtaining theoretical insights into pragmatic competence (cf. Chapters 9, 10, 11 and 12).
- Fourthly, the substantial body of research into discourse processing, reference tracking and inferencing associated with such names as Mira Ariel, Simon Garrod, Morton Ann Gernsbacher, Art Graesser, Walter Kintsch, Ted Sanders, Anthony Sanford and Rolf Zwaan covers an important dimension of pragmatic processing, viz. the cognitive underpinnings of the way in which semantic and pragmatic content are incrementally “put together” during the construal of meaning-in-context (cf. Chapters 3 and 8).
- Fifthly, the term *experimental pragmatics* has entered the scene rather recently (cf. Noveck and Sperber 2004), subsuming attempts to apply established experimental psycholinguistic and psychological methods to test theoretical claims. A survey of such approaches by Breheny (2011) can be found in the first volume of this Handbook series edited by Wolfram Bublitz and Neal Norrick. Experimental pragmatics is, to a large extent, a spin-off from Relevance Theory

- (Sperber and Wilson 1986/1995), aiming to complement the dominantly theoretical work typically based on fabricated examples by experimental studies.
- Sixthly, an increasing number of cognitive linguists are becoming acutely aware of the need to complement the cognitive approach with pragmatic and socio-cultural dimensions of inquiry. Besides Gilles Fauconnier and Mark Turner, whose conceptual blending theory has integrated a context-dependent component right from the start, key representatives include René Dirven, Dirk Geeraerts, Peter Harder, Istvan Kecskes, Gitte Kristiansen and John Taylor (cf. Chapters 5, 6 and 7). An important corollary of this development is the insight that the role played by cognitive-pragmatic principles and processes in the emergence, constitution and change of the “linguistic system” has been grossly underestimated in the past and should be taken much more seriously (cf. Chapters 18, 19, 20 and 21).
 - Finally, of course, mention must be made of Bara’s monograph *Cognitive Pragmatics* (2010), which is an updated and translated version of an Italian book published in 1999. Bara presents an extremely wide-ranging account of communicative competence. As one reviewer remarks, “Bara’s *Cognitive Pragmatics* is a unique exploration of human mental processes in communication with many insightful connections to areas beyond cognitive science” (Wang 2011: no page numbers). And, indeed, the book contains, among other things, discussions of and references to cybernetics, animal communication, paleolithic graffiti, game theory, ethiology, evolutionary anthropology and theories of language origin and evolution. On a more critical note, the same reviewer comments that “it seems that Bara’s *Cognitive Pragmatics* framework is more descriptive than interpretive”, and that “[t]he author pays more attention to a static description of human mental processes of communication, leaving the individual’s dynamic mental process in real communicative interaction by the wayside” (Wang 2011: no page numbers). As a result, the book is less relevant for the study of the construal of meaning-in-context than its title seems to suggest.

3. The demands on Cognitive Pragmatics

What, then, are the basic demands that a viable cognitive-pragmatic theory of language has to meet? Or, in other words, how do we model a human mind that is equipped to construe meaning-in-context?

To flesh out the bare bones of these questions, a short example taken from the movie *Last Chance Harvey* featuring Emma Thompson and Dustin Hoffman in the roles of Kate and Harvey will certainly be helpful. Harvey is an American commercial composer who travels to London looking forward to giving away his daughter at her wedding but is ousted from this role by his daughter’s stepfather.

Having left the wedding in disappointment to fly back home, he learns on the phone that he has been fired and finds a bar in the airport to recover from this shock. Kate, whose job is to collect statistical information from travellers at Heathrow airport, is spending her lunch break in this bar and reading a book. The two had shared a rather fleeting and unpleasant moment the day before when Harvey somewhat harshly declined to answer Kate's questions while making his way out of the terminal after having arrived in London. Harvey has found a place at the bar, Kate is sitting at a table; the only other person present is the barman. After a short conversation initiated by Harvey picking up on their previous encounter, Kate, who has watched Harvey down his third whisky, initiates the following brief exchange:

- (1) Kate: *That'll help.*
 Harvey: *Sorry?*
 Kate: *I said, that'll help.*
 Harvey: *Believe me, it will.*
 Kate: *Right.*
 Harvey: *I reckon it'll help as much as that trashy novel and a glass of Chardonnay.*

Let us focus on Kate's first utterance and discuss what is needed to construe a plausible meaning-in-context of the type 'drinking large of amounts of alcohol will not solve your problems'. Beginning with general **cognitive prerequisites**, Kate and Harvey must of course have the motor ability to produce spoken utterance and the sensory ability to perceive them. Secondly, both must have acquired, at some earlier point in their lives, what could be called "linguistic competence", i.e. lexical and grammatical knowledge (however that is to be modelled) of English, which enables them to associate meanings with the individual lexical items, grammatical elements and grammatical structures. Note that this kind of knowledge is, of course, far from sufficient to arrive at the meaning-in-context sketched above. Thirdly, Kate and Harvey have to be willing to engage in a conversation in the first place, which must not be taken for granted given the type of situation they are in. This includes the willingness to cooperate communicatively; indeed, the way this willingness is gradually building up, especially on Kate's side, is a major part of the appeal of the scene for the viewer. Fourthly, both must have acquired "pragmatic competence", that is, the general ability and willingness to interpret other interlocutors' communicative intentions. Fifthly, Kate and Harvey must have acquired a certain degree of "social competence" allowing them to make informed guesses as to the nature of this social situation: a meeting of strangers in a public place; the social norms governing such situations in Western culture; a man trying to "chat up" a woman; the social role of the barman; etc. And sixthly, Kate and Harvey must have at their disposal general world knowledge and cultural knowledge pertaining to a vast range of issues such as airports, bars, alcoholic drinks and their effects, and so on. Without taking recourse to this kind of knowledge, there is defi-

nately no way of proceeding from *that'll help* to 'drinking large quantities of alcohol will not solve your problems'.

Moving next to necessary **cognitive abilities**, both interlocutors must first of all be able to keep track of the situational context, the linguistic context and the ways in which both constantly change. For example, the fact that Harvey is progressing towards his fourth shot is clearly relevant for the way in which Kate phrases her utterance and Harvey eventually understands it. What is equally important to keep track of are the hypothetical mental states of the other interlocutors: Kate and Harvey, like indeed all competent speakers and hearers, seem to be acutely aware of each others' current mental states. What does the other person know on the basis of what has happened before, of what has been said before and of what can be garnered from the perception of the situation? Significantly, Kate is not only aware of Harvey's attempt to get drunk, she is also aware of the fact that he is aware of her knowledge and that she is aware of the fact that he is aware of it.

In addition, Harvey has to have the ability to connect the individual elements of the sequentially aligned linguistic input he is confronted with (i.e. *that* with *'ll* and *help*), keeping in mind the situational input and currently activated and stored knowledge. In the course of this, he has to compute conventionally and conversationally underdetermined and implicit meanings, including, among other things, the target of the deictic *that* and the contextually appropriate sense of *help*.

While it would be tempting to claim that at this point Harvey has "understood" the literal meaning that 'that will help you solve your problems' and is then able to proceed to figuring out the ironic meaning of Kate's utterance, this presumably misses the point: both the background knowledge already activated and the potential familiarity with situations where *that'll help* is used with an ironic meaning render it rather unlikely that Harvey will process the utterance in a sequential manner by first construing a literal meaning-in-context and then construing the non-literal, ironic one on the basis of additional cognitive principles. Be that as it may, Harvey does have to compute the conventionally and conversationally non-literal meanings, taking into account, as before, the utterance itself, as well as context, context, pragmatic, social, cultural and world knowledge, in order to arrive at a contextually appropriate ironic meaning along the lines suggested above.

Abstracting and abducting from this innocuous but sufficiently complex example, it can be stated that a realistic cognitive-pragmatic model of the construal of meaning-in-context has to accommodate at least the following cognitive prerequisites and abilities (cf. Table 1). The table also includes key terms and research fields traditionally associated with these prerequisites and abilities, which will not be detailed any further here, however, as they are dealt with in the subsequent chapters of this Handbook and are included in the subject index.

While providing such a general list of the major cognitive foundations of the construal of meaning-in-context does not seem to be a particularly daunting task, the proof of the pudding is, as observed above, in the generalizing. It is the mission

Table 1. Survey of demands on a cognitive-pragmatic theory

Cognitive prerequisites:	Key terms:
– motor and sensory ability to produce and perceive utterances	articulation and auditory perception
– linguistic competence	grammatical and lexical knowledge
– willingness to engage in communication	cooperation, cooperative principle
– pragmatic competence	joint attention, intention-reading
– social competence, cultural knowledge and world knowledge	social norms, context of culture, frames, scripts, cognitive and cultural models
Cognitive abilities:	Key terms:
– keep track of situational context and linguistic cotext	deixis, anaphora, cohesion and coherence
– keep track of mental states of other interlocutors	common ground, shared knowledge, mutual knowledge, audience design, given – new, accessibility, topicality
– connect linguistic and situational input and construe meanings of elements and chunks in the input	sense disambiguation (polysemy), reference tracking, anaphora resolution, pragmatic enrichment, explicature
– construe conventionally implicit meaning (taking into account cotext, context and pragmatic, social and cultural knowledge)	inferencing, presupposition, conventional (and, to some extent, generalized conversational) implicature
– construe contextually implicit meaning (dto.)	inferencing, reasoning, conversational (esp. particularized) implicature
– construe conventionally and contextually non-literal meaning (dto.)	implicature, irony, banter, humour, figurative language, metaphor, metonymy

of this Handbook to make some progress towards delivering key components of such an account.

4. The structure of this Handbook

4.1. The rationale behind the structure of this Handbook¹

To translate the conception of Cognitive Pragmatics introduced so far into a coherent arrangement of chapters in this Handbook, a distinction between four types of *input factors* and three major *targets of construal* is introduced:

Types of input factors used in the construal of meaning-in-context:

1. The utterance/text/discourse (including preceding cotext).
2. The non-linguistic situational, social and cultural environment.
3. The linguistic system (somewhat simplistically hypostatized as a cognitively given structure).
4. Cognitive principles (i.e. general, entrenched routines) and processes (i.e. on-line applications of routines and novel cognitive processes).

Major targets of the construal of meaning-in-context:

- A. **Underdetermined** meaning (e.g. sense disambiguation, anaphora resolution, pragmatic enrichment).
- B. **Non-explicit** meaning (e.g. inferencing, reasoning, implicature, world knowledge).
- C. **Non-literal** meaning (e.g. humour, irony, figurative language).

While traditional, i.e. non-cognitive, pragmatics has mainly been concerned with the effects of 1 and 2 on A, and particularly on B and C, the picture of cognitive pragmatics drawn so far indicates that this field of inquiry focuses on the effects of the interplay of 4, on the one hand, and of 1 and 2, on the other, on A, B and C. In addition, as pointed out above, Cognitive Pragmatics should be interested in “feedback” effects of the interaction of 1, 2 and 4 with A, B and C on 3, i.e. the emergence of linguistic structure from actual language usage and processing, especially recurrent processing routines.

A very loose cross-tabulation of these two sets of categories, complemented by the “feedback loop”, yields four broad domains, which are covered by the four parts of this Handbook that follow the present introduction (which constitutes Part I).

Part II: The cognitive principles of pragmatic competence

This part deals with entrenched cognitive routines of pragmatic interpretation, i.e. the influence of 4 on A, B and C, mainly from an off-line perspective. Key issues addressed in this part are:

- relevance as a fundamental communicative and cognitive principle (Chapter 2)
- implicature and explicature as basic cognitive-pragmatic macro-processes (Chapter 3)
- inferencing and reasoning as cognitive processes in the construal of meaning-in-context (Chapter 4)
- basic conceptual principles and relations (Chapter 5)
- salience phenomena in cognitive domains and conceptual networks (Chapter 6)
- the role of encyclopaedic knowledge and cultural models (Chapter 7)

Part III: The psychology of pragmatics

This part brings the online perspective to the fore and surveys key aspects related to pragmatic processing, the acquisition of pragmatic competence and pragmatic disorders, i.e. the influence of 4 on A, B and C from an online perspective:

- the processing of pragmatic information in discourse (Chapter 8)
- the role of salience-based interpretations in the processing of utterances (Chapter 9)
- components of pragmatic ability and children's pragmatic language development (Chapter 10)
- pragmatic disorders in general (Chapter 11)
- autistic spectrum disorders (Chapter 12)
- aphasia from a cognitive-pragmatic and conversation-analytical perspective (Chapter 13)

Part IV: The construal of non-explicit and non-literal meaning-in-context

This part focuses on the cognitive principles and online processes involved in the construal of non-explicit and non-literal meaning, i.e. the joint influence of 1, 2 and 4 on B and C:

- shared knowledge, mutual understanding and meaning negotiation (Chapter 14)
- conversational and conventional implicatures in the construal of non-explicit meaning-in-context (Chapter 15)
- figurative language in discourse (Chapter 16)
- the cognitive pragmatics of humour and irony (Chapter 17)

Part V: The emergence of linguistic structure from the construal of meaning-in-context

This part deals with the effects of the interaction of 1, 2 and 4 with A, B and C on 3:

- a survey of emergentist and usage-based models of grammar (Chapter 18)
- the cognitive pragmatics of language change (Chapter 19)
- the sociopragmatics of language change (Chapter 20)
- the semantics of pragmatic expressions (Chapter 21)

Since the cognitive, psycholinguistic and psychological perspectives are to dominate this Handbook, it is considered appropriate to start out from input factor 4 and move on later to aspects closer to utterances and contexts traditionally covered by pragmatics. In the remainder of this introduction a survey of the chapters will be given.

4.2. Survey of the chapters

Part II: Cognitive principles of pragmatic competence

Part II on “Cognitive principles of pragmatic competence” is subdivided into those cognitive principles and processes which would traditionally be considered as “pragmatic” insofar as they pertain to online processing and context-dependent content, on the one hand, and the ones that are closer to “semantic”, i.e., represented, conceptual and less context-dependent, aspects of meaning construal, on the other. Topics such as inferencing, reasoning, implicature and explicature as well as the relevance principle are at the heart of the former section (“**Pragmatic Principles**”), while the latter (“**Semantic Principles**”) focuses on fundamental conceptual principles underlying meaning construction, including conceptual networks and domains, contextual salience, metaphor, metonymy and conceptual blending, and the role and representation of encyclopaedic knowledge.

“Pragmatic” principles

Chapter 2 by **Yan Huang** on “Relevance and neo-Gricean pragmatic principles” gives a survey of the development and theoretical ramifications of the fundamental pragmatic principle of relevance. This principle has been a cornerstone of a range of pragmatic theories – most prominently those proposed by Sperber and Wilson (1986/1995), Horn (1984, 2009) and Levinson (2000) – which are inspired by Grice’s (1975) *maxim of relation* and his notion of *implicature* (see also Carston and Hall, Chapter 3, and Moeschler, Chapter 15). Huang summarizes these approaches and compares them with regard to how they explain the way in which language users construe “what is meant” on the basis of “what is said” by the application of a very limited number of pragmatic principles.

Squarely set within the relevance-theoretical framework (Sperber and Wilson 1986/1995), **Chapter 3** by **Robyn Carston and Alison Hall** details this model’s account of the cognitive-communicative processes involved in the online, relevance-driven construal of meaning in context. The processes of implicature and explicature take centre stage and provide the title of this chapter. While explicature subsumes pragmatic enrichment processes that are, metaphorically speaking, close to the actually communicated propositions, including sense disambiguation (see also Taylor, Chapter 6) and anaphora resolution (see also Sanders and Canestrelli, Chapter 8), implicatures are more distant contextual implications intended to be communicated by the speaker. In the chapter, the two concepts are explained and analyzed with regard to their explanatory potential and compared to related notions in competing frameworks.

Chapter 4 by **Murray Singer and R. Brooke Lea** takes a psychological, rather than linguistic, vantage point and surveys the empirical evidence available on “Inferencing and reasoning in discourse comprehension”. Partly basing their

account on Kintsch's (1988) influential construction-integration model of discourse comprehension, the authors provide an in-depth discussion of the role of *bridging inferences*, which are necessary for comprehension, and *elaborative inferences*, which additionally enrich the construed situation model. While inference processes are regarded as tapping into stored memory representations, allowing the language user, for example, to connect information about objects to knowledge of their parts, or about events to their causes, deductive reasoning processes are based on conclusions arrived at by means of syllogisms and other forms of basic propositional logic.

"Semantic" principles

Chapter 5 by **Małgorzata Fabiszak** entitled "Conceptual principles and relations" opens the section on pragmatically relevant conceptual principles underlying the construal of meaning-in-context. Stressing the fluid boundaries between semantics and pragmatics, the author presents the current state of mainly cognitive-linguistic research on fundamental conceptual principles and relations. Key issues of the chapter include the prototypical structure of categories, conceptual networks, image schemata, idealized cognitive models, frames, metonymy and metaphor and conceptual blending (see Ungerer and Schmid 2006 for a general introduction to these notions). As befits a contribution to a handbook of cognitive pragmatics, the chapter focuses on the online processes of meaning construction integrating those conceptual structures in the context of communicative acts in social settings and also touches upon the role of individuals' embodied experience and socialization history as well as the shared knowledge of the members of a speech community.

Chapter 6 by **John Taylor** on "Contextual salience, domains, and active zones" follows up on issues discussed by Fabiszak, including the semantics-pragmatics continuum, and deals from a semanticist's perspective with the following long-standing questions (approached from a pragmatic perspective by Carston and Hall in Chapter 3 and from a psycholinguistic perspective by Giora in Chapter 9): How are hypothetically stored, represented "semantic" meanings of lexical items – the large majority of which are of course highly polysemous – instantiated in given contexts? What cognitive processes are involved in this? And how can the representation of lexical meanings be modelled in such a way that it does justice to their amazing flexibility and adaptability to variable contexts? Taking up usage-based cognitive-linguistic approaches (e.g. Lakoff 1987; Langacker 1993; Evans 2009), Taylor concludes his discussion by suggesting that the semantics-pragmatics distinction may presumably turn out to be artificial, if it can indeed be shown that representations of word meanings are essentially routinized activation patterns in conceptual networks which are extracted from actual uses in social settings (see also Harder, Chapter 18).

Chapter 7 by **Istvan Kecskes** details another conceptual foundation of the construal of meaning-in-context which is already mentioned in Fabiszak's contribution, viz. the role played by "Encyclopaedic knowledge and cultural models". While Fabiszak mainly dwells on the cognitive aspects of the representation of encyclopaedic knowledge, Kecskes systematically widens the scope to include the social and cultural dimensions of linguistically relevant extra-linguistic knowledge. The paper sketches the major pillars of a dynamic socio-cognitive model of encyclopaedic knowledge (cf. Kecskes 2008) and explains its implications for the study of meaning-in-context, thus spinning further the thread begun in the two preceding chapters. Kecskes's account of intersubjectively shared cultural models complements Fabiszak's survey of idealized cognitive models and other cognitive knowledge structures such as frames, scripts and their role in the construction of mental spaces.

Part III: The psychology of pragmatics

Part III moves the spotlight to the psychology of pragmatics and elucidates the **processing** of contextual information, the **acquisition** of pragmatic competence and pragmatic impairment and **disorders**.

Processing and acquisition

Chapter 8 by **Ted Sanders and Anneloes Canestrelli** surveys psycholinguistic research which investigates the mental operations involved in "The processing of pragmatic information in discourse". As indicated by the title, the authors' focus is on the level of discourse and on the cognitive processes behind traditional notions such as coherence and cohesion. The two major areas of investigation are the cognitive processes involved in establishing referential coherence, i.e. the ways in which language processors keep track of multiple references to representations of the same referent, and relational coherence, i.e. connecting discourse by means of logical, thematic and argumentative links. The chapter discusses variables that affect the choice and interpretation of anaphoric items, including accessibility (Ariel 1990), topicality (Givón 1995), recency of mention and others (Walker, Joshi, and Prince 1998), and probes the question whether or not the overt signalling of coherence relations by means of connectors such as *but*, *yet* or *because* is invariably conducive to ease of reading and recall of text content. The authors conclude with some reservations concerning the generalizability of experimental findings and plead for an integration of text-linguistic and psycholinguistic approaches.

Chapter 9 by **Rachel Giora** entitled "Happy New War – The role of salient meanings and salience-based interpretations in processing utterances" constitutes a psycholinguistic and pragmatic counterpart to the chapter by John Taylor, who looks at ambiguity and polysemy resolution from a cognitive-linguistic stance.

Like Taylor, Giora deals with the cognitive principles and processes determining the context-dependent access to the meanings of lexical items and larger meaning-carrying chunks, but her focus is on experimental work in the field. According to Giora, the notion of graded salience is the key to answering the question of how interlocutors swiftly and unconsciously arrive at contextually appropriate lexical meanings. Reporting on a wealth of empirical studies and illustrating their findings with original material, Giora highlights the potential of her approach in comparison with other models, among them the so-called direct-access-view (Gibbs 1994) and the relevance-theoretical approach (Sperber and Wilson 1986/1995).

Chapter 10 by **Daniela O'Neill** on “Components of pragmatic ability and children’s pragmatic language development” closes the first group of chapters in Part III and links it with the second one. It starts out from a systematic description of pragmatic competence, which is seen to rely on three distinguishable types of knowledge: social knowledge, social-cognitive knowledge and cognitive knowledge. These are related to *social pragmatics*, *mindful pragmatics* and *cognitive pragmatics* respectively. Exploiting this distinction, the author then proceeds to a rich and detailed account of empirical findings on children’s pragmatic language development in these three areas. O’Neill’s account of ‘normal’ paths for the acquisition of pragmatic competence provides the backdrop for the following three chapters on pragmatic disorders.

Disorders

Chapter 11 by **Louise Cummings** opens the next section by giving a bird’s eye survey of “Pragmatic disorders”. The author summarizes the current state of our knowledge of pragmatic impairment by examining the features of specific language impairments (SLI), autistic spectrum disorders (ASD), types of right-hemisphere damage and other disorders in children and adults (cf. Cummings 2009). Specifically, Cummings considers how breakdown in the pragmatics of language adversely affects the comprehension and expression of classic pragmatic phenomena including speech acts, the processing of implicatures, the use and understanding of deictic expressions and presuppositional phenomena, the utilization of context during utterance interpretation, and the processing of non-literal language. Impairments in pragmatic aspects of non-verbal communication are also touched upon.

Chapter 12 by **Anne Reboul, Sabine Manificat and Nadège Foudon** (“Autism from a cognitive-pragmatic perspective”) zooms in on a group of developmental deficits subsumed under the label *autistic spectrum disorders* (ASD). They discuss the impact of social-pragmatic deficits on language acquisition in autistic people, distinguishing various syndromes including autism (also known as Kanner’s autism) and Asperger Syndrome. Moving to more narrowly “pragmatic” deficits, the authors explain the intention-reading ability commonly referred to as

Theory of mind (Premack and Woodruff 1978) and demonstrate its role as a key prerequisite for successful pragmatic processing. Pragmatic deficits typical of autistic adults, which relate to problems in interpreting indirect speech acts and other non-explicit and non-literal utterances, are also discussed.

The focus of **Chapter 13** by **Suzanne Beeke** entitled “Aphasia: The pragmatics of everyday conversation” is a second classic field of language impairment. From a cognitive-pragmatic point of view, it is particularly remarkable that patients who show the lexical and/or syntactic deficits commonly associated with different types of aphasia, as Beeke puts it, “communicate better than they speak”. The author first summarizes the findings of early pragmatic approaches to aphasic spoken language, which were taken to indicate that people with aphasia seemed to have relatively intact pragmatic abilities. Following this, the bulk of Beeke’s chapter demonstrates the potential of a conversation-analytical approach to researching and treating aphasia and presents key findings corroborating the value of this perspective in relation to aphasic conversation. Richly illustrated, the chapter includes an analysis of extracts from conversations involving one speaker who suffers from agrammatic aphasia.

Part IV: The construal of non-explicit and non-literal meaning-in-context

Part IV takes the Handbook into the next level of cognitive-pragmatic inquiry: the cognitive processes involved in the construal of non-explicit and non-literal meaning-in-context. The part is divided into two sections focussing on these two aspects respectively.

The construal of non-explicit meaning-in-context

Chapter 14 on “Shared knowledge, mutual understanding and meaning negotiation” by **William Horton** follows up on Chapter 3 on inferencing and reasoning, on the one hand, and Chapter 7 on encyclopaedic knowledge, on the other, and reviews the historical development of psycholinguistic studies into common ground, shared knowledge, mutual understanding and meaning negotiation. Particular attention is devoted to controversies over the amount of mutual knowledge actually required for successful language processing and the time course of its activation. Optimal audience design models (e.g. Clark 1996), which regard common ground as a prerequisite for successful communication, are shown to compete with approaches that attribute a much less pervasive role to mutual knowledge (e.g. Keysar et al. 2000) or see it as only exerting a probabilistic influence on language use (e.g. Brown-Schmidt, Gunlogson, and Tanenhaus 2008).

Picking up themes from chapters 3 and 4, **Chapter 15** by **Jacques Moeschler** focuses on “Conversational and conventional implicatures”. This chapter presents a historical survey of the concept of implicature. Criteria for distinguishing be-

tween different types of implicatures are discussed. Moeschler then surveys implications, ramifications and modifications of the notion of implicature in the work of Levinson (2000), Horn (e.g. 2004), Sperber and Wilson (1986/1995) and others, concluding with an assessment of the role of implicatures in comprehension and communication in general.

The construal of non-literal meaning-in-context

Chapter 16 on “Figurative language in discourse” by **Alice Deignan** is the first of two contributions which deal with the use and comprehension of conventional and novel non-literal language. The topic of Deignan’s chapter is the role of metaphors and other types of figurative language, mainly metonymy, in discourse. The author demonstrates the potential of conceptual metaphor theory (Lakoff and Johnson 2003) for the analysis of figurative language in actual spoken and written discourse, but indeed also highlights its limitations and shortcomings (cf. Cameron 2008; Semino 2008; Deignan, Littlemore, and Semino, forthcoming). The chapter reviews empirical research into the evaluative, interpersonal and textual functions of metaphor in discourse and briefly introduces the critical discourse approach to metaphor analysis. The forms that figurative language takes in discourse, the functionally motivated, non-random distribution of manifestations of figurative language in conversation and text, as well as the implications of the discourse-related research on our understanding of figurative language are also discussed.

In **Chapter 17**, **Geert Brône** tackles “Humour and irony in cognitive pragmatics”. Like figurative language, humorous and ironic language presents a special challenge to any pragmatic theory, since “what is meant” is particularly distant from “what is said”. Brône provides a comprehensive state-of-the-art review of theoretical and empirical research into the cognitive aspects of humour and irony. The section on humorous language takes Attardo and Raskin’s (1991) General Theory of Verbal Humour as a reference-point for a discussion of the ways in which canned but also conversational jokes are processed. The section on irony presents the work by Giora (2003), Coulson (2001), Gibbs (1986) and others mentioned in Section 2 above (cf. also Chapter 9) and probes the potential of cognitive-linguistic theories for the study of irony and sarcasm.

Part V: The emergence of linguistic structures from meaning-in-context

Parts II to IV of the Handbook follow common practice in pragmatics insofar as they take for granted that the online construal of “pragmatic” meaning-in-context relies on stored and entrenched “semantic” knowledge representations. Part V reverses this perspective and highlights the ways in which cognitive-pragmatic principles and processes contribute to the emergence and change of individually entrenched and collectively shared knowledge that is grammar. Among the best-

known approaches emphasizing this contribution are Traugott's (cf. Traugott and Dasher 2004) invited-inference theory of semantic change, Hopper's (1987) concept of *emergent grammar* and an increasingly wide range of usage-based approaches which regard grammar as the product of language use (cf., e.g., Langacker 1988; Tomasello 2003; Bybee 2010).

Chapter 18 by **Peter Harder** opens this part by providing a survey of "Emergent and usage-based models of grammar". Harder's account focuses not on the role of specific cognitive-pragmatic principles and processes but on the theoretical background assumptions and claims that motivate such models and the methodological challenges they have to face. Major running themes in Harder's contribution are the tension, as yet unresolved, between system and usage in linguistic theorizing and the related controversies over how to model the interplay of lexical, grammatical and pragmatic aspects of language adequately.

Chapter 19 by **Graeme Trousdale** entitled "Grammaticalization, lexicalization and constructionalization from a cognitive-pragmatic perspective" explores the potential of cognitive pragmatics for explaining various aspects of language change. Picking up threads from Harder, the chapter looks at attempts to explain the co-evolution of meanings and forms in grammaticalization studies (e.g. Bybee, Perkins, and Pagliuca 1994). The role of cognitive construal operations such as viewpoint and subjectivization (Langacker 1987) on pragmatic processes such as invited inferencing (Traugott and Dasher 2004) and particular aspects of language change are discussed. In the later section of the chapter, the focus shifts to *constructionalization*, a recent term referring to changes affecting conventionalized or novel pairings of form and meaning.

Chapter 20 by **Terttu Nevalainen** widens the scope of investigation to include consideration of the "Sociopragmatics of language change". Recognizing the fact that a pragmatic perspective on the emergence of meaning must not be restricted to the interplay between the language system and language use in specific situations, the chapter emphasizes the need to describe how changes and innovations spread across a linguistic community. Providing a wealth of illustrations and empirical findings, Nevalainen approaches this task by looking at the main sources and loci of innovation, discussing local and long-term effects of sociopragmatic processes such as accommodation (Giles, Coupland, and Coupland 1991; Auer and Hinskens 2005) and investigating the role of social networks and acts of social identity.

Chapter 21 by **Maj-Britt Mosegaard Hansen** aptly closes Part V and the whole Handbook with an investigation of "The semantics of pragmatic expressions". This final chapter demonstrates the relevance of a number of issues raised earlier in Part V and elsewhere in the Handbook for a notoriously difficult area of linguistic inquiry: the linguistic description of the meanings of pragmatic expressions such as connectives, discourse markers, pragmatically motivated multi-word expressions and other "context-level expressions", as Hansen calls them. Among these issues are: the contested boundary between semantics and

pragmatics, which is supplemented by the psycholinguistic question as to whether the meanings of context-level expressions are referential in nature (“semantic”) or procedural (“pragmatic”); the vexing question of how to make sense of the polysemy/polyfunctionality of context-level expressions; and the need to construct adequate models of generalizable cognitive-pragmatic factors behind the semantic change of these expressions.

5. Conclusion

Does the collection of chapters in this Handbook fill a “much-needed gap”? Ignoring the fact that the editor should of course leave it to others to answer this legitimate question, I would like to venture one or two concluding observations.

It should be fairly uncontroversial that the development of a coherent and comprehensive cognitive-pragmatic account of how language users construe meanings-in-context falls within the remit of the language sciences. So far, however, I would argue, in spite of the existence of the inspiring and illuminating work referred to in Section 2 above, that none of the existing linguistic “disciplines” has managed to provide a natural breeding-ground for such an account. Traditional “philosophical” pragmatics has failed or, better, not even tried to supply solid empirical evidence demonstrating the cognitive plausibility and validity of its largely theoretical claims, however appealing and convincing they may be. Psycholinguistics and the psychology of language, true to the nature of experimental approaches, tend to lose sight of the bigger picture behind the controlled observation of highly specific processes and phenomena related to the construal of meaning-in-context. Cognitive linguistics, with its focus on stored representations and their cognitive foundations, has so far not even attempted, let alone managed, to produce systematic models of how stored knowledge and online processing interact in the construal of linguistically underdetermined, non-explicit and non-literal meanings-in-context. In short, a linguistic discipline that feels responsible for targeting the seemingly simple general question as to how interlocutors connect “what is said” to “what is meant” and vice versa has not yet been established.

It goes without saying that this Handbook, partly due to the fact that it is a handbook rather than a monograph, is not a suitable medium for offering a comprehensive and coherent answer to this question either. What it might be able to do, however, is give a fresh impetus and provide some assistance for future efforts in the field by providing a rich survey of the questions to be asked, of avenues that promise to lead to answers to these questions and of ways to approach the task of systematically generalizing the apparently ungeneralizable.

Notes

1. I would like to thank Dirk Geeraerts for his contribution to designing the overall structure of this Handbook, which is, in spite of some changes, still reflected in Section 4.1.

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Part II: Cognitive principles of pragmatic competence

“Pragmatic” principles

2. Relevance and neo-Gricean pragmatic principles

Yan Huang

This chapter is dedicated to Professor Anna Morpurgo Davies, my mentor at Oxford, on the occasion of her seventy-fifth birthday.

1. Introduction

The maxim of Relation is one of a set of pragmatic sub-principles originally postulated by Grice (1975, 1989). However, in Sperber and Wilson's (1986/1995) relevance theory, the whole centre of gravity of pragmatics is reduced to a single, technical concept of relevance, which is embodied in two principles of relevance: the principle of cognitive relevance and the principle of communicative relevance. This contrasts with the neo-Gricean pragmatic models advanced by both Horn (1984, 2009) and Levinson (1987, 2000), where the original Gricean maxim of Relation is not given any prominent place.

This chapter endeavours to examine relevance and neo-Gricean pragmatic principles. I shall start by discussing the role played by the maxim of Relation in the original Gricean programme in section 2. Next, in section 3, I shall navigate around the notion of relevance and the cognitive and communicative principles of relevance. I shall then explore both Horn's (1984, 2009) and Levinson's (1987, 2000) neo-Gricean pragmatic principles in section 4. Finally, in section 5, a comparison between relevance and neo-Gricean pragmatic principles and their related areas will be offered.

2. Relation in classical Gricean pragmatics

In classical Gricean pragmatics, the maxim of Relation is just one of a set of pragmatic sub-principles articulated by Grice (1975, 1989) to provide an account of how language is used maximally efficiently and effectively to achieve rational interaction in communication, as can be seen in the simplified version of classical Gricean theory of conversational implicature in (1) (see e.g. Huang 2000a: 206, 2007: 26, 2010a).

(1) Classical Gricean theory of conversational implicature:

- a. The co-operative principle
Be co-operative.
- b. The maxims of conversation
 - Quality: Be truthful.
 - (i) Don't say what is false.
 - (ii) Don't say what lacks evidence.
 - Quantity: (i) Don't say less than is required.
(ii) Don't say more than is required.
 - Relation: Be relevant.
 - Manner: Be perspicuous.
 - (i) Avoid obscurity.
 - (ii) Avoid ambiguity.
 - (iii) Be brief.
 - (iv) Be orderly.

Assuming that the co-operative principle and its associated maxims of conversation are normally adhered to by both the speaker and the addressee in a verbal interaction, Grice suggested that a conversational implicature – roughly, any meaning implied or expressed by, and inferred or understood from, the utterance of a sentence which is meant without being part of what is strictly said¹ – can then arise from either strictly observing or ostentatiously flouting the maxims. In Huang (2003, 2007), I called conversational implicatures that are engendered by way of directly observing the maxims *conversational implicatures_O*, and conversational implicatures that are generated by way of the speaker's deliberately flouting the maxims *conversational implicatures_F*. Given the Gricean maxim of Relation, while the Relation-implicature in (2) is a conversational implicature_O, that in (3) is a conversational implicature_F. (I use '+>' to stand for "con conversationally implicate".)

(2) A: *I am out of petrol.*

B: *There is a garage round the corner.* (Grice 1989: 32)

+> The garage is open and sells petrol.

(3) John: *Susan can be such a cow sometimes!*

Mary: *Oh, what a lovely day today!* (Huang 2007: 30)

+> e.g. One shouldn't speak ill of people behind their back.

3. Relevance in relevance theory

In Sperber and Wilson's (1986/1995) relevance theory, however, the whole centre of gravity of pragmatic theory is reduced to a single, technical concept of relevance.² This notion of relevance is embodied in the two principles of relevance

put forward by Sperber and Wilson (1986/1995): a first or cognitive principle of relevance (4), and a second or communicative principle of relevance (5).³

(4) The cognitive principle of relevance

Human cognition tends to be geared to the maximization of relevance.

(5) The communicative principle of relevance

Every utterance conveys a presumption of its own optimal relevance.

What, then, is relevance? According to Sperber and Wilson (1986/1995), relevance is a function or measure of two factors: (i) cognitive or contextual effects, and (ii) processing effort. The first factor is the fruitful outcome of an interaction between a newly impinging stimulus and a subset of the assumptions that are already established in a cognitive system. The second factor is the effort a cognitive system has to expend in order to yield a satisfactory interpretation of any incoming information processed. Defined thus, relevance is a matter of degree. The degree of relevance of an input to an individual is a balance struck between cognitive effects (i.e. the reward) and processing effort (i.e. the cost). The greater the positive cognitive effects achieved, and the smaller the processing effort required, the greater the relevance of the input to the individual at the time.

Furthermore, Sperber and Wilson isolated three main types of positive cognitive effects to which the processing of new information in a context may give rise: (i) a generating of a conclusion derivable from new and old information together, but from neither new nor old information separately, which is called a contextual implication, (ii) a warranted strengthening of an existing assumption, and (iii) a warranted revision (including contradicting and cancelling) of an existing assumption. As an illustration, consider the following scenario, taken from Blakemore (2002: 60–61). Suppose that a bus driver is about to leave from a bus stop. He sees in his rear mirror the reflection of an anxious-looking woman carrying a bus pass, trying to cross the road behind him. In this situation, the bus driver's overall representation of the world can be improved in the following three ways corresponding to the three types of cognitive effects mentioned above. In the first place, given the assumption that if a person is holding a bus pass, then he or she intends to travel on a bus, the bus driver will derive the new assumption or the contextual implication that the woman in question has the intention of travelling on his bus. Secondly, the bus driver's existing assumption that the woman is trying to cross the road to catch his bus may be supported and strengthened by the assumption that she is carrying a bus pass. Thirdly and finally, the bus driver's existing assumption that the woman intends to take his bus is contradicted and eliminated when he sees the woman walk off in the opposite direction after handing the bus pass to someone who is standing by the bus stop.

Next, I move to processing effort. Consider another scenario: Suppose that Xiaoming, a Chinese student who has just arrived in England, wants to rent a room

from the Smiths, his potential landlords. He wants to know whether the Smiths keep any cats. His question in (6) could receive any of the replies in (7).

(6) *Do the Smiths have any cats?*

(7) a. *They have three cats.*

b. *They have three pets.*

c. *Either they have three cats or the capital of China is not Beijing.*

Given (4) and (5), all the three replies in (7) are relevant to Xiaoming's question in (6). However, according to the notion of relevance defined above, (7a) is more relevant than either (7b) or (7c). On the one hand, (7a) is more relevant than (7b), because the former requires less processing effort than the latter. The reason is because (7a) entails (7b), and hence generates all the conclusions, among other things, deducible from (7b), together with the context. On the other hand, (7a) is also more relevant than (7c). This is because, although (7a) and (7c), being logically equivalent, yield exactly the same amount of cognitive effect, the effect is much more easily obtained from (7a) than (7c), since the latter has a second, false disjunct to be computed. In other words, the processing effort required to compute (7a) is smaller than that required to compute (7c). Given that relevance stated in this way is a trade-off of effect and effort, it is comparative rather than quantitative. One feature of such a comparative notion is that, as Sperber and Wilson were aware, it provides clear comparisons only in some but not all cases. This gives rise to one of the most common criticisms levelled against relevance theory, namely that it fails to provide an explanation of how to measure contextual effects and processing effort in an objective way, how to make them commensurate with each other, and why there is always a unique way to meet the cognitive and communicative principles of relevance (see e.g. Levinson 1989, and Bach 1999, but see Wilson and Sperber 2004 for a spirited defence).

By way of summary, what the cognitive principle of relevance basically says is this: 'as a result of constant selection pressures, the human cognitive system has developed a variety of dedicated (innate or acquired) mental mechanisms or biases which tend to allocate attention to inputs with the greatest expected relevance, and process them in the most relevance-enhancing way' (Wilson 2010: 394). In other words, in human cognition, there is a tendency for communicators to achieve as many cognitive effects as possible for as little processing effort as possible. This means that relevance plays an essential role not only for utterance interpretation, but for all external stimuli or internal mental representations like sights, smell and thoughts as well (Wilson 2010).

Now, given the cognitive principle of relevance, it follows that a speaker, by his or her act of uttering a sentence, indicates that his or her utterance should be seen as relevant enough to be worth processing by the addressee. This is in fact what the communicative principle of relevance in (5) above actually says. Next, the pre-

sumption of optimal relevance included in the principle entitles the addressee to presume not only that the utterance is relevant enough to be worth his or her processing effort, but also that it is the most relevant utterance compatible with the speaker's abilities and preferences. Finally, on the basis of the communicative principle of relevance and the presumption of optimal relevance included in it, there is a specific relevance-theoretic procedure employed by the comprehension system, which is given in (8) (Wilson 2010).

- (8) The relevance-guided comprehension heuristic
- a. Follow a path of least effort in constructing an interpretation of the utterance (and in particular in resolving ambiguities and referential indeterminacies, adjusting lexical meaning, supplying contextual assumptions, deriving implicatures, etc.).
 - b. Stop when your expectations of relevance are satisfied.

The communicative principle of relevance is responsible for the recovery of both the explicit content (i.e. explicature) and the implicit content (i.e. what I called "r-implicature" in Huang 2007) of an utterance. An explicature is an inferential development of one of the linguistically-given incomplete conceptual representations or logical forms of the sentence uttered (but see Burton-Roberts 2007 for the comments that 'development' in the definition is not defined in relevance theory and Bach's 2004 comments on the term 'explicature'). Defined thus, it is a pragmatically inferred component of the Gricean notion of what is said (though what is said is abandoned in relevance theory). It corresponds roughly to Bach's (2004) notion of "implicature" and Recanati's (2004) notion of "pragmatically enriched said" (see also Huang 2010d on implicature). Depending on the context, the explicature of (9a) may be the bracketed part of (9b).

- (9) a. *Everyone enjoys classical music.*
 b. *Everyone [in John's class] enjoys classical music.*

I turn next to what is taken as implicit content, or r-implicatures in relevance theory. An r-implicature is defined as a communicated assumption derivable solely via pragmatic inference. Thus, the recovery of it differs from that of an explicature in that while the latter involves both decoding and inference, the former involves only inference. Two kinds of r-implicatures can then be identified: (i) implicated premises, and (ii) implicated conclusions. The former is a contextual assumption intended by the speaker and supplied by the addressee, and the latter is a contextual implication communicated by the speaker. By way of illustration, take (10).

- (10) Car salesman: *Are you interested in test-driving a Rolls Royce?*
 John: *I'm afraid I'm not interested in test-driving any expensive car.* (Huang 2007: 195)

John's reply may yield the following two r-implicatures:

- (11) a. A Rolls Royce is an expensive car
 b. John isn't interested in test-driving a Rolls Royce

Here, (11a) is an implicated premise and (11b) is an implicated conclusion of John's reply. (11b) follows deductively from (11a) combined with (10). However, this analysis is not unequivocally accepted. In the first place, in Recanati's (2004: 48) view, an implicated premise is not an implicature, because it is not part of what the speaker means. Rather, it is part of what he or she takes for granted or presupposes and expects the addressee to take for granted. Secondly, as pointed out in Huang (2007: 195), the treatment of (11a) as an implicated premise is limited to the class of examples like (10) in the relevance theory literature, and more generally, is applicable only to what is treated as a particularized conversational implicature (PCI) in the Gricean and neo-Gricean framework. How it can be applied to a generalized conversational implicature (GCI) in the Gricean sense like (12) is, to say the least, not clear.

- (12) *John and Mary watched the Berlin Wall crumble in 1989.*
 +> John and Mary watched the Berlin Wall crumble in 1989 together⁴

To sum up, in relevance theory, the recovery of both explicatures and r-implicatures is guided by the communicative principle of relevance. More specifically, in an overall, relevance-theoretic comprehension process, three sub-tasks are involved, as listed in (13) (Wilson and Sperber 2004: 615).

- (13) Sub-tasks in the overall comprehension process
- a. Constructing an appropriate hypothesis about explicit content (explicatures) via decoding, disambiguation, reference resolution, and other pragmatic enrichment processes.
 - b. Constructing an appropriate hypothesis about the intended contextual assumptions (implicated premises).
 - c. Constructing an appropriate hypothesis about the intended contextual implications (implicated conclusions).

In other words, in relevance theory, utterance interpretation involves (i) the completion or expansion of incomplete logical forms, and the derivation of explicatures via the completion or expansion of the logical forms, and (ii) the generation of r-implicatures including the recovery of r-implicated premises and r-implicated conclusions. Furthermore, the first satisfactory interpretation worked out by the use of the relevance-theoretic comprehension procedure is the only satisfactory reading. This interpretation is the one that the addressee should select. Put in a different way, the relevance-guided comprehension mechanism has a clear stopping point. Once the addressee discovers a reading that crosses the threshold set up by the relevance-theoretic comprehension heuristic, he or she will take it to be what the speaker intends to communicate (Wilson 2010).

This relevance-theoretic analysis is, however, not without problems. For instance, it is incapable of accounting for examples of the following type, discussed in Horn (2006).

(14) *If it's warm, we'll lie out in the sun. But if it's hot, we'll go inside and sit in front of the air-conditioner.*

As pointed out by Horn (2006), in (14), the recovery of the stronger, pragmatically enriched reading of what is said, namely, the explicature 'warm but not hot' arising from the use of *warm* in the first clause can be obtained only when the stronger scalar expression *hot* in the third clause is reached. In other words, the explicature under consideration is not the first satisfactory interpretation picked up by the addressee. Rather, it is the outcome of a retroactive adjustment of the earlier, weaker reading 'at least warm'. Clearly, in order to derive the correct explicature of (14), the addressee cannot stop where he or she is predicated to stop by the relevance-theoretic comprehension procedure (see also Borg's 2009 discussion of various relevance-theoretic possible but untenable manoeuvres to tackle counterexamples of this kind).

4. Neo-Gricean pragmatic principles

In the last section, I discussed the notion of relevance and two principles of relevance in relevance theory. In this section, I turn to neo-Gricean pragmatic principles.

4.1. The Hornian bipartite model

Horn (1984, 2009) developed a bipartite, neo-Gricean pragmatic model, namely what he (2007) called "a Manichaeian manifesto".⁵ In Horn's opinion, all of Grice's maxims (except the maxim of Quality) can be replaced with two fundamental and counterpoising principles: the Q[quantity]- and R[elation]-principles.

(15) Horn's Q- and R-principles

- a. The Q-principle
Make your contribution sufficient;
Say as much as you can (given the R-principle).
- b. The R-principle
Make your contribution necessary;
Say no more than you must (given the Q-principle).

In terms of information structure, Horn's Q-principle, which collects Grice's first sub-maxim of Quantity and his first two sub-maxims of Manner, is a lower-bounding pragmatic principle which may be (and characteristically is) exploited to en-

gender upper-bounding conversational implicatures: a speaker, in saying ‘... *p* ...’, *ceteris paribus* conversationally implicates that (for all he or she knows) ‘... at most *p* ...’. The *locus classicus* here is those conversational implicatures that arise from a prototype Horn-scale. Prototype Horn-scales are defined in (16) (see e.g. Atlas and Levinson 1981, Levinson 2000: 76, Huang, 1991, 2007: 38), with exemplification given in (17).

(16) Prototype Horn-scales

For $\langle S, W \rangle$ to form a Horn-scale,

- (i) $A(S)$ entails $A(W)$ for some arbitrary sentence frame A ;
- (ii) S and W are equally lexicalized, of the same word class, and from the same register; and
- (iii) S and W are ‘about’ the same semantic relation, or from the same semantic field

where S stands for ‘semantically strong expression’ and W stands for ‘semantically weak expression’.

(17) a. $\langle \text{all, most, many, some} \rangle$

b. $\langle \text{hot, warm} \rangle$

c. $\langle \text{beautiful, pretty, attractive} \rangle$

An instance of Q-implicatures is given in (18).

(18) *Some of the children hate broccoli.*

+> Not many/most/all of the children hate broccoli⁶

In (18), the speaker used the semantically weaker *some*, where a semantically stronger *many*, *most* or *all* could have been employed. From a semantic point of view, *some* has the ‘at least’ reading, namely ‘at least some’, and this is its lower-bounded interpretation. By the Q-principle, the use of *some* then gives rise to the ‘at most’ or ‘not more than’ Q_{scalar} implicature, namely ‘at most some’ or ‘not more than some’. This reading is the upper-bounded interpretation (Huang 2009, 2010b, 2010c).

On the other hand, the counterbalancing R-principle, which subsumes Grice’s second sub-maxim of Quantity, his maxim of Relation, and his last two sub-maxims of Manner, and which is based on Atlas and Levinson’s (1981) principle of informativeness, is an upper-bounding pragmatic law which may be (and systematically is) exploited to invite lower-bounding conversational implicatures: a speaker, in saying ‘... *p* ...’, conversationally implicates that (for all he or she knows) ‘... more than *p* ...’. This is illustrated in (19) below. However, more recently Horn (2007) has been of the opinion that the R-principle is not in itself subsumable under Grice’s co-operative principle, but under rationality.

(19) *The Berlin Wall came down and the Wolfgang family moved to Munich.*

+> The Berlin Wall came down and then the Wolfgang family moved to Munich.

Viewing the Q- and R-principles as a mere instantiation of Zipfian economy, Horn (1984, 2009) explicitly equated the Q-principle (“a hearer-oriented economy for the maximization of informational content”) with Zipf’s “Auditor’s Economy” (the Force of Diversification, which tends towards a vocabulary of *m* different words with one distinct meaning for each word) and the R-principle (“a speaker-oriented economy for the minimization of linguistic form”) with Zipf’s “Speaker’s Economy” (the Force of Unification, which tends towards a vocabulary of one word which will refer to all the *m* distinct meanings). The notion of Speaker’s Economy is further distinguishable between mental inertia or paradigmatic economy (*économie mémorielle*) and articulatory or physical inertia or syntagmatic economy (*économie discursive*), hence internally dialectic in its operation. The former is concerned with the reduction in the inventory of mental lexicon; the latter, with the reduction in the number of linguistic units (Horn 2007: 173–174). While the Auditor’s Economy places a lower bound on the informational content of the message, the Speaker’s Economy places an upper bound on its form. Furthermore, Horn argued that the whole Gricean mechanism for pragmatically contributed meaning can be derived from the dialectic interaction (in the classical Hegelian sense) between the two mutually constraining mirror-image forces in the following way.

(20) Horn’s division of pragmatic labour

The use of a marked (relatively complex and/or prolix) expression when a corresponding unmarked (simpler, less “effortful”) alternate expression is available tends to be interpreted as conveying a marked message (one which the unmarked alternative would not or could not have conveyed).

In effect, what the communicative equilibrium in (20) basically says is this: the R-principle generally takes precedence until the use of a contrastive linguistic form induces a Q-implicature to the non-applicability of the pertinent R-implicature (see also e.g. Huang 1994/2007, 2000, 2003, 2004, 2007 for further discussion).

4.2. The Levinsonian tripartite model

Horn’s proposal to reduce Grice’s maxims to the Q- and R-principles was called into question by Levinson (1987, 2000). In Levinson’s opinion, Horn failed to draw a distinction between what Levinson called “semantic minimization” (“semantically general expressions are preferred to semantically specific ones.”) and “expression minimization” (“shorter” expressions are preferred to “longer” ones). Consequently, inconsistency arises with Horn’s use of the Q- and R-principles. For

example, in Horn's division of pragmatic labour, the Q-principle operates primarily in terms of units of speech production whereas elsewhere, in Horn-scales, for instance, it operates primarily in terms of semantic informativeness.

Considerations along these lines led Levinson to argue for a clear separation between pragmatic principles governing an utterance's surface form and pragmatic principles governing its informational content (but see Horn 2007 for a spirited defence of his bipartite model). He proposed that the original Gricean program (the maxim of Quality apart) be reduced to three neo-Gricean pragmatic principles: what he dubbed the Q[quantity]-, I[nformativeness]- and M[anner]-principles. Each of the three principles has two sides: a speaker's maxim, which specifies what the principle enjoins the speaker to say and a recipient's corollary, which dictates what it allows the addressee to infer. Let me take them one by one.

(21) The Q-principle (simplified) (e.g. Huang 2007: 41, see also Levinson 2000: 31)

Speaker: Do not say less than is required (bearing the I-principle in mind).

Addressee: What is not said is not the case.

The basic idea of the metalinguistic Q-principle is that the use of an expression (especially a semantically weaker one) in a set of contrastive semantic alternates (such as a Horn-scale) Q-implicates the negation of the interpretation associated with the use of another expression (especially a semantically stronger one) in the same set. Seen the other way around, from the absence of an informationally stronger expression, one infers that the interpretation associated with the use of that expression does not hold. Hence, the Q-principle is essentially negative in nature.

Three types of Q-implicature can then be identified: (i) *Q_{-scalar} implicatures*, as in (18) above; (ii) *Q_{-clausal} implicatures*, and (iii) what I dubbed *Q_{-alternate} implicatures* in Huang (2007: 42–44). As mentioned above, *Q_{-scalar} implicatures* are derived from Horn-scales. Next, *Q_{-clausal} implicatures* are pragmatically enriched meanings of epistemic uncertainty. Like *Q_{-scalar} implicatures*, *Q_{-clausal} implicatures* also rest on a set of contrastive semantic alternates, but, in this case, of a constructional kind (see (22)). Finally, we have *Q_{-alternate} implicatures*, which come from a non-entailment semantic (contrast) set. Roughly, we have two subtypes here. In the first, the lexical expressions in the set are informationally ranked, as in (23). Following Huang (2007: 42–44), let me call Q-implicatures deriving from such a set *Q_{-ordered alternate} implicatures*. By contrast, in the second subtype, the lexical expressions in the set are of equal semantic strength, as in (24). Let me term Q-implicatures thus induced *Q_{-unordered alternate} implicatures*.

(22) *Mary believed that the cat was hiding behind the sofa.*

+> The cat might or might not be hiding behind the sofa – Mary didn't know which.

(23) *John tried to give up smoking.*

+> John did not succeed in giving up smoking.

(24) *The language school offers a three-week immersion course in English, French, and German.*

+> The language school doesn't offer a three-week immersion course in e.g. Russian.

Furthermore, based in part on what he called rank orders, in (25), where *S* unilaterally entails $\sim W$, Horn (2007: 168–170) distinguished two kinds of pragmatic strengthening: informative and rhetorical. While R- or I-implicature (to be discussed below) increases both informative and rhetorical strength, Q-implicature is informatively but not rhetorically stronger than the sentence uttered without the implicature.

(25) <<general, colonel, lieutenant, sergeant, corporal, private >>

Next, there is the I-principle.

(26) The I-principle (simplified) (e.g. Huang 2007: 46, see also Levinson 2000: 32)
 Speaker: Do not say more than is required (bearing the Q-principle in mind).
 Addressee: What is generally said is stereotypically and specifically exemplified.

Mirroring the effects of the Q-principle, the central tenet of the I-principle is that the use of a semantically general expression I-implicates a semantically specific interpretation. More accurately, the conversational implicature engendered by the I-principle is one that accords best with the most stereotypical and explanatory expectation given our knowledge about the world.

(27) *If you clean the kitchen, I'll give you twenty euros.*

+>If, and only if, you clean the kitchen will I give you twenty euros.

Finally, we come to the M-principle.

(28) The M-principle (simplified) (e.g. Huang 2007: 50, Levinson 2000: 33)
 Speaker: Do not use a marked expression without reason.
 Addressee: What is said in a marked way conveys a marked message.

Unlike the Q- and I-principles, which operate primarily in terms of semantic informativeness, the metalinguistic M-principle operates primarily in terms of a set of alternates that contrast in form. The fundamental axiom upon which this principle rests is that the use of a marked expression M-implicates the negation of the interpretation associated with the use of an alternative, unmarked expression in the same set. To put it another way, from the use of a marked linguistic expression, one infers that the stereotypical interpretation associated with the use of an alternative,

unmarked linguistic expression does not obtain. An M-implicature is illustrated by (29b) below, which is marked.

(29) a. *This government is efficient.*

I +> This government is efficient in the stereotypical sense.

b. *This government is not inefficient.*

M +> This government is less efficient than the utterance of (29a) suggests.

Given the above tripartite classification of neo-Gricean pragmatic principles, the question that arises next is how inconsistencies arising from these potentially conflicting implicature apparatuses can be resolved. According to Levinson (2000), they can be resolved by an ordered set of precedence, incorporating Horn's (1984) division of pragmatic labour.

(30) Levinson's resolution schema for the interaction of the Q-, I- and M-principles (e.g. Huang 2007: 51–54):

a. Level of genus: $Q > M > I$

b. Level of species: e.g. $Q_{\text{-clausal}} > Q_{\text{-scalar}}$

This is tantamount to saying that genuine Q-implicatures (where $Q_{\text{-clausal}}$ cancels rival $Q_{\text{-scalar}}$) precede inconsistent I-implicatures, but otherwise I-implicatures take precedence until the use of a marked linguistic expression triggers a complementary M-implicature to the negation of the applicability of the pertinent I-implicature (see also Huang 1991, 2000, 2003, 2004, 2007, 2011 for further discussion). In summary, while both Horn's and Levinson's neo-Gricean endeavours have put the classical Gricean theory on a much more elegant and rigorous basis, neither of them, however, has given the original Gricean maxim of Relation a more prominent place.

5. A comparison of relevance and neo-Gricean pragmatic principles and related areas

What, then, are the main similarities and differences between relevance and neo-Gricean pragmatic principles and their related areas? There are at least three main similarities. In the first place, both relevance and neo-Gricean pragmatic theories share the Gricean assumption that sentence meaning is a vehicle for conveying meaning_{nn} or speaker meaning, and the essence of meaning_{nn} is communication which is intended to be recognized as having been intended. In other words, speaker meaning is a matter of expressing and recognizing intention (Huang 2007). A second similarity is that both theories maintain with Grice that speaker meaning cannot be simply decoded, but has to be pragmatically enriched. This indicates that both theories belong to the camp of "contextualism" in the current divide between contextualism and semantic minimalism or literalism in the philosophy of lan-

guage. Thirdly and finally, both theories assume that in computing speaker meaning, an addressee is guided by the expectation that an utterance should meet certain standards (see also Wilson 2010).

On the other hand, there are major differences between relevance and neo-Gricean pragmatic principles and their related areas. The first difference is concerned with whether a pragmatic theory of human communication should be based on the study of usage principles or cognitive principles. One of the central issues of any pragmatic theory is to explain how the addressee works out the speaker's intended meaning on the basis of the evidence available (but see note 10 below). The answer provided by Grice is that utterances automatically raise certain expectations, and these expectations guide the addressee towards what the speaker intends. More specifically, Grice put forward an account of these expectations in terms of a co-operative principle and a set of attendant conversational maxims. The Gricean co-operative principle and its associated maxims of conversation are essentially usage principles based on the rational nature of human communication, and indeed of any goal-oriented (human) activity (Grice 1989: 28). In other words, they are general communicative norms recognized jointly, though tacitly, by the speaker and the addressee in order to communicate effectively and efficiently.

Where do the co-operative principle and its attendant conversational maxims come from, and how do the speaker and the addressee come to know them? Whereas Grice was non-committed on the source of these pragmatic principles and their place in our overall cognitive architecture, one possible answer provided by him is that they are likely to be learned. To quote him: "it is just a well-recognized empirical fact that people do behave in these ways; they learned to do so in childhood and have not lost the habit of doing so; and, indeed, it would involve a good deal of effort to make a radical departure from the habit" (Grice 1989: 29). In the relevance-theoretic framework, on the other hand, pragmatics is reduced to a single notion of relevance, which is realized in two principles of relevance. But unlike Grice's co-operative principle and its attendant maxims of conversation, the principles of relevance are not a maxim addressed to the speaker, known by the addressee, and obeyed or exploited in communication. Rather, grounded in a general view of human cognition, they are an automatic reflex of the human mental capacity that works without the communicators having any overt knowledge of it. How do the speaker and the addressee follow the principles of relevance? They do not. According to Sperber and Wilson (1995: 162), "[c]ommunicators and audience need no more know the principle of relevance to communicate than they need to know the principles of genetics to reproduce. Communicators do not 'follow' the principle of relevance; and they could not violate it even if they wanted to. The principle of relevance applies without exception: every act of ostensive communication communicates a presumption of relevance". Relevance is thus a form of unconscious inference. In other words, the principles of relevance are governing cognitive principles that are not themselves an object of processing.⁷ This raises the

larger issue of whether relevance theory can be falsified or not. Given that relevance is an exceptionless generalization, it is likely to be immune from any possible counterexamples (see e.g. Levinson 1989, Huang 1994/2007, 2000 and 2007, but see Wilson and Sperber 2004, Wilson 2009 for counterarguments).⁸

In the second place, relevance theory and classical/neo-Gricean pragmatic theory differ in whether or not separate notions of explicature and implicature are needed in the recovery of so-called explicit and implicit content, respectively. As is well-known, in Grice's opinion, the propositional content of what is said is not fully worked out until reference is identified, deixis is interpreted and ambiguity is resolved. How can all this be done? Grice (1989: 25) seemed to take the recovery of the explicit truth-conditional, propositional content as largely the outcome of linguistic and contextual decoding. This led Sperber and Wilson to their criticism that, in the Gricean paradigm, only the recovery of implicit context (r-implicature) is taken to be properly pragmatic, and that as a result, the key part pragmatics plays in computing explicit content is overlooked. Consequently, Sperber and Wilson posited their notion of explicature. Explicature plays an extremely important role in relevance theory, and as a consequence, many types of implicature in the Gricean and neo-Gricean sense are reduced to explicature. This, for example, is the case for "scalar implicature", "conjunction buttressing", and many others. By contrast, in the neo-Gricean pragmatic framework, the relevance-theoretic explicature-implicature distinction is rejected. In Levinson's (2000: 195–196) opinion, pragmatic intrusion into what is said, that is, into determining the truth-conditional, propositional content is neither an explicature, nor the pragmatically enriched said, as argued by Recanati (2004); nor an implicature, as urged by Bach (2004). Rather, it is the same beast as a neo-Gricean conversational implicature. In my opinion, the reason why it is a conversational implicature is threefold. First, so-called explicature is engendered largely by the same Gricean pragmatic mechanism that yields a conversational implicature. Secondly, Recanati (1993) put forward two tests, i.e. the availability principle and the scope principle, to differentiate explicature, the pragmatically enriched said, and implicature from conversational implicature. But as I argued in Huang (2007), neither of Recanati's tests really works from a theoretical point of view. This is also the case with work carried out in experimental pragmatics. I do not think that there is any experiment that can differentiate explicature from conversational implicature. Therefore, currently there is no failsafe test (either conceptual or experimental) that can be employed to distinguish alleged explicature or the pragmatically enriched said or implicature from conversational implicature on a principled basis. Thirdly, other things being equal, given the metatheoretical principle known as "Occam's razor" ("theoretical entities are not to be multiplied beyond necessity"), the implicature analysis is theoretically and methodologically preferable, because it postulates less representational levels in the interpretation of an utterance than the relevance-theoretic explicature/implicature analysis. If neo-Gricean conversational implicature

can intrude into the truth-conditional content of an utterance, then a problem known as Grice's circle arises, namely, how what is conversationally implicated can be defined in contrast to, and calculated on the basis of what is said, given that what is said seems to both determine and to be determined by what is conversationally implicated (e.g. Levinson 2000, Huang 2007).⁹ Levinson's proposal was that one should reject the "received" view of the pragmatics-semantics interface, namely the view that the output of semantics is the input of pragmatics, and to allow implicatures to play a systematic role in "pre"-semantics, that is, to help determine the truth-conditional, propositional content of an utterance (Levinson 2000, see also Huang 2003, 2007). To put it slightly differently, in order to avoid Grice's circle, one needs both "pre"-semantic pragmatics and "post"-semantic pragmatics or what Korta and Perry (2008) called "near-side pragmatics" and "far-side pragmatics".

Thirdly, a heated debate has been going on for the last two decades or so, focusing on the nature of Gricean and neo-Gricean generalised conversational implicatures (GCIs) in general and Q_{scalar} implicatures in particular. One view is that GCIs in general and Q_{scalar} implicatures in particular convey default meaning, that is, their meaning is automatically worked out by an addressee on encountering a scalar implicature trigger like *some*. In other words, according to this default inference theory, scalar implicatures are inferences *sans* a conscious inferential process and irrespective of a particular context (see e.g. Levinson 2000 for strong defaultism and Horn 2009 for weak defaultism). A second, relevance-theoretic position, known as the contextual inference theory, maintains that the derivation of scalar implicatures depends heavily on contextual factors. Another way of saying this is that scalar implicatures can only be derived if the context warrants it. In addition, a third contender has recently entered the debating chamber. According to this position, scalar implicatures arise in an upward entailing environment but are quite weak and even blocked in a downward entailing environment. On the basis of this claim, it is argued that the derivation of Q_{scalar} implicatures relies heavily on structural or grammatical factors. Consequently, scalar implicatures must be computed compositionally, and therefore fall under compositional semantics, hence part of grammar or innate linguistic mechanism. This position is associated with the work of Chierchia (2004) and is called the structural inference theory. Furthermore, all the three views have recently been subject to studies in experimental pragmatics. While much of the relevance-theoretically oriented experimental work naturally favours the contextual inference approach (e.g. Noveck and Sperber 2007, Noveck and Reboul 2008), there is also experimental evidence in support of the default inference theory (e.g. Grodner et al. 2007) and the structural inference view (e.g. Panizza and Chierchia 2008, see also Garrett and Harnish 2009).

In the fourth place, there is the debate relating to whether a pragmatic theory of human communication should contain two levels or three levels. Building on the Gricean generalized versus particularized implicature dichotomy, Levinson (2000)

developed a theory of presumptive meaning. From a traditional, standard point of view, there are only two levels of meaning to a theory of communication: a level of sentence-meaning versus a level of speaker-meaning, or, to make use of the type-token distinction, a level of sentence-type-meaning versus a level of utterance-token-meaning. But Levinson (2000: 23) argued that such a view “is surely inadequate, indeed potentially pernicious, because it underestimates the regularity, recurrence, and systematicity of many kinds of pragmatic inferences”. He proposed to add a third level – utterance-type-meaning – to the two generally accepted levels of sentence-type-meaning and utterance-token-meaning. This third layer is the level of generalized, preferred or default interpretation, which is not dependent upon direct computations about speaker-intentions but rather upon expectations about how language is characteristically used. Generalized conversational implicatures, Levinson argued, should be included in this layer, as these pragmatic inferences have an expectable, stable and even standardized or conventionalized interpretation. Stated in this way, a neo-Gricean pragmatic theory of conversational implicature, which is largely concerned with generalized rather than particularized implicature, is essentially a theory of utterance-type-meaning on a level intermediate between sentence-type-meaning on the one hand and utterance-token-meaning on the other. In other words, it is ultimately a theory of presumptive meaning – pragmatic inference that is generalized, default and presumed. However, as pointed out by Levinson (2000), this middle-layer of utterance-type-meaning has been constantly subject to attempts to reduce it on the one hand to the upper-layer of sentence-type-meaning, as in e.g. Chierchia’s (2004) structural inference theory, and on the other to the lower-layer of utterance-token-meaning, as in, e.g. relevance theory. In my opinion, such reductionist efforts, though highly desirable given “Occam’s razor”, cannot be successful. The reason they will fail is this: on the one hand, generalized conversational implicatures are defeasible, thus not code-like, as claimed by Sperber and Wilson. This will make it difficult for them to be semanticized. On the other hand, other things being equal, a theory about types is in principle better than a theory about tokens in that the former enjoys more predictive and explanatory power. Therefore, any attempts to reduce generalized conversational implicatures to a kind of context-induced, “nonce” inferences should be resisted. If these arguments are correct, a three-tiered theory of communication with a layer of default but defeasible interpretation sitting midway is in principle to be preferred over a two-levelled one without such an intermediate layer (Huang 1994, 2000, 2003, 2004, 2007).

Finally, somewhat related to the difference concerning communication theory levels above is the difference with respect to the distinction in conversational implicature type or context type. In the Gricean framework, there are two types of conversational implicature, i.e. generalized and particularized. Alternatively, one can argue that there is only one type of conversational implicature but two types of context, i.e. default and specific. In relevance theory, by contrast, there is neither

any distinction in conversational implicature type nor any distinction in context type. As noted already, all conversational implicatures are reduced to a kind of context-induced, “nonce” inference, namely what I have called r-implicatures (see also Huang 2007).¹⁰

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Notes

1. Currently there is a split on the issue of whether a conversational implicature is a component of speaker-meaning or a pragmatic inference. Saul (2002) was of the opinion that Grice’s main goal is to develop a theory of speaker-meaning, but not a theory of psychological processing. This view is echoed in Bach (2006). Following Saul (2002) and Bach (2006) and biting the bullet, Horn (2009) now holds that a conversational implicature is a component of speaker-meaning rather than a pragmatic inference. By contrast, Sperber and Wilson (1986/1995), Levinson (2000) and Atlas (2005), for example, are still treating a conversational implicature as a pragmatic inference. My definition is applicable to both sides.
2. In fact, a similar notion of relevance can be traced back to the work of the logicians Noel Belnap (1969) and A. R. Anderson and the social phenomenologist Alfred Schutz (1970). Anderson and Belnap (1975/1992) developed a logic of relevance to account for inferences that are relevant but not quite valid. Schutz (1970) argued that relevance is a principle according to which an individual organizes his or her cognitive structures into “provinces of meaning”. See also Allwood (2000).
3. Notice that in Sperber and Wilson (1986), there was only one principle of relevance, namely the communicative principle of relevance, which goes thus: every ostensive stimulus conveys a presumption of its own optimal relevance. On Sperber and Wilson’s (2005: 261) view, “[t]he change is, of course, expository and not substantive”.
4. Strictly speaking, ‘together’ is what is implicated. ‘John and Mary watched the Berlin Wall crumble in 1989 together’ is what is communicated, that is, the sum of what is said and what is implicated. In what follows, however, I shall not make such a difference.
5. Manichaeus or Manes was an ancient Persian teacher who advocated the doctrine known as Manichaeism or Manicheism, namely, the world is governed by a balance of the forces of good and evil.
6. An issue arises concerning the epistemic commitment or strength of Q-implicatures, especially Q_{-scalar} implicatures. The issue has to do with the question of what it is a speaker Q_{-scalar} implicates against. Two main neo-Gricean pragmatic positions can be identified:

the weak epistemic force one represented by e.g. Hirschberg (1991), Sauerland (2004), Geurts (2009), and Horn (2009), and the strong epistemic force one advocated by e.g. Gazdar (1979) and Levinson (2000: 77–79). In addition, there is a third neo-Gricean position. In Atlas's (2005) view, the whole issue is derived from the confusion between speaker meaning on the one hand and a speaker's psychological states on the other.

7. See also Cummings (2005) for a philosophical critique of three critical features of relevance theory, namely (i) the elimination rules of the logical entries of concepts, (ii) the role of deduction in utterance interpretation, and (iii) the functional concept of confirmation. In fact, Cummings' criticism is in part based on Putnam's (1981) similar charge of self-refutation against logical positivism. In Cummings' opinion, the relevance-theoretic claims display a striking similarity to those of logical positivism.
8. One of the minimal Popperian criteria for a scientific theory is falsifiability, which dictates that empirically based theories (under which linguistics falls) can only be refuted, but not proven true.
9. Grice's circle is labelled the "pragmatic circle" by Korta and Perry (2008). According to Korta and Perry, the circle runs like this: Gricean reasoning requires what is said to get started and is needed to get to what is said.
10. Cf. Saul (2002), who was of the opinion that classical/neo-Gricean pragmatic theory and relevance theory are not as incompatible as they may appear. This is because while Grice's main goal is to develop a theory of speaker-meaning or utterance production, Sperber and Wilson (1986/1995) are primarily concerned with the construction of a cognitive psychological theory of utterance comprehension. Their theory does not attend to the question of how and why the speaker, given what he or she wants to convey, utters what he or she utters (Horn 2006). Put slightly differently, in Mate and Tirassa's (2010: 240) words, "however satisfactory as theory of language comprehension, relevance theory has never been able to become a theory of language generation or of dialogue, nor has it ever even tried to". When there are meaning discrepancies between utterance production and comprehension, one has what Saul called an "audience-implicature". This opinion was also shared by Bach (1999), who argued that utterance interpretation is not a problem for pragmatics, but for cognitive and social psychology. Both Saul and Bach thought that relevance theory has misunderstood this main goal of Grice's thinking.

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3. Implicature and explicature

Robyn Carston and Alison Hall¹

1. Introduction

The explicature/implicature distinction is one manifestation of the distinction between the explicit content of an utterance and its implicit import. On certain ‘minimalist’ approaches, the explicit/implicit distinction is equated with the semantics/pragmatics distinction or with Paul Grice’s saying/implicating distinction. However, the concept of ‘explicature’, which belongs to the relevance-theoretic pragmatic framework, has closer affinities with the wider ‘contextualist’ perspective, according to which context-sensitive pragmatic processes make a much greater contribution to the proposition explicitly communicated than merely resolving ambiguities and providing referents for indexicals. Crucially, there are pragmatic processes of meaning enrichment and adjustment which have no linguistic mandate but are wholly motivated by considerations of communicative relevance. Two consequences of this are that (a) explicit utterance content can include constituents which are not articulated in the linguistic form of the utterance, and (b) certain Gricean implicatures are reanalysed as components of the explicitly communicated truth-conditional content. In this chapter, we outline the explicature/implicature distinction and highlight some of the issues it raises for semantic/pragmatic theorizing.

To get a preliminary idea of how the distinction between implicature and explicature works, consider what Amy communicates in the following exchange:

(1) Max: *How was the party? Did it go well?*

Amy: *There wasn’t enough drink and everyone left early.*

(2) THE PARTY DID NOT GO WELL²

It seems fairly clear that she is communicating (2). This is not something she says explicitly; rather, it is an indirect or implied answer to Max’s question – a *conversational implicature*, as such implicitly communicated propositions are known. The hearer (Max) derives this implicated meaning by inferring it from the proposition which is more directly and more explicitly communicated by Amy, together with his readily available assumptions about the characteristics of successful versus unsuccessful parties (e.g. people tend to leave early when a party isn’t very good). What is the more directly communicated proposition, the ‘explicature’ of the utterance? One possibility is that it is simply the linguistically encoded meaning of the sentence that she uttered, so it is the conjunction of the context-free meaning of the two simple sentence types:

(3) (i) THERE WASN'T ENOUGH DRINK (ii) EVERYONE LEFT EARLY

This is, undeniably, the most explicit component of the meaning of Amy's utterance, but it is very unclear what exactly it amounts to and it seems to lack the specificity of the understood content. For instance, the extension of the noun *drink* includes green tea, tap water, and medicines in liquid form, to mention but a few of the many drinks which are unlikely to be relevant in the context of Amy's utterance. Similarly, the linguistically encoded meaning of the bare quantifier *everyone* includes many people whom Amy has no intention of denoting. In the context of the dialogue above, it is clear that she intends to convey that everyone who came to the particular party that Max asked her about left that party early.

So, although the linguistic expressions employed by Amy, the words she actually uttered, have a meaning and that meaning is, arguably, the most explicit meaning that her utterance provides, it seems to be quite remote from the proposition that Max is likely to take her to have directly communicated (to have said, stated, or asserted). That seems to be more like the content in (4) (where the elements highlighted in bold all go beyond the encoded meaning of the linguistic expressions uttered):

(4) THERE WASN'T ENOUGH ALCOHOLIC DRINK TO SATISFY THE PEOPLE AT THE PARTY_i AND SO EVERYONE WHO CAME TO THE PARTY_i LEFT IT_i EARLY.

This is the proposition on the basis of which Amy's utterance would be judged as true or false, would be agreed or disagreed with ('Yes, there was so little alcohol that we all had to go off to the pub', or 'No, not everyone left the party early and those who did had an exam the next morning'). Notice also that it is this proposition (and not the very general encoded linguistic meaning) which plays the crucial role of premise in the reasoning process which leads to the implicated conclusion that the party didn't go well. We take it that this (or something very similar to it) is the explicature of Amy's utterance.

The distinction between two kinds of communicated propositions, explicatures and implicatures, has been developed within the relevance-theoretic account of communication and utterance interpretation (Sperber and Wilson 1986/1995; Carston 2002; Wilson and Sperber 2004). This framework is resolutely cognitive-scientific in orientation: the central notion of informational 'relevance' which drives the account is defined in terms of the positive cognitive implications that a new input has in a cognitive system weighted against the costs (in such resources as attention, inferential effort, etc.) that it imposes on that system. The greater the range of cognitive implications and the lower their cost, the more the relevance of the input. Verbal utterances and other kinds of ostensive communicative acts are special inputs in that there is an inevitable presumption that they will be 'optimally relevant', that is, they will provide at least a sufficient array of cognitive implications and other positive cognitive effects to offset the processing effort they

require.³ It is in the (non-demonstrative) inferential process of looking for an interpretation consistent with this presumption that a hearer derives an explicature, by enriching and modulating the conceptual schema provided by decoded linguistic meaning. This occurs in parallel with the derivation of implicatures (cognitive implications manifestly intended by the speaker), and the two kinds of propositional meanings are mutually constraining. The ultimate interpretation should be one in which the explicature together with intended contextual assumptions provides an inferentially sound basis for the implications derived.

In this paper, we look in detail at some of the particular micro-processes involved in the online, relevance-driven derivation of explicature and implicatures. But before that, we set out some background intellectual history tracing the development of the concept of implicature. It did not arise within linguistics or cognitive science but within the philosophy of language, where its main purpose was to help in the delineation of a favoured notion of 'semantic content'. Its subsequent adoption into the cognitively-based relevance-theoretic account of communication where it is placed in opposition to explicature rather than semantics has naturally led to its being somewhat altered with regard to the domain of utterance meaning it encompasses and the role it plays.

2. How it all began: semantic content and implicature

In his 'logic of conversation', Paul Grice (1967/89) sought to separate out the semantic content of an uttered sentence, i.e. what it says, from any other thoughts and ideas that a speaker might mean or communicate by her action of uttering the sentence. His collective term for all those extra or secondary meanings that might be conveyed was 'implicature', where implicatures are intended propositional components of the utterance's overall significance but are not the basis on which the utterance is judged as true or false.

Implicatures can arise in two ways: via presumptions concerning rational communicative behaviour or via certain linguistic conventions. The implicature of (5) is an example of the first sort, a 'conversational' implicature, and the implicature of (6) is an example of the second sort, a 'conventional' implicature (see Huang, this volume, and Moeschler, this volume, for more details):

(5) *That material looks red to me.*

Implicature: THERE IS SOME DOUBT ABOUT WHETHER THE MATERIAL IS RED OR NOT.

(6) *Mary is a housewife but she is very intelligent.*

Implicature: THERE IS A CONTRAST OF SOME SORT BETWEEN BEING A HOUSEWIFE AND BEING VERY INTELLIGENT.

With (5), the idea is that if the speaker was completely certain of the redness of the material she should have made the more informative statement that the material *is* red; since she did not and since, other things being equal, speakers are expected to be as informative as they can relevantly be, she must be implicating that there is some doubt about the redness of the material. Thus this conversational implicature follows from one of the several conversational maxims that Grice sets out as regulating rational communication (Grice 1975). Note that the proposition in (2) above, implicated by Amy in her response to Max in (1), is also a conversational implicature, one that would be dependent on Grice's conversational maxim of relevance. He drew a further distinction among conversational implicatures between 'generalized' ones, such as (5), which arise across a great many contexts of use and 'particularized' ones, such as (2), which are dependent on the properties of specific, often one-off, contexts, in this case the conversation about a particular party. Whether Grice intended this generalized/particularized distinction to carry any theoretical weight is unclear, but, as we will see when we move to the explicature/implicature distinction, it turns out that the status of many of the generalized cases is quite controversial. With (6), on the other hand, the implicature does not depend on any conversational presumptions and occurs across all contexts because it is generated on the basis of the conventional linguistic meaning of the connective *but*.

In all these cases, the meaning allegedly implicated is separated off from the primary meaning, that is, the semantic content of the uttered sentence, which is the propositional content on the basis of which the utterance is judged as true or false. In the case of (5), this propositional content is that the material in question appears to the speaker to be red, so if the speaker is, in fact, in no doubt that the material is red, her utterance is somewhat infelicitous or inappropriate, but she has not spoken falsely on that basis. In the case of (6), the propositional content is that Mary is a housewife and she is very intelligent, and, again, if there is, in fact, no contrast between these two properties, the utterance is not thereby made false, though it is certainly inappropriate and very misleading.

In Grice's account, what implicatures of any stripe are set apart from is 'what is said' by a speaker, which Grice took to be the truth-conditional content of the utterance. What is said is determinable from the conventional linguistic meaning of the sentence uttered together with some minor context-dependent considerations, specifically, selection of the occasion-specific sense of any ambiguous words or structures and fixing of referents of indexical elements. The centrality of this semantic 'what is said', the proposition expressed by a sentence, goes back some way in the history of the philosophy of language, to at least Frege, Russell and Carnap. They were first and foremost logicians, interested in the syntactic and, especially, the semantic properties of formal languages, such as the predicate calculus. However, they extrapolated from these artificial languages to human (natural) languages, which they assumed would be found to have the same fundamental properties, abstracting away from such imperfections as ambiguity and vagueness. So,

just as the semantics of logical formulae was taken to be a matter of how the external world must be for them to be true (that is, their truth conditions) and the semantics of logical connectives such as ‘&’, ‘v’, ‘ \rightarrow ’ was fully captured by truth tables, it was assumed that natural language sentences also have truth conditions and natural language connectives such as *and*, *or*, *if ... then* are truth-functional. The presence within natural languages of such elements as indexicals which depend on a context of use for their ‘semantic value’ was seen as an interesting extra issue to be dealt with but not a threat to the overall picture. Adherence to truth-conditional semantics and to explicit logical formalism continues today in contemporary formal semantic work on natural languages.

This ‘ideal language’ approach was challenged by Austin, Strawson and the later Wittgenstein, who developed the ‘ordinary language’ approach, aimed at describing natural language phenomena rather than forcing them into the logical mould. They rejected the equation of sentence meaning with truth conditions, maintaining that although a sentence abstracted from use has a meaning, it is only in the context of a speech act (an utterance) that it expresses a proposition and so has truth conditions; it is the statement thus made that has truth conditions, the sentence *per se* does not. This aspect of ordinary language philosophy is very much reflected in the relevance-theoretic framework according to which sentence meaning is not truth-conditional but provides merely a template or schema which is contextually enriched on an occasion of utterance into a complete proposition, a proposition which the speaker has explicitly communicated (the explicature of the utterance).

A second aspect of the descriptive investigative work of the ‘ordinary language’ philosophers was the close observation of the meaning of words as used in ordinary communication. This included attention to a range of linguistic expressions that lay beyond the reach of the truth-conditional paradigm, including such connectives as *but*, *yet*, *despite*, *after all*, *whereas*, *moreover*, *so* and *anyway*, sentence adverbials like *frankly*, *seriously*, *evidently*, *unfortunately*, and *incidentally*, and such discourse elements as *alas*, *indeed*, *oh*, *for goodness sake*, and *well*. Quite a few of these seemed explainable in speech act terms; for instance, *but* in (6) above could be characterized as introducing a second-order speech act of contrasting the two first-order speech acts of stating (‘Mary is a housewife’ and ‘Mary is very intelligent’); *seriously* could be characterized as modifying the speech act a speaker is performing, e.g. an act of asserting (‘Seriously, you will regret this’) or an act of requesting information (‘Seriously, where is my key?’) (for discussion, see Ifantidou 2001).

This focus on language in use also led to a reappraisal of analyses of words whose semantics was of central importance within the formal truth-conditional paradigm. Strawson (1952) pointed out that the natural language counterparts of logical connectives are often used with much richer (non-truth-functional) meanings than their counterparts in logical languages, such as the temporal and causal

connotations of many instances of sentences conjoined with *and* (e.g. *She insulted him and he resigned*), the implication often carried by conversational disjunctions that the speaker's grounds for uttering a sentence of the form '*P or Q*' are not that she knows *P* to be true or that she knows *Q* to be true, but that she has some other (non-truth-functional) basis for her utterance. Close attention to a range of predicates led to strong views on their precise meanings and thus on how they ought to be used: the word *know* should not be used about certainties (e.g. *I know this is my hand* is a misuse), the word *try* only applies if there is some difficulty, the phrase *looks to me* (as in (5) above) is used only when there is some doubt about the reality, and so on (for discussion, see Travis 1991).

Initially, the two approaches, the truth-theoretic and the use-theoretic, were seen as diametrically opposed and exclusive: either you analyse natural language meaning in the logical truth-conditional way or you describe it as it occurs and is understood in everyday use. One of Grice's great contributions was to bring the two traditions together into a complementary rather than rivalrous relation. His own formative philosophical development lay within the ordinary language camp, and its emphasis on speaking as an action (rationally-based and with consequences) is evident throughout his work on implicature. However, his saying/implicating distinction and his analyses of particular natural language words, including the connectives and quantifiers, are informed by insights from both traditions. He insisted – against the central tenet of most ordinary language theorists – that it is important not to equate meaning and use (Grice 1967/89: 4); in other words, he distinguished semantics and pragmatics. So, in the case of (5) above, someone who utters *it looks red to me* when she has absolute certainty about the redness of the item in question may, in many contexts, be somewhat misleading, saying something weaker than she could have said, given the state of her knowledge; nevertheless, the proposition that comprises the semantic content of her utterance, what she has said (as opposed to what she merely implicated), namely, that the item in question looks red to her, is true. Most important for Grice's case here is that the implication of doubt or uncertainty is cancellable: it is possible to conceive of a context in which what is at issue is people's perceptions, how things look or sound or feel to them, in which case the utterances *X feels hot to me* and *Y looks red to me* would not carry any implications of doubt or uncertainty. Thus, those implications, prevalent though they may be, are not part of the meaning (the semantics) of those words, not part of what is said by them; when they do arise they are a product of speaker-hearer assumptions about normal conversational use.

The explanatory power of an account that combines logico-semantic analysis with considerations of language use is particularly well-exemplified in Grice's treatment of the connectives *and* and *or*. Their semantics, he argues, is identical with that of their logical counterparts, hence truth-functional, and the stronger implications that they seem to have in many contexts can be explained by the 'logic of conversation':

(7) *Amy insulted Max and he resigned.*

Propositions meant:

- a. AMY INSULTED MAX & MAX RESIGNED
- b. MAX RESIGNED AFTER AMY INSULTED HIM
- c. MAX RESIGNED BECAUSE AMY INSULTED HIM

(8) *Max is working on his lecture or he is watching TV.*

Propositions meant:

- a. MAX IS WORKING ON HIS LECTURE v MAX IS WATCHING TV
- b. MAX IS NOT BOTH WORKING ON HIS LECTURE & WATCHING TV
- c. THE SPEAKER DOESN'T KNOW THAT MAX IS WORKING ON HIS LECTURE
- d. THE SPEAKER DOESN'T KNOW THAT MAX IS WATCHING TV

In each case, on Grice's account, the proposition that constitutes the semantics of the utterance (what is said) is the first one and all the others are conversational implicatures. Various conversational maxims play their part in the (non-demonstrative) inference process by which these implicatures are derived: the maxim of orderliness for (7b), probably the maxim of relevance for (7c), the maxim of informativeness for (8b)–(8d).⁴ One of the great strengths, in Grice's opinion, of an account which distinguishes the statement made by an utterance (hence its semantics) from its implicatures is that it allows for the very general patterns of valid inference formulated within the logical semantic tradition to be carried over into the semantics of natural language (for discussion, see Grice 1975: 41–43).

Thus, in Grice's conception of 'what is said' we see the preservation of a notion of semantic content much akin to that of Frege and Russell, that is, closely tied to the context-free semantics of the words in the uttered sentence with only a very minimal context-dependent component, restricted to choosing between the senses of ambiguous words and supplying values for indexicals, both apparently achieved on the basis of best contextual fit (Grice 1975: 44). However, Grice's 'what is said' has another important property that distinguishes it from truth-conditional sentence meaning. His interest in language in use, in actions performed by speaking, such as asserting something or implicating something, required that, for him, 'what is said' by an utterance must be a component of speaker meaning (also referred to as *meaning-intended*, or *m-intended*, content), that is, it is overtly endorsed by the speaker.⁵ Hence what is said and what is implicated together constitute what the speaker meant by her utterance (for discussion, see Neale 1992; Recanati 2004: chapter 1).

3. From 'what is said' to explicature

The two-fold nature of Grice's 'what is said' is reflected in the fact that Griceans sometimes talk of what the speaker says and sometimes of what the utterance or the words themselves say. Unfortunately, this very combination of features – speaker