Key Notions for Pragmatics

Handbook of Pragmatics Highlights (HoPH)

The ten volumes of *Handbook of Pragmatics Highlights* focus on the most salient topics in the field of pragmatics, thus dividing its wide interdisciplinary spectrum in a transparent and manageable way. Each volume starts with an up-to-date overview of its field of interest and brings together some 12–20 entries on its most pertinent aspects.

Since 1995 the *Handbook of Pragmatics (HoP)* and the *HoP Online* (in conjunction with the *Bibliography of Pragmatics Online*) have provided continuously updated state-of-the-art information for students and researchers interested in the science of language in use. Their value as a basic reference tool is now enhanced with the publication of a topically organized series of paperbacks presenting *HoP Highlights*. Whether your interests are predominantly philosophical, cognitive, grammatical, social, cultural, variational, interactional, or discursive, the *HoP Highlights* volumes make sure you always have the most relevant encyclopedic articles at your fingertips.

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Volume 1

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Edited by Jef Verschueren and Jan-Ola Östman

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Table of contents

Speech act theory   229

Marina Sbisà

Preface to the series

In 1995, the first installments of the Handbook of Pragmatics (HoP) were published. The HoP was to be one of the major tools of the International Pragmatics Association (IPrA) to achieve its goals (i) of disseminating knowledge about pragmatic aspects of language, (ii) of stimulating various fields of application by making this knowledge accessible to an interdisciplinary community of scholars approaching the same general subject area from different points of view and with different methodologies, and (iii) of finding, in the process, a significant degree of theoretical coherence.

The HoP approaches pragmatics as the cognitive, social, and cultural science of language and communication. Its ambition is to provide a practical and theoretical tool for achieving coherence in the discipline, for achieving cross-disciplinary intelligibility in a necessarily diversified field of scholarship. It was therefore designed to provide easy access for scholars with widely divergent backgrounds but with converging interests in the use and functioning of language, in the topics, traditions, and methods which, together, make up the broadly conceived field of pragmatics. As it was also meant to provide a state-of-the-art report, a flexible publishing format was needed. This is why the print version took the form of a background manual followed by annual loose-leaf installments, enabling the creation of a continuously updatable and expandable reference work. The flexibility of this format vastly increased with the introduction of an online version, the Handbook of Pragmatics *Online* (see www.benjamins.com/online).

While the HoP and the HoP-online continue to provide state-of-the-art information for students and researchers interested in the science of language use, this new series of Handbook of Pragmatics *Highlights* focuses on the most salient topics in the field of pragmatics, thus dividing its wide interdisciplinary spectrum in a transparent and manageable way. The series contains a total of ten volumes around the following themes:

- Key notions for pragmatics
- Philosophical perspectives
- Grammar, meaning and pragmatics
- Cognition and pragmatics
- Society and language use
- Culture and language use
- The pragmatics of variation and change
- The pragmatics of interaction

- Discursive pragmatics
- Pragmatics in practice

This topically organized series of paperbacks, each starting with an up-to-date overview of its field of interest, each brings together some 12-20 of the most pertinent HoP entries in its respective field. They are intended to make sure that students and researchers alike, whether their interests are predominantly philosophical, cognitive, grammatical, social, cultural, variational, interactional, or discursive, can always have the most relevant encyclopedic articles at their fingertips. Affordability, topical organization and selectivity also turn these books into practical teaching tools which can be used as reading materials for a wide range of pragmatics-related linguistics courses.

With this endeavor, we hope to make a further contribution to the goals underlying the HoP project when it was first conceived in the early 1990's.

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Jef Verschueren (University of Antwerp)

Acknowledgements

A project of the HoP type cannot be successfully started, let alone completed, without the help of dozens, even hundreds of scholars. First of all, there are the authors themselves, who sometimes had to work under extreme conditions of time pressure. Further, most members of the IPrA Consultation Board have occasionally, and some repeatedly, been called upon to review contributions. Innumerable additional scholars were thanked in the initial versions of handbook entries. All this makes the Handbook of Pragmatics a truly joint endeavor by the pragmatics community world-wide. We are greatly indebted to you all.

We do want to specifically mention the important contributions over the years of three scholars: the co-editors of the Manual and the first eight annual installments, Jan Blommaert and Chris Bulcaen were central to the realization of the project, and so was our editorial collaborator over the last four years, Eline Versluys. Our sincerest thanks to all of them.

The Handbook of Pragmatics project is being carried out in the framework of the research program of the IPrA Research Center / Antwerp Center for Pragmatics at the University of Antwerp. We are indebted to the university for providing an environment that facilitates and nurtures our work.

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Introduction

The pragmatic perspective

Jef Verschueren

University of Antwerp

The view behind this series defines *pragmatics* briefly as *the cognitive, social, and cultural science of language and communication*. This first volume introduces some of the most salient notions that are commonly encountered in the pragmatic literature, such as deixis, implicitness, speech acts, context, and the like. It situates the field of pragmatics in relation to a general concept of communication and the discipline of semiotics. It also touches upon the non-verbal aspects of language use and even ventures a comparison with non-human forms of communication. This introductory chapter is intended to explain why a highly diversified field of scholarship such as pragmatics can be regarded as a potentially coherent enterprise.

This chapter presents some historical notes about pragmatics as a wide and highly interdisciplinary field of inquiry; a discussion of problems related to the delimitation of this field as well as to methodology and the status of evidence in pragmatics; a full explanation of the notion of 'pragmatics' underlying the Handbook of Pragmatics, i.e., one that defines pragmatics as a perspective on language rather than as a component of a linguistic theory; and a sketch of a proposal as to how such a perspective could lead to a general frame of reference within which a diversity of research results can be fruitfully compared and which may itself lead to the formulation of useful research strategies.

Before attempting an historical sketch of the scientific heritage of pragmatics, we must first specify in the simplest possible terms what its basic task and its general domain of inquiry are. Pragmatics does not deal with language *as such* but with *language use* and the relationships between language form and language use. Obviously, using language involves *cognitive* processes, taking place in a *social* world with a variety of *cultural* constraints. This observation is the basis for the multidisciplinary formulation of the brief definition of pragmatics provided above.

Within the confines of this general field of inquiry, the basic task of pragmatics is to provide an answer to a question of the following kind: *What is it to use language?* To understand what is involved in answering that question, and hence what kinds of scientific endeavors feed into the enterprise of trying to answer it, we may take as our starting point a somewhat trivial general observation that will later in this text lead to some basic building blocks for theory formation in pragmatics.

Talking, or using language expressively and/or communicatively in general, consists in the continuous making of linguistic choices, consciously or unconsciously, for linguistic or extra-linguistic reasons. These choices can be situated at all levels of linguistic structuring: phonological, morphological, syntactic, lexical, semantic, etc. They may range over variety-internal options; or they may involve regionally, socially, or functionally distributed types of variation. A theory of language use could and should therefore be conceived of as the study of the mechanisms and motivations behind any such choices and of the effects they have and/or are intended to have. Such a task is extremely wide-ranging. In order to keep the theory 'linguistic' and to avoid having to include everything, therefore, usually a practical cut-off point will have to be found. For instance, one can go as far as to relate my saying *The book is red* to its typically expected association with my belief that the book is red, but it would not be the task of pragmatics to start probing into my reasons for believing that the book is red, unless this would be necessary for an understanding of other aspects of the discourse my utterance fits into.

Before going into the historical background for dealing with such issues, and before identifying their implications for delimiting the field of pragmatics as well as their potential for further theory formation, two preliminary remarks have to be made about this 'making of choices' as a basic intuition. First, the term may misleadingly focus attention exclusively on the production side of verbal behavior; it should be clear that also interpreting involves the making of choices. Second, choices are not necessarily either-or decisions. For one thing, the language user is compelled to make choices, no matter whether there are fully satisfactory choices available. Furthermore, many choices are indeterminate in the sense that their meaning may be apparent only once they are situated in the given cognitive, social, and cultural context. These remarks amount to the recognition of what we will later refer to as the negotiability involved in language use. (For more caveats, see Verschueren 1999: 55–58.)

1.   Pragmatics and its formative traditions

A number of traditions have contributed, individually and collectively, to the formation of the field of linguistic pragmatics. Allowing ourselves, for the sake of presentation, to associate the *tradition* of pragmatics with its *name*, any historical discussion inevitably starts from the classical definition of 'pragmatics' by Morris (1938) as the study of the relationship between signs and their interpreters. Though the concerns that constitute the scope of pragmatics have a much longer history (see Nerlich & Clarke 1996), pragmatics — as a notion — was born from an extremely ambitious project. It was in his attempt to outline a unified and consistent *theory of signs* or *semiotic*, which

would embrace everything of interest to be said about signs by linguists, logicians, philosophers, biologists, psychologists, anthropologists, psychopathologists, aestheticians or sociologists, that Morris proposed the following definition of the field:

> In terms of the three correlates (sign vehicle, designatum, interpreter) of the triadic relation of semiosis, a number of other dyadic relations may be abstracted for study. One may study the relations of signs to the objects to which the signs are applicable. This relation will be called the *semantical dimension of semiosis*, [...]; the study of this dimension will be called *semantics*. Or the subject of study may be the relation of signs to interpreters. This relation will be called the *pragmatical dimension of semiosis*, [...], and the study of this dimension will be named *pragmatics*. (Morris 1938: 6)

This definition has to be placed in the intellectual context of the emergence of *semiotics* as a philosophical reflection on the 'meaning' of symbols, often triggered by the use of symbols in science and hence related to developments in the philosophy or theory of science but soon expanded to all other domains of activity involving what Cassirer calls 'symbolical animals', i.e., humans. In particular, there is a direct line from the American philosophical tradition of *pragmatism* (represented by Charles S. Peirce, William James, Clarence Irving Lewis, John Dewey, and George Herbert Mead, whose student Morris was), which was concerned with the meaning of concepts in direct relation to definite human purposes and practical consequences (the name of the tradition having been inspired by Kant's use of *pragmatisch* in his *Kritik der reinen Vernunft* [Critique of pure reason]).[1]

The very context of this definition already turns pragmatics into an eminently interdisciplinary enterprise. Morris' ambitious goals did not just reflect his personal ambitions. They formed an integral part of an emerging movement which tried to combine philosophical and scientific rigor in its approach, with the inevitable risks involved in an uncompromising attempt to understand all of human reasoning and behavior. It is as if Bronowski's observation was consciously used as a guideline: "That is the essence of science: ask an impertinent question, and you are on the way to the pertinent answer." (1973: 153) Impertinent questions were indeed being asked, and the self-imposed tasks were not minor:

> By 'pragmatics' is designated the science of the relation of signs to their interpreters. [...] Since most, if not all, signs have as their interpreters living organisms, it is a sufficiently accurate characterization of pragmatics to say that it deals with the biotic aspects of semiosis, that is, with all the psychological, biological, and sociological phenomena which occur in the functioning of signs. (Morris 1938: 30)

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1.   For some of the basic writings of pragmatism, see Thayer (Ed.) (1970). For detailed discussions of the relationships between pragmatics and semiotics, see Parret (1983) and Deledalle (Ed.) (1989), as well as Christiane Andersen's contribution to this volume.

Since the motivation for Morris' theory of signs was to try to sketch a theoretical structure which could incorporate whatever of interest could be said about signs by linguists, logicians, philosophers, psychologists, biologists, anthropologists, aestheticians and sociologists, it should be clear from this passage that pragmatics gets more than an equal share of the burden.

It is not surprising then, that the 'formative' traditions which can be observed as having shaped pragmatics as we know it today, have their origins in many different disciplines. For one thing, Morris' discovery of the language user was not an isolated development. It parallelled, and had a direct link with, the discovery of the human actor in relation to language and cultural and social behavior in the work of Mead, Malinowski, Boas, and Sapir. The interdisciplinarity is so fundamental, that any attempt at neatly ordering the following brief survey along disciplinary boundaries would grossly oversimplify the historical process. Yet we cannot avoid using a few disciplinary labels.

Even if we were to ignore the philosophical basis of semiotics, it cannot be denied that philosophy has provided some of the most fertile ideas in pragmatics. In addition to the *Wittgensteinian program* to relate 'meaning' to 'use' (Wittgenstein 1953; see also Birnbacher & Burkhardt Eds. 1985), the philosophy of language produced two of the main theories underlying present-day pragmatics. The first one is *speech act theory*, originally formulated by an Oxford 'ordinary language philosopher' (Austin 1962) and further developed by Searle (1969). The second is the *logic of conversation* (see Grice 1975). Together, they provided the frame of reference for the consolidation of the field of linguistic pragmatics, which had become a fact by the time Bar-Hillel published *Pragmatics of natural languages* (1971) and Davidson & Harman published *Semantics of natural language* (1972), two classic collective volumes with predominantly philosophical contributions, but with a marked presence of a few linguists (e.g., Fillmore, G. Lakoff, McCawley, and Ross) associated — to various degrees — with the dissident movement of generative semantics. It was indeed by way of *generative semantics*, however shortlived it may have been, that a philosophically inspired pragmatics caught root in linguistics as a respectable enterprise (a history eloquently described by R. Lakoff 1989).[2]

Speech act theory – see Marina Sbisà's account in this volume – has exerted an influence which persists until today. It was the driving force behind the Anglo-American prominence in pragmatics. This does not mean that speech act theory itself has not

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2.   Needless to say, the role of philosophy in the formation and further growth of pragmatics is not restricted to the major traditions listed. Vastly divergent contributions have indeed been made by philosophers throughout. Just compare Dascal (1983), Heringer (1978), Kates (1980), Martin (1979), Montague (1974), or Barwise & Perry (1983).

been subject to various influences. It has clearly been shaped by interactions with and challenges from research reflected in work by Vanderveken (1988), Récanati (1981), Sbisà (1989), the Geneva school of pragmatics (e.g., Roulet 1980, and the annual *Cahiers de linguistique française*), not to mention Apel's *transcendental pragmatics* (1989) and Habermas' *universal pragmatics* (1979).

The name Habermas, which stands for critical social theory, provides a link to a different strand of formative traditions: a complex of sociological, anthropological, psychological, and psychiatric endeavors. All these are found in combination in the *Batesonean program* emanating from the Mental Research Institute in Palo Alto. This tradition did not only reintroduce Bartlett's (1932) concept of *frames* (as in Bateson 1972), adopted later in Fillmore's *frame semantics* (1975), Goffman's sociological *frame analysis* (1974) which he also applied to the analysis of verbal interaction (Goffman 1981), and in *artificial intelligence* (Minsky 1977). Bateson's was in fact a general program, not less ambitious than the semiotic one, aimed at a better understanding of human behavior, including both mental and verbal activity. The best-known statement of its views on communication already had 'pragmatics' in its title: Watzlawick, Beavin & Jackson's (1967) *Pragmatics of human communication: A study of interactional patterns, pathologies, and paradoxes.* (For a succinct and insightful account of the tradition, see Winkin 1981.)

Some other trends in sociology and anthropology, converging to various degrees with the Batesonean program (with roots from long before Bateson's own involvement, and especially with its expression in Goffman's work), soon came to be associated with pragmatics as well. This was particularly the case for two traditions. First the anthropologically oriented *ethnography of communication* which, from its first formulations (as in Gumperz & Hymes Eds. 1972) through all its further developments, whether simply under the label of *sociolinguistics* (e.g., Hymes 1974) or more specifically *interactional sociolinguistics* (e.g., Gumperz 1982), has remained an attempt — sometimes more and sometimes less successful — to study language use in context, taking into account the full complexity of grammar, personality, social structure, and cultural patterns, without lifting these different aspects out of the pattern of speech activity itself. Second, there was the sociological tradition of *ethnomethodology*, initiated by Garfinkel (see Garfinkel 1967), which produced the ever-widening field of *conversation analysis* (e.g., Sacks, Schegloff & Jefferson 1974, Atkinson & Heritage Eds. 1984, Hutchby & Wooffitt 1998). Again, in spite of the little details with which conversation analysis often occupies itself, the underlying question was far from modest: face-to-face interaction became the subject of investigation in view of the clues it provides for an understanding of the organization of human experience and behavior.

The basic assumptions of both the ethnography of communication and ethnomethodology take us back, unwittingly, to a British philosopher in the Wittgensteinian

tradition, Winch (1958), whose basic claim was that human behavior cannot be understood without access to the concepts in terms of which those engaged in the behavior interpret it themselves, and that language provides the necessary clues to those concepts. Given the similarity of the foundations, it is not surprising that the two traditions have significantly converged. What they have produced, in conjunction, is for instance a highly dynamic notion of *context* which is destined to become a major building block for theory formation in pragmatics in the years ahead (see Auer & di Luzio Eds. 1992, Duranti & Goodwin Eds. 1992, as well as Peter Auer's contribution to this volume).

Psychology and cognitive science had been involved all along. Bühler's (1934) theory of the psychology of language, especially by means of the distinctions it makes between various functions of language, has been directly or indirectly present in most pragmatic thinking. Suffice it to enumerate a few random observations on later developments. Winch's (1958) book on 'the idea of a social science' was published in a series called 'Studies in philosophical psychology', and indeed it had as much to say about the mind as about society. One of the classical collections of articles pertinent to pragmatics — even though its title was *Semantics* — was published by a psychologist and a linguist and was labeled 'An interdisciplinary reader in philosophy, linguistics and psychology' (Steinberg & Jakobovits Eds. 1971). Clark & Clark's (1977) textbook introduction to *psycholinguistics* had already fully incorporated whatever knowledge about language use, comprehension, production, and acquisition had been provided by pragmatics by that time, and it has had a thorough influence on much later work. Meanwhile, a clearly *cognitive tradition* was developing in endeavors as diverse as the study of patterns of metaphorization (Lakoff & Johnson 1980), inquiries into aspects of meaning construction at the sentence level and in discourse (Fauconnier 1985; Givón 1989; Talmy 1978), and the writing of cognitive grammars (Langacker 1987). Recently we were reminded that the real aim of cognitive science was "to prompt psychology to join forces with its sister interpretive disciplines in the humanities and in the social sciences" to study 'acts of meaning' (Bruner 1990: 2), a quintessentially pragmatic concept. At various points in the process, the much older ideas formulated by Vygotsky (see 1986) on the relationships between individual cognition and society were revitalized, with or without reference to language acquisition. *Developmental psycholinguistics* has been using and contributing to the growth of pragmatics for decades (see Bates 1976 & Ervin-Tripp 1973), and it is in Ochs' (1988) study of language acquisition in a Samoan village that we find one of the fullest examples of how the cognitive, the social, and the cultural combine in matters of language and language use, a matter already dealt with a century earlier in von Humboldt's work, and closely related to the concerns of linguists and anthropologists such as Whorf, Kroeber, Haas, and Emeneau. A psychological orientation, finally, also provides meeting points between developmental and pathological concerns

(as in Bernicot et al. Eds. 2002, or Salazar Orvig 1999), leading back, as it were, to Bateson and Watzlawick.

So far we have not mentioned any formative traditions which have their roots in linguistics as such. There are at least three that cannot be ignored, though also those will be shown to have connections beyond the 'purely' linguistic study of language. First, there is a distinctly *French school of pragmatics* (closely related to the Geneva school already referred to), with roots in the work of Benveniste (1966) and with Ducrot (1972, 1973, 1980) and later Moeschler (1996) and Reboul & Moeschler (2005) as outspoken proponents. Benveniste's work was clearly influenced by British analytical philosophy, as is Ducrot's by the later developments of speech act theory. Influence in the other direction has been unjustifiably scarce, since numerous original contributions have been made: Benveniste's concept of 'delocutivity', further developed by Anscombre (1979) as a tool to explain the self-referentiality of explicit performatives; Ducrot's notion of the 'polyphonous' nature of utterance meaning, resulting from an illuminating distinction between producer, locutor, and enunciator as distinct aspects of the speaker (with remarkable parallels to Bakhtin's 'voices'); Ducrot's recasting of speech act theory into the mould of a general theory of argumentation, in the context of which close attention is paid to the detailed study of the 'small words' which serve as argumentative structuring devices (an endeavor which the French and the Geneva schools have in common). Moreover, some of the traditional topics of linguistic pragmatics, such as presupposition, have been subject to highly insightful analyses in the context of this tradition (e.g., Ducrot 1972).

Second, *Prague school linguistics* (e.g., Mathesius 1928; Daneš Ed. 1974; Firbas 1983; Sgall & Hajičová 1977) provided some key notions related to information structuring and perspectivization, which have acquired an established place in the pragmatic study of language, such as 'theme-rheme', 'topic-comment', and 'focus', not to mention the contributions it made to the study of intonation. The tradition was functionalist in the sense that language was viewed from the perspective of the goals it serves in human activity. Though much of the work was devoted to linguistic details, its foundations were linked to cybernetics with its notion of the goal-directedness of dynamic systems. Moreover, there was a stylistic component (e.g., Jakobson 1960) which brought the Prague school close to the concerns of semiotics in general. And the relationship with other disciplines was regarded as a highly relevant issue (as reflected, for instance, in Jakobson's 1970 account).

Last but not least, we should not forget the tradition of *Firthian linguistics*, hinging on a "view of speech as a social instrument both for 'sense' and 'nonsense', work and play — practical, productive, creative" (Firth 1964: 15) and, following in Malinowski's footsteps, refusing to look at language outside of a 'context of situation'. Today, most *functional approaches in linguistics* have direct or indirect historical roots in Firthian linguistics or the Prague school or both (e.g., Halliday 1973 & Dik 1978; for an overview, see Dirven & Fried Eds. 1987).

Many of the above trends have left an abundance of traces in the major works in mainstream linguistics, such as Bolinger's (1968) classical textbook *Aspects of language*, or Lyons' (1977) *Semantics*.

2.   Pragmatics as a repository of interesting topics

Many types of topics simply happened to become part of the field of pragmatics as a result of the constitutive forces described in the previous section. The most common shorthand definition of pragmatics as the study of *how language is used* can easily be extended in such a way as to include everything that linguists can possibly deal with. Remember that pragmatically oriented students of language felt the need to supplement Chomsky's (1965) dichotomy between competence and performance with the notion 'competence to perform', 'communicative competence' (Habermas 1971, 1979; Hymes 1972) or 'pragmatic competence', the validity of which was even recognized by Chomsky in the following terms:

> For purposes of inquiry and exposition, we may proceed to distinguish 'grammatical competence' from 'pragmatic competence', restricting the first to the knowledge of form and meaning and the second to knowledge of conditions and manner of appropriate use, in conformity with various purposes. Thus we may think of language as an instrument that can be put to use. The grammar of the language characterizes the instrument, determining intrinsic physical and semantic properties of every sentence. The grammar thus expresses grammatical competence. A system of rules and principles constituting pragmatic competence determines how the tool can effectively be put to use. (Chomsky 1980: 224)

Most pragmaticians would disagree with this componential presentation because unlike many other tools, language is not a 'thing' which leads an independent and unchanging life once it has been 'made'. It requires constant adaptations to different purposes and circumstances of use. And for a descriptive account of the meaning and an explanatory account of the form of linguistic entities, it is often necessary to refer to conditions of their appropriate use. Strictly speaking, every aspect of competence is part of one's competence to perform. In other words, also the so-called 'grammatical competence' determines the way in which language gets used. Thus the form/meaning vs. use opposition is not unproblematic. While maintaining the contrast, Morris also recognizes this issue when introducing the notion of a 'pragmatical rule'.

> Syntactical rules determine the sign relations between sign vehicles; semantical rules correlate sign vehicles with other objects; *pragmatical rules* state the conditions in the interpreters under which the sign vehicle is a sign. *Any rule when actually in use operates as a type of behavior, and in this sense there is a pragmatical component in all rules*. But in some languages there are sign vehicles governed

by rules over and above any syntactical and semantical rules which may govern those sign vehicles, and such rules are pragmatical rules. Interjections such as 'Oh!', commands such as 'Come here!', value terms such as 'Fortunately', expressions such as 'Good morning!', and various rhetorical and poetical devices occur only under certain definite conditions in the users of the language; they may be said to express such conditions, but they do not denote them at the level of semiosis in which they are actually employed in common discourse. The statement of the conditions under which terms are used, in so far as they cannot be formulated in terms of syntactical and semantical rules, constitutes the pragmatical rules for the terms in question. (Morris 1938: 35; italics added)

This formulation, which places everything that syntax and semantics cannot cope with in the custody of pragmatics, has no doubt contributed to the 'waste basket' view of pragmatics.

In the 'Anglo-American tradition' (see Levinson 1983 – also represented to varying degrees by Leech 1983, Davis Ed. 1991, Thomas 1995, Yule 1996, and more recently Cummings 2005, Robinson 2006, Burton-Roberts Ed. 2007, and Huang 2007), pragmatics sometimes looks like a repository of extremely interesting but separable topics such as *deixis, implicature, presupposition, speech acts, conversation, politeness* and *relevance*. More often than not, theoretical unity is not provided in spite of the many points of contact between these various topics. Thus, *speech act rules* are frequently specific applications of the more general *conversational maxims*. Grice's (1975) account of *conversational implicatures* and Searle's (1975) definition of *indirect speech acts* are very similar. Moreover, in his account of the 'illocutionary derivation' needed to arrive at the meaning of an indirect speech act, Searle makes explicit reference to the principles of conversational cooperation. Furthermore, there is a fundamental sense in which *background information* (relied upon for interpreting both conversational implicatures and indirect speech acts) and *presupposition* are synonymous, though the latter acquired a number of more restricted meanings. And one of the main early definitions of *presuppositions* advanced in the literature (Fillmore 1971), crucially depends on functions of language which are generally discussed in terms of *speech acts*.

The numerous identifiable points of contact have not spontaneously produced coherence in the 'waste basket', though truly powerful examples of theory formation have emerged (e.g., Clark 1996 and Levinson 2000) and though interesting and useful attempts have been made even to reduce pragmatics to a single-principle enterprise (as in *relevance theory*; see Sperber & Wilson 1986). A stumbling block seems to have been the persistent attempt to define pragmatics as an additional *component* of a theory of language, with its own range of topics or even its own units of analysis. (For a more detailed discussion of these issues, see Verschueren 1985 and 1999.)

Similarly, in spite of the obvious interdisciplinarity of its roots, the growing field of pragmatics followed the road of boundless diversification — more or less the opposite of the unification Morris would have dreamt of. Many types of interaction can

fortunately be observed between anthropological linguists (studying the relationships between languages and cultures), sociolinguists (concerned with the ways in which social relationships, patterns, and networks interact with language structure and language use), neurolinguists (trying to reveal the neurophysiological aspects of speaking and listening), psycholinguists (studying the relationships between language and mind in general), developmental psycholinguists (concentrating on the ontogenetic origin and evolution of language), linguists and philosophers of language (often focusing on a restricted, though itself quite diversified, range of topics: speech act theory as the philosophical study of language in action, proposing the 'speech act' as the basic unit of analysis; conversational logic formulating rules for conversational exchanges, and reflecting on how these influence interpretation processes; linguists studying presuppositions in an attempt to determine what implied propositions have to be true for an expression to be appropriately used; those dealing with the given/new and topic/comment distinctions trying to discover how 'common' or 'mutual' knowledge is reflected in sentence structure, and how it gets gradually extended in a text), text linguists and discourse analysts (describing how macrostructural properties of texts and discourses relate to processes and strategies of discourse progression), conversation analysts and ethnomethodologists (undertaking detailed linguistic analyses of conversational exchanges in order to unravel their most intricate mechanisms, often viewed as manifestations of microsociological patterns and relationships), and many other scholars in the language-related sciences. Yet they are often still inclined to pursue their interests within the confines of their own disciplines, with different aims and methodologies, and with various divergent and confusingly overlapping terminologies.

It was this situation that prompted the establishment of an International Pragmatics Association (which managed to attract major proponents of all the fields of investigation mentioned), the diagnosis being that there were too many disciplinary ambitions to achieve unity of purpose, so that even the most closely related activities developed in parallel with insufficient interaction. This having been said, we should beware of any attempts to establish pragmatics as a *(sub)discipline* or more or less separate 'science' as well. Going 'its own way' would involve the risk of paying less and less attention to the diversity of perspectives and methodologies that now feed into pragmatics. We will return to the question of how pragmatics can be developed without defining it as a component of a theory of language and without yielding to misplaced ambitions to establish a separable discipline. But first we have to turn to some of the more specific problems of delimitation and methodology.

3.   The problem of delimitation

A large number of attempts have been made to come to terms with the problem of delimiting the field of pragmatics in a principled way, i.e., in such a way that there is

some *topical* unity — the types of research questions asked — as well as a *methodological* one. A bird's-eye view of some of the major collective volumes, monographs, and introductory as well as advanced textbooks reveals the following picture.

In general, topical and methodological unity is easiest to find in work that restricts the scope of pragmatics to more or less bounded notions such as *speech acts*, whether or not extended into the realm of *dialogue* or *discourse*, or discussed in direct relation to logical or grammatical problems (e.g., Wunderlich Ed. 1972; Schlieben-Lange 1975; Dahl Ed. 1977; Searle, Kiefer & Bierwisch Eds. 1980; Ghiglione & Trognon 1993; Cutting 2008), or *énonciation* or *énoncé* (e.g., Récanati 1979; Kerbrat-Orecchioni 1980; Berrendonner 1981; Latraverse 1987; Reboul & Moeschler 2005). It is also to be found in work focusing on phenomena, principles, or processes imminently relevant to the study of language in use, whether or not in combination with a clear focus on the types of notions already illustrated, such as *appropriateness* (as in Verschueren 1978, and about which Parret, Sbisà & Verschueren 1981 somewhat naïvely claim that there seems to be "some sort of general consensus" [p. 8] that it is of central importance), *politeness* (Leech 1983; Brown & Levinson 1987), *relevance* (Sperber & Wilson 1986), *implicitness* (as in Östman 1986; Ducrot 1972; Kerbrat-Orecchioni 1986), *'meaning derivation'* (e.g., Cornulier 1985), *inferencing* (Gumperz 1982), *joint action* (Clark 1996), *'transphrastic'* units (Stati 1990), *presumptive meanings* (Levinson 2000), *default meanings* (Jaszczolt 2005), *mediation* (Norris & Jones Eds. 2005), etc.

Aspirations towards topical and methodological unity are often translated into a view of pragmatics as a clear *component* of a linguistic theory, complementary to semantics and/or grammar. Thus Leech (1983: 4) claims "[...] that grammar (the abstract formal system of language) and pragmatics (the principles of language use) are complementary domains within linguistics." In Leech's terminology, semantics is part of grammar. Two other, quite straightforward formulations of such a view are Gazdar's (1979) statement that (formal) pragmatics is the study of meaning minus truth-conditions (semantics being confined to the study of meaning in terms of truth-conditions, as in Kempson 1975), or Cole's (1981: xi) contrast between semantics as "involved in the determination of conventional (or literal) meaning" and pragmatics in "the determination of nonconventional (or nonliteral) meaning". Though critical of such definitions, Levinson (1983: 32) sides with them in a slightly reformulated fashion, after carefully reviewing a wide range of alternative proposals:

> The most promising [definitions of pragmatics] are the definitions that equate pragmatics with 'meaning minus semantics,' or with a theory of language understanding that takes context into account, in order to complement the contribution that semantics makes to meaning.

This is the basis of the widespread definition of pragmatics as the study of *meaning in context*. This view is further modified, while remaining within the same general

paradigm, by the distinction which Davis (1991: 11) introduces between a theory of satisfaction and a theory of pragmatics:

> We can say that the former [a theory of satisfaction] must give an account of the satisfaction conditions of sentences, including the satisfaction conditions that certain sentences have relative to a particular context of use. This requirement means that within a specification of context-relative truth conditions, a theory of satisfaction must mention the speaker's intentions where those intentions play a role in determining the referent of terms that have no semantic referent given by the conventions of the language. Pragmatics will have as its domain speakers' communicative intentions, the uses of language that require such intentions, and the strategies that hearers employ to determine what these intentions and acts are, so that they can understand what the speaker intends to communicate.

The clear separability of a pragmatic component is often denied, as when Guenthner & Schmidt (1979: vii) say that "we cannot hope to achieve an adequate integrated syntax and semantics without paying heed to the pragmatic aspects of the constructions involved". This idea would be supported by most of the proponents of the component view of pragmatics, for whom the same observation often triggered their interest in pragmatics in the first place. The pragmatic component is even seen as a necessary component of an adequate theory of linguistic competence. Thus Levinson (1983: 33) argues for "the need for a pragmatic component in an integrated theory of linguistic ability", and Davis (1991: 4) says: "I shall regard pragmatics as part of a theory of competence and, as such, take it to be psychologically realized". Whatever differences in theory there may be, adherents of this general type of view focus on a roughly shared range of pragmatic phenomena: deixis, implicature, presupposition, speech acts, conversational interaction, and the like. What they also share, in spite of the obvious cognitive nature of the competence or ability under investigation (inferencing processes, for instance, being a major concern), and in spite of the social and cultural determinants of context, is a observable fear of trespassing into the realm of sociolinguistics and psycholinguistics.

Bolder approaches speak of pragmatics as "la science qui reconstruit le langage comme phénomène communicatif, intersubjectif et social" [the science that reconstructs language as a communicative, intersubjective and social phenomenon] (Parret et al. 1980: 3). This is joined by a chorus of claims about the necessary interdisciplinarity of the field of pragmatics:

> 'Pragmatik' — gleich ob als linguistische Teiltheorie oder als neuartige Theorie sprachlicher Kommunikation — ist angewiesen auf enge Zusammenarbeit mit andere Disziplinen wie Soziologie, Psychologie, Philosophie, Logik und Mathematik, Informations- und Systemtheorie, Jurisprudenz, Literaturwissenschaft etc. ['Pragmatics', whether as a component of a linguistic theory or as a new kind of theory of linguistic communication, has to rely on close cooperation with other disciplines such as

> sociology, psychology, philosophy, logic and mathematics, information and system
> theory, jurisprudence, literary science, etc.| (Schmidt 1974: 7)

In much the same way, van Dijk's (1978) introduction to pragmatics stresses its links with
cognitive psychology, sociology, and anthropology. Golopentia's (1988: 2) approach is
said to lean on "la sémiotique mise à part, la linguistique, l'ethnolinguistique, l'analyse
textuelle, l'analyse conversationelle et la théorie littéraire" |linguistics, ethnolinguistics,
textual analysis, conversation analysis, and literary theory, in addition to semiotics| and
on the work of not only Austin but also von Wright and Bakhtin (whose work on the
dialogic imagination has clearly become more and more popular as a source of inspi-
ration in some circles of pragmaticians; see, e.g., Bakhtin 1981 & Todorov 1981). The
most straightforward plea for multidisciplinarity in a pragmatics textbook is no doubt
offered by Cummings (2005) who – after referring to Dascal (1983), Mey (1993) and
Green (1996) as sources of inspiration – clarifies her perspective as follows:

> |...| two features that I wish to develop within this book. The first feature is that
> pragmatics is significantly informed by a range of academic disciplines. [...]
> However, while pragmatics receives conceptual influences from a number of
> disciplines, its subject matter is in no sense simply the sum of these influences. For,
> as I will demonstrate subsequently, pragmatics is a branch of enquiry in its own right,
> one which can contribute insights to neighbouring academic disciplines in much
> the same manner that these disciplines can contribute insights to it. This second
> feature of pragmatics – its capacity to influence the conceptual development of *other*
> disciplines – completes the view of pragmatics that I wish to propound in this book.
> (Cummings 2005: 1–2)

A comparable general orientation is to be found at the basis of a number of collective
volumes of work on pragmatics (including Johansen & Sonne Eds. 1986; Verschueren &
Bertuccelli Papi Eds. 1987; Verschueren Ed. 1991a and 1991b). Similarly, intersections
with the fields of text linguistics, narrative, discourse analysis, literary studies and stylis-
tics almost invariably show a clear interdisciplinary slant (e.g., Chafe Ed. 1980; van Dijk
1981; Hickey Ed. 1990; Pratt 1977; Steiner & Veltman Eds. 1988), while applied forms
of pragmatics are of necessity interdisciplinary (e.g., Blum-Kulka, House & Kasper Eds.
1989; Smith & Leinonen 1992; Perkins 2007; Coulthard & Johnson 2007).

Of course, not all interdisciplinary approaches cast such a wide net around all that is
of interest for an understanding of the human functioning of language. In an attempt to
recapture unity of topic and method after the expansion across disciplines, tight restric-
tions are imposed, for instance, by *relevance theory* (Sperber & Wilson 1986) which
limits pragmatics to whatever can be said in terms of a cognitively defined notion of
relevance. Or, as Blakemore's (1992: 47) relevance-theoretic textbook would have it:

> |...| it is misleading to include phenomena like politeness, face-saving and turn taking
> together with the phenomena discussed in the following chapters [on explicature and
> implicature] under the general heading of pragmatics.

Though she does not reject socio-pragmatics (as defined by Leech 1983) as a valid endeavor, she does not accept the possibility of combining a cognitive and a social approach into one general theory of pragmatics. Rejections in the other direction are less common, but many authors who enter the domain of the social when defining pragmatics, leave out the cognitive. A recent example is provided by Mey (1993: 42):

> Hence, *pragmatics is the study of the conditions of human language uses as these are determined by the context of society.*

Thus Mey's introductory textbook deals with all the traditional topics to be found in Levinson (1983), leaving out a detailed treatment of presuppositions, but adding a chapter on 'societal pragmatics', with distinctly critical overtones — as was to be expected of the author of *Whose language?* (Mey 1985). More or less ambitious combinations of the cognitive and the social aspects of language use are to be found in a number of relatively recent textbooks such as Bertuccelli Papi (1993), Ghiglione & Trognon (1993), Moeschler & Reboul (1994), as well as in Givón's (1989) grand design of a theory with "at its very core the notion of *context*, or *frame*, or *point of view*" (p. 1) in relation to the entire system of signs at every possible level of structuring, labeled the 'code', and emphasizing the role of the human 'mind' in the process of communication.

4.   On dimensions, perspectives, methodology, and evidence

In the foregoing paragraphs, approaches to the delimitation of pragmatics have been presented as differing along the parameter of interdisciplinarity. No attempt was made to hide a bias favorable to the more radically interdisciplinary side. Moreover, the legitimacy of this preference was at least implicitly shown to derive from the nature of the formative traditions, practically all of which had a distinctly interdisciplinary slant. Yet, though approaches with a broad scope may be preferable, so far they do not constitute 'better pragmatics' at all. Usually this is due to a lack of clarity and coherence, deriving from missing theoretical foundations and uncertainty about the methodological demands to be placed on empirical evidence. It is therefore easy to understand Davis (1991: 3) when he says that "The problem with this broad view of pragmatics [as defined by Morris] is that it is too inclusive to be of much use". He argues this point as follows:

> Using this definition, pragmatics has as its domain any human activity involving language, and thus includes almost all human activity, from baseball to the stock market. The consequence is that all the human sciences become part of pragmatics. On this view, then, pragmatics is not on the same level as semantics and syntax, when these are construed as theories constructed to account for various aspects of a speaker's linguistic ability. Nor can pragmatics be regarded as a field of study, like linguistics or sociology. What groups various activities and theories together in one field of

study is that they share a set of questions or a methodology. But there is no common methodology or set of questions that groups together in a natural class the full range of the human sciences in which language is involved. Economics and sociolinguistics, for example, have very little in common to justify their inclusion in the same field of study. For 'pragmatics' to be a useful term, its domain must be restricted. (1991: 3–4)

How can we escape from this conclusion?

Davis' reasoning is perfectly valid unless we combine a return to Morris, which would indeed demand that pragmatics should incorporate cognitive and social as well as cultural aspects, with a radical departure from viewing pragmatics as a separable component of a linguistic theory, and with a decision to stop thinking in terms of separable disciplines (or subdisciplines).[3] Note that a challenge to disciplinary thinking is becoming more widespread in the social sciences in general:

All these new questions are being raised in the context of a disciplinary structure that is no longer very well suited to them. The social science disciplines were defined a century ago and despite the rash of multidisciplinary centers and programs in academia, departments are still divided along those traditional lines. [...] it's still true that the safest way to carve out an academic career is to publish in the traditional mainline concerns of your disciplines.

Trouble is, traditional disciplinary boundaries are nowadays being blurred and bent almost out of recognition to accommodate torrents of new knowledge, to respond to the demand for socially relevant research by funding agencies, and to reflect the fact that the problems of greatest moment today have to be tackled by multiple approaches. (Holden 1993: 1796)

In order not to leave the humanities and social sciences in total chaos after abandoning adherence to disciplinary boundaries, they should be rethought in terms of *dimensions* of human reality to be approached from different *perspectives*.

In the specific case under discussion, we should stop trying to assign to pragmatics its own set of linguistic features in contradistinction with phonology, morphology, syntax and semantics. If, for the sake of argument, pragmatics is to be defined as the study of meaning in context, it should study whatever meaning emerges as a result of the contextual use of any linguistic feature (including phonological, morphological, or

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3.   Though Morris speaks of *dimensions of semiosis*, his view is basically componential: "Syntactics, semantics, and pragmatics are components of the single science of semiotic but mutually irreducible components". (1938: 54) These components, moreover, are hierarchically ordered: "In a systematic presentation of semiotic, pragmatics presupposes both syntactics and semantics, as the latter in turn presupposes the former, for to discuss adequately the relation of signs to their interpreters requires knowledge of the relation of signs to one another and to those things to which they refer their interpreters". (1938: 33)

syntactic ones), whether this feature has a 'semantics' of its own or not; hence semantics should not be the primary point of comparison, though it usually is treated that way in attempts at defining pragmatics. But if pragmatics does not belong to this traditional linguistic contrast set of components of the study of language, neither does it belong to the interdisciplinary contrast set including psycholinguistics, sociolinguistics, etc. (each of which studies processes or phenomena which can be situated at various levels of linguistic structuring which are the proper domain of different intralinguistic components, and each of which typically relates such processes or phenomena to an aspect of extra-linguistic reality). *Pragmatics* should be seen, rather, as a specific *perspective* (to be tentatively defined later) on whatever phonologists, morphologists, syntacticians, semanticists, psycholinguists, sociolinguists, etc. deal with. Insofar as phonologists, morphologists, etc. adopt this perspective themselves, they are doing pragmatics. Many types of research associated with the interdisciplinary subfields are *de facto* related to or belong to the pragmatic perspective, but *not all* — which is why these endeavors will continue to lead a life of their own.

It is not the intention to preclude the possibility of viewing the various intralinguistic and interdisciplinary components of the study of language as perspectives as well. Yet the discussion is not purely terminological. There is at least one essential difference between pragmatics and what we have referred to as components of linguistics. In contrast with phonology with phonemes as basic units of analysis, morphology with morphemes, syntax with sentences, and semantics with propositions or lexical items, pragmatics cannot — without undue oversimplification — be said to have any basic unit of analysis at all, which is not meant to suggest that the traditional distinctions between components would be clearcut and without areas of overlap. And in contrast with the interdisciplinary fields of research, which have specific aspects of extra-linguistic reality as correlational objects (neurophysiological mechanisms for neurolinguistics, mental processes for psycholinguistics, society for sociolinguistics, and culture for anthropological linguistics — a categorization which is not meant to imply any judgments as to the interaction or lack of interaction between these) no such central, if not exclusive, correlational objects can be assigned to pragmatics.

If we are satisfied that pragmatics should be seen as a specific perspective on language rather than a component of linguistic theory with its own clearly definable object of investigation, we are still stuck, of course, with the problem of how to define this perspective. Before entering that problem, however, we should point out that the perspective view of pragmatics has a long implicit, if not explicit, history. In their editorial introduction to the first issue of the *Journal of Pragmatics*, Hartmut Haberland & Jacob Mey say:

> Linguistic pragmatics, [...], can be said to characterize a new way of looking at things linguistic, rather than marking off clean borderlines to other disciplines. (1977: 5)

Even earlier, at a time when respect for pragmatics among theoretical linguists had only just started to spread, Ann Weiser (1974) concluded her seminal paper on the problems of the 'performative theory' (treating every utterance as a single, classifiable act) as follows:

> Syntax, semantics, and pragmatics are a famous triad. It is perhaps natural to assume that the same relation holds between semantics and pragmatics as between syntax and semantics, but it [i.e., this assumption] is unwarranted. Our current view of syntax and semantics is that they are related as parts of a continuum, separated by either a fuzzy boundary or a nonexistent one. We have no justification for placing pragmatics on this continuum, or for assuming that a formal theoretical structure developed to handle language abstracted from performance can be adopted for the study of the communicative interaction of people in real-world situations. It has been shown more than once recently [...] that pragmatic considerations have effects on syntactic transformations, but this does not mean they have to be written into syntactic trees. This is very important for us to realize. As theoretical linguists embarking on the study of pragmatics we are not just slightly widening our area of investigation, but we are *taking an entirely different point of view on language*. We must take care that we do not burden ourselves with theoretical constructs that are not appropriate to the new endeavor, or we will miss the opportunity to gain the fresh and revealing insights into language and human beings that pragmatics so temptingly offers. (p. 729; italics added)

It is unfortunate for pragmatics that her warning has not always been kept in mind.

Such an approach is not necessarily a prerogative of pragmatics. Recently, Berger made a very similar remark about sociology:

> Sociology is not so much a field as a perspective; if this perspective fails, nothing is left. Thus one can study the economy, or the political system, or the mating habits of the Samoans from perspectives that are quite different, one of which is sociology. The sociological perspective has entered into the cognitive instrumentarium of most of the human sciences with great success. Few historians have not somewhere incorporated a sociological perspective into their work. Unlike most other human scientists, sociologists cannot claim a specific empirical territory as their own. It is mostly their perspective that they have to offer. (1992: 18)

But the 'other human scientists' may not have their own 'empirical territory' either. Probably the time has indeed come for a complete reassessment of the human sciences as a network of converging and diverging perspectives on different dimensions of human reality rather than a collection of disciplines.

In a wider historical perspective, such a reassessment is not even new. Already in 1929 Sapir said that

> It is difficult for a modern linguist to confine himself to his traditional subject matter. Unless he is somewhat unimaginative, he cannot but share in some or all of the mutual interests which tie up linguistics with anthropology and culture history, with sociology, with psychology, with philosophy, and, more remotely, with physics and physiology. (1929: 208)

An advocate of interdisciplinarity *par excellence* he clearly viewed anthropology, sociology, and psychology, all of which were intertwined in his own work (witness collections such as Sapir 1966) in terms of perspectives rather than objects of inquiry (see Winkin 1981: 64–65). In this, as in many other respects, present-day pragmatics is somehow re-inventing Sapir's work. From the point of view of pragmatics we can only regret that a relative dominance of structuralist paradigms seems to have interrupted the flow of Sapir's ideas — and not only his — in linguistics (in much the same way as Parsonian sociology can be said to have interrupted a development that, as Hilbert 1992 shows, had to be re-invented, for instance, by ethnomethodology).

Our focus on one specific domain within the humanities and social sciences should not make us forget, moreover, that it is even possible to distinguish between the major types of scientific endeavor (the first one including mathematics and physics; the second including linguistics, the life sciences, and economics; the third consisting of philosophical reflection) in terms of different dimensions of a general epistemological field. Following Foucault (1966), the 'human sciences', studying human life, labor, and language, would have to be situated in relation to all three dimensions, and within those human sciences any topic could be approached from a number of different perspectives (such as the psychological, the sociological, the linguistic).

Opting for an approach to pragmatics which requires it to be defined as a particular perspective on language (to be specified in the following section), necessarily results in *methodological pluralism* which allows for *various types of evidence*. A few general guidelines, however, should be kept in mind. Since pragmatics (in its different guises) basically studies language as a form of and in relation to human behavior, there are strong empirical demands to be imposed. At the same time, the behavior is of interest only to the extent that it is related to the meaning it has for the people involved. Hence, the empirical orientation has to be combined with a clearly interpretive stance. And since cognitive processing is involved, evidence as to the psychological reality of the described phenomena is at least desirable. A tall order indeed.[4] In the development of pragmatics in recent years, this order has been filled by the development and convergence of a variety of methodologies, ranging from the use of vast corpora (with diachronic as well as synchronic data), to cognitively oriented ethnographic studies (e.g., Levinson 2003), reliance on computational techniques, and even experimentation (e.g., Noveck & Sperber 2004).

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4.   Valuable ideas on how to approach language as a social 'reality' are to be found, amongst many other sources, in Bourdieu (1982). For warnings concerning the applicability of methods common in the social sciences, such as survey research, see Cicourel (1982) and Briggs (1986). On how to deal with the issue of 'meaning', see Verschueren (1994a, 1994b).

5.   A functional perspective on language

It will be clear that the foregoing presentation is biased towards a preference for inter-preting *pragmatics* as *a general functional perspective on (any aspect of) language*, i.e., as *an approach to language which takes into account the full complexity of its cognitive, social, and cultural (i.e., 'meaningful') functioning in the lives of human beings.*

Note that the terminology may lead to serious misinterpretation. In the social sci-ences, a *functionalist* approach is usually contrasted with an *interpretive* approach, the former being associated with an emphasis on relatively mechanical processes (in the tradition of Parsonian sociology which posits functions as the links between relatively stable structural categories), the latter with 'meaning' (in a tradition leaning towards Winch, with Goffman's symbolic interactionism and Garfinkel's ethnomethodology as just two of the representatives). It should be clear that when pragmatics is defined as a functional perspective on language and language usage, it is more analogous to inter-pretivism (remember the emphasis we just placed on meaning) than to functionalism in the social sciences. However, in relation to language, it would be confusing to define a pragmatic perspective as 'interpretive' because this would bias the attention towards only one pole of the interpretation-production dichotomy. Both of these are of course equally important in language use; hence, e.g., Clark's (1996) emphasis on joint action.

Though it is not the intention to impose a specific theoretical model on the field of pragmatics, a brief illustration may be useful of how a functional perspective of the type envisaged can be given substance. The following is just one possible proposal. It serves the purpose of demonstrating that coherent theory formation, and the result-ing principled empirical research, is possible even when we take the broad view of pragmatics we have been advocating, a possibility underscored by the fact that early and rudimentary versions of the proposal in question (later developed more fully in Verschueren 1999) found their way, e.g., into Bertuccelli Papi's (1993) pragmatics textbook and into Bernicot's (1992) pragmatic account of language acquisition.

Going back to the shorthand definition of linguistic pragmatics as the study of lan-guage use, the most basic question is: *What is it to use language?* As already indicated, an unsophisticated but correct answer could be that communicating with language — whether on a face-to-face basis or on a wider societal level — consists essentially in the continuous making of communicative choices, both in speaking and in interpreting. When viewing pragmatics as a general functional perspective on language and lan-guage use, an additional question should be: *What does language do for human beings, or what do human beings do for themselves by means of using language?* Keeping this further question in mind, at least three, hierarchically related, notions are needed to understand the 'making of choices'.

First, *variability* is the property of language determining the range of possible choices (at every level of structure). As early as 1974, Hymes said that "in the study of language as

a mode of action, variation is a clue and a key" (75). This notion should be taken so seriously that the range of possibilities it defines cannot be seen as anything static: the range of possible choices itself is not fixed once and for all; rather, it is constantly changing.

Second, there is *negotiability* involved. This notion implies that the choices are not made mechanically or according to strict rules or fixed form-function relationships, but on the basis of highly flexible principles and strategies. Negotiability thus also implies the indeterminacy of the choices made: making one choice does not always and not necessarily exclude the alternatives from the world of interpretation; speakers simply operate under the constraint of having to make a choice no matter whether it corresponds exactly to one's needs.

Third, *adaptability* (a notion to which one of the chapters in this volume is devoted) is the property of language which enables human beings to make negotiable choices from the variable range of possibilities in such a way as to satisfy basic human communicative needs. In this context, 'basic' does not mean 'general'; i.e., the communicative needs in question always arise in context and may therefore be quite specific. The positive formulation concerning the 'satisfaction' of those communicative needs does not preclude the incidence of serious communication failure, nor is it intended to deny the possibility of an occasional need for non-communication or even miscommunication.

These three notions are fundamentally inseparable. They do not represent topics of investigation, but merely interrelated properties of the overall object of investigation for linguistic pragmatics, the functionality of language. Their hierarchical ranking is but a conceptual tool to come to grips with the complexity of pragmatic phenomena, which allows us to use the higher-order notion 'adaptability' as the point of reference in further theory-formation and empirical research, keeping in mind that it has no content without both variability and negotiability. Using adaptability as the starting point, we can assign four clear tasks — not necessarily to be performed in the order in which they are listed below — to pragmatic descriptions and explanations.

First, *contextual objects of adaptability* have to be identified. These potentially include all the ingredients of the communicative context which communicative choices have to be interadaptable with. The range goes from aspects of the physical surroundings (e.g., distance as an influence on loudness of voice) to social relationships between speaker and hearer and aspects of the interlocutors' state of mind. It goes without saying that these 'objects' are not seen as static extralinguistic realities, but that they are themselves subject to variation and negotiation, both autonomously and in interaction with aspects of the communicative event in relation to which they can be seen to function.[5]

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5.   Sherzer's (1987) description of Bhojpuri bargaining, in which even the identity of the bargaining object is verbally negotiated, serves as an excellent example to warn against a static and unidirectional interpretation of the contextual objects of adaptability in language use.

Second, the processes in question have to be situated with reference to the different *structural layers of adaptability*. Since the making of communicative choices takes place at all possible levels of linguistic structure that involve variability of any kind, pragmatic phenomena can be related to any level of structure, from sound feature and phoneme to discourse and beyond, or to any type of interlevel relationship.

Third, any pragmatic description or explanation must account for the *dynamics of adaptability* as manifested in the phenomenon under investigation, in other words the development of adaptation processes over time. By its very nature, this task cannot be performed without lending full force to the negotiability of choices. It involves an account of the actual functioning of adaptation processes. That is, questions have to be answered about the ways in which communication principles and strategies are used in the making and negotiating of choices of production and interpretation.

Fourth, we have to take into consideration differences in the *salience of the adaptation processes*. Not all choices are made equally consciously or purposefully. Some are virtually automatic, others are highly motivated. They involve different ways of processing in the medium of adaptability, the human 'mind in society' (a clumsy term to avoid the suggestion that either the individual or society would be primary, or to emphasize what could be called the non-dichotomous dual nature of the medium of adaptation). It is with reference to this issue that the distinction between explicitly communicated meaning and implicit information will take on special relevance.[6]

These four tasks can be seen as *necessary ingredients of an adequate pragmatic perspective on any given linguistic phenomenon*. But these four tasks for pragmatic investigations are not to be situated all on a par with each other. Their contributions are not only complementary, they have different functional loads to carry within the overall framework of the pragmatic perspective.

First, a combination of *contextual objects* and *structural layers* of adaptability can be used to define the *locus* of adaptation phenomena, i.e., they describe the combination of linguistic and extra-linguistic coordinates in the communicative space of a speech event. Thus, our topic of inquiry may concern children's socialization processes in relation to choices at the code level, or hearer involvement in relation to information structuring

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6.   In earlier versions of this theoretical framework, the term *accessibility* was used. This term was abandoned because of its interference with traditional usage in psychology where, for instance, a term or category with a high level of accessibility will be said to be chosen with a lower degree of awareness because of the ease of access. What I meant with levels of accessibility was simply degrees of awareness. In order to avoid confusion, it was therefore more appropriate to simply substitute the original term. 'Salience' was suggested to me by Michael Meeuwis, who was inspired in this by Errington (1988).

in the sentence, or memory limitations in relation to the use of anaphora, etc. While contextual objects and structural layers are relatively straightforward notions which can often be conveniently used as a starting point for specific descriptive tasks in pragmatics and as parameters which have to be continuously referred to throughout an investigation, the precise way in which they combine can usually not be stated until the investigation is completed; such statements then tend to take the form of explanations. To complicate matters, context and structure cannot be seen as truly separable phenomena (see Verschueren 2008).

Accounting for the *dynamics* of adaptability, taking into account the full impact of variability and negotiability, is no doubt the central task of most specific pragmatic investigations, since it is essentially concerned with a definition of the *processes* of adaptation as such. In principle, this should be much harder than identifying the locus of those processes.

Finally, an investigation of the *salience of adaptation processes* sheds light on their *status* in the realm of the consciousness of the human beings involved, i.e., in relation to the type of human reflexive awareness (which may be actualized to various degrees in different instances of use) which was the original prerequisite for the development of human language in the first place. It is the importance of this aspect that has made the study of *language ideologies* a prime topic in pragmatics (e.g., Kroskrity, Schieffelin & Woolard Eds. 1992; Blommaert Ed. 1999), recently extended into systematic reflections on possible ideological underpinnings of pragmatic theorizing itself (Hanks, Ide & Katagiri Eds. 2009), and that has prompted the development of a *metapragmatics* concerned with linguistic traces of a speaker's awareness of the processes he or she is involved in (see Silverstein 1979; Lucy Ed. 1993; Authier-Revuz et al. Eds. 2003; Jaworski et al. Eds. 2004; Bublitz & Hübler Eds. 2007).

The superordinate concern which guides the study of pragmatic phenomena, primarily as processes at various levels of salience, but also in the identification of their locus to the extent that attempts at explanation are involved, is simply to understand the *meaningful functioning* of language, i.e., to trace the dynamic generation of meaning in language use. What we are concerned with, in other words, are indeed what Bruner (1990) calls 'acts of meaning', cognitively mediated, and performed in a social and cultural environment.

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Adaptability

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1. Introduction

The notion of adaptation or adaptability inevitably triggers associations with evolutionary theory. In a discussion of language, this link is both a useful and a potentially pernicious one. It is useful, since the emergence and development of language are no doubt part of a wider adaptive process. This will be briefly discussed in Section 2.1 of the present contribution. But there is more. Having emerged, language can also be said to function adaptively in its everyday manifestations. This will be the topic of Section 2.2. The pernicious nature of the intuitive link between the notion of adaptability and evolutionary theory manifests itself when it is all too easily assumed, as happens regularly, that the originally biological notion remains unchanged when used as in the second part of this exposition. There we will first present a brief account of a proposal to turn adaptability into a key concept for a theory of pragmatics (Section 3.1), followed by a quick glance at some of the ways in which an adaptability perspective has been, or is being, applied to a variety of topics in the field of pragmatics (Section 3.2).

Through the contrast between the first (Sections 2.1 & 2.2) and the second part (Sections 3.1 & 3.2), we wish to indicate the problematic status of a straightforward identification of these two uses of the term 'adaptation', as entertained in biological and social-interactive accounts of linguistic behavior, respectively. Generally, this paper aims to discuss how we adapt to language (or, in other words, how humans developed a predisposition for language) and how language adapts to us, once we have a linguistic repertoire to choose from. The first question is one where language is considered the product of largely *causal* biological processes, while the second focuses on *reasons* speakers may have in selecting this or the other form of expression in language use.

2. Biological adaptability and language

In what follows, we will use the term 'emergence', closely tied to that of 'adaptation', in both a loose and a somewhat stricter sense. First, emergence, as a mathematical concept, refers to the development of properties in an information system of sufficient complexity that cannot be reduced to the composing elements of that system, e.g., the brain. In addition, emergence can also be understood as an ongoing process of

structuration, or "the conditions which govern the continuity and dissolution of structures or types of structures" (Giddens 1977: 120). It is not identical to the ontogenetic development of an organism or system (i.e., its actual history), because emergent structures are fluid, shifting, and manifested stochastically. In the case of an existing language, fixing groups of all kinds as recognizably structural units (words and 'phrases') comes from the constant re-systematization of language. Consequently, the representations that are assumed to function in language production and interpretation are only temporary, dynamic states that are forever adapting to the dictates of actual use. Grammar, in this perspective, comes about through the repeated adaptation of forms to live discourse, a theme that has been heavily stressed in much of the extant functionalist and cognitive-linguistic literature (e.g., Givón 1979; Givón (Ed.) 1979; Haiman 1985; and, more recently, Hopper 1998 and Bybee & Hopper 2001). The notion of language as a fixed, monolithic synchronic system can thus be replaced by one in which the very experience with language leads to the formation of a massive collection of heterogeneous constructions, each and every one of them shaped by its structural adaptation to particular contexts of language use (Langacker 1987). It follows that linguistic structure is not a preexistent, autonomous matrix but responds to, and is actually brought about by, the ongoing pressures of discourse (Ochs, Schegloff & Thompson 1996). It also follows that there can never be any real contrast between the representational and the communicative functions of language.

Other important attempts to integrate neurobiology and culture, in explaining how conventions in general, and language in particular, have emerged, include Donald (1991) and Nelson (1996).

2.1 The adaptive emergence of language

Theories about the origin of language usually hinge on the observation that human language, as we know it, is a unique tool for communication, a signaling technique not to be found elsewhere in the animal world. The emergence of this tool, whose use is nonarbitrarily related to its own form and structure, is linked to supposedly unique cognitive capabilities and in fact imposes constraints on what the tool itself may be used for (without fully determining this use). Cognition and language combined are said to explain the rapid cultural development of *Homo sapiens*. Here is how some of the interconnections, with a focus on culture and language, are introduced by Wang (1982: 2):

> Alfred Russell Wallace, the codiscoverer of the theory of evolution with Charles Darwin, is sometimes credited with being the first to see clearly the vital distinction between biological evolution and cultural evolution. It makes all the difference, of course, whether our bodies change to meet the needs of the environment or whether we change the environment to suit us instead. Cultural evolution proceeds at a much quicker pace,

and can develop in infinitely more directions. Of the countless species that biological evolution has produced on this planet, we are the only species that has developed culture to any significant degree. The key to this development is language.

Looking at the different ingredients of such a line of thinking one by one, let us start with the uniqueness of language. Hockett (1960) proposed thirteen design features of language in terms of which it can be compared to other communicative systems:

- the use of the vocal-auditory channel (rather than gesture, dancing, etc.);
- broadcast transmission and directional reception (the signal can be heard by any auditory system within earshot, and the source can usually be localized through binaural reception);
- rapid fading (sound does not leave traces — a property of language for which writing, and more recently audio-recording, may provide a remedy);
- interchangeability (an utterance can be reproduced by anyone else);
- total feedback (a speaker hears whatever is of linguistic relevance in what he or she says him- or herself; compare with communicative facial expressions, which you cannot normally see yourself);
- specialization (the bodily effort and the spreading sound waves serve no other function than to be a signal; compare with the panting of a dog, which primarily serves to maintain body temperature but which may, as a side effect, also communicate);
- semanticity (there are relatively fixed associations between elements of a message and features of the surrounding world; thus 'salt' means salt and not sugar);
- arbitrariness (signs themselves do not have to exhibit properties of what they refer to; thus 'salt' is neither granular nor salty);
- discreteness (there are clear distinctions between signs rather than a continuum of signing; while vocal gestures, such as raising one's voice to express emotion, are scalar, there is no continuous scale that leads from 'pin' to 'bin');
- displacement (language can be used to talk about things that are remote in space and/or time);
- productivity (the fact that things can be said and understood that have never been said or heard before; this turns language into an 'open' system, in contrast with closed communicative systems consisting of a finite repertoire of signals);
- traditional transmission (even though there might be a genetic predisposition to learn language, any individual human acquires (or is 'taught') his or her particular language(s) extra-genetically, i.e., culturally);
- duality of patterning (or 'double articulation'; a small stock of distinguishable but in themselves meaningless sounds is used to build a large stock of meaningful elements which are used to construct messages).

Clearly, there are interrelations between these design features. For instance, rapid fading and broadcast transmission are a direct consequence of the use of the

vocal-auditory channel. Arbitrariness is a feature that is relevant only for a system that is fundamentally semantic (or rather, symbolic). And a system must also be semantic/symbolic in order to have duality of patterning.

In spite of the generally clear division between natural and nonnatural ways of 'meaning something', with nonhuman communicative systems ranging exclusively on the natural side, it is not at all certain that any of the enumerated features is really unique to human language. The use of the vocal-auditory channel, with all its corollaries, is extremely common in a wide range of species. Interchangeability is certainly not universal; thus only the male stickleback can change the color of its eyes and belly, but in order for a danger call to spread among a population of gibbons, it must be possible for gibbons to reproduce the 'same' call. Such a call also shows specialization and semanticity even if its meaning may be relatively vague (even the most general danger call still means danger). Arbitrariness is not exceptional. For instance, there is no sign-intrinsic reason why faster dancing in bees should indicate that the source of nectar is closer while slower dancing indicates a greater distance, rather than the reverse. While gibbon calls are discrete, bee dancing is more continuous, orientation and speed being gradable. But while gibbon calls form a closed system, bee dancing is more productive (even if the 'topic' of the communication may remain relatively constant). Displacement has not been attested in nonhuman primates, but it certainly occurs in bee dancing. Traditional transmission is doubtful for most animal communication systems, even though some species seem to exhibit 'dialectal' patterns of variation: Italian bees, for instance, dance differently from Austrian bees. Still this is not a matter of conventional variation, as in human languages, since the difference is genetically determined, such that no Italian bee will ever acquire the Austrian idiom, not even in an exclusively Austrian environment (cf. von Frisch 1967).

Likewise, duality of patterning has not been shown beyond doubt in any nonhuman communication system, but some interesting hypotheses in this direction have been formulated concerning certain types of bird song. In specific cases, it is even argued that certain species, like the Bengalese finch, sing 'nondeterministic' songs that could be described by a finite-state syntax (Hosino & Okanoya 2000), i.e., their singing has a high level of temporal organization with multiple 'phrases' organized into a song. It is further hypothesized that a song with (a primitive) syntax is more attractive for female birds and might therefore evolve through sexual selection, given its general absence in the ancestor species. Finally, and most interestingly, even the vocal qualities of human language may turn out not to be quite as essential as one might think at first. For one, the existence of numerous signed languages in the world demonstrates the relatively 'a-modal' character of human linguistic competence, i.e., the fact that it can, and will, be realized in more than one specific medium. For another, recent neuro-imaging research has shown that Liberman's old Motor Theory of Speech Perception (Liberman et al. 1967) may be correct in assuming that the basis of speech perception

consists in 'reconstructing' the 'articulatory gestures' made by the speaker (i.e., hearers identify spoken words by using this articulatory information to access their own speech motor system). In particular, work by Rizzolatti & Arbib (1998) suggests that part of the monkey ventral pre-motor cortex (F5) contains so-called 'mirror neurons', which fire both when the animals manipulate objects, including their own body parts, and when they observe others' meaningful actions (so, for all practical purposes such mirror neurons look and act like the usual motor-related F5 neurons, virtually activating muscles that would be used if an action were actually performed). If a similar system exists in humans, and if area F5 in the monkey can be seen as the probable homologue of Broca's area (the speech motor area of the modern human brain; Fadiga et al. 1995), then it might be reasonably hypothesized that the processing of incoming speech involves the activation of corresponding articulatory gestures in Broca's area. (This may explain why lip-reading enhances the interpretability of what someone else is saying, or why moving one's lips during reading may help sentence processing.) If, then, human speech evolved from a primitive gestural system of communication (Corballis 1999), the precursor of Broca's area must have been crucially implicated in the meaningful recognition of manual actions performed by others. Since this recognition seems to require some type of corresponding internal action on the part of the subject, mirror neurons may provide a neural link between self-actions and observed actions by representing the observed action (e.g., talking) in terms of motor routines. These mirror neurons may thus turn out to effectively build the basis for higher-level cognitive skills, such as theory of mind and language, and may therefore become crucial in the attempt to 'naturalize' the human capacity for empathy, imitation, 'mind reading' (the sense of what someone else is thinking), and social connectedness. Given the data on imitation in newborns (e.g., Greenfield & Savage-Rumbaugh 1993; Want & Harris 2002), we are apparently born with such neurons.

The uniqueness of human language may well reside in the mere fact that it combines all of these features. But if all features taken individually (barring, maybe, the duality of patterning) could be developed by other species, why did only humans combine them into the complex and powerful communicative tool called 'language'?

A common explanatory attempt has been to point out the relationship between brain size and group size (e.g., Dunbar 1995): the larger the groups in which animals live, the more there is a need for organization, the maintenance of complex and/or multiple social relationships, and often a division of labor, too. To interpret all the relevant information, more brain power is needed, which, in turn, stimulates the development of more complex communication systems. This process of the mutual reinforcement of strictly distinct properties within the same species might be seen as a form of 'co-evolution' (though this term is usually reserved for the simultaneous evolution of linked properties in two different species, e.g., when an insect herbivore responds to the development in its plant host of a chemical defense mechanism by

developing mechanisms to detoxify and render harmless those defensive chemicals, such that the two species will eventually become more and more closely associated with each other). In conjunction with such observations the argument is often made that language developed primarily for bonding purposes, as an extension of primate grooming behavior. Evidence for this is sought in the prevalence of social talk in ordinary conversation (e.g., Dunbar 1997; Nelissen 2002). But if there is an adaptive advantage in developing a human-like brain and language, this still leaves the question as to why other species living in large groups, say wolves, elephants, or, for that matter, ants or penguins, did not do so. Some kinds of penguin, for instance, live in incredibly large colonies and have developed vocalization systems that allow them to recognize an individual in the crowd at a kilometer's distance. Yet they do not speak, and their brain size is not at all untypical for birds. What is more important, still, is that, over and above all of these signal properties which may or may not be shared with language, animal communication simply never relies on interaction in the true sense of the word. That is, though an audience may have to be present as a trigger, and though there may be typical responses (and thus adaptations) to what one has 'communicated', the expectation of such a response may not be needed for bees to start dancing. Bees will perform as soon as they feel the 'urge' to express themselves (on the type and location of a food source), i.e., as soon as the relevant stimuli are present (which may or may not include the presence of an audience). Humans, by contrast, typically do not need such direct, causal stimulation and may very well choose to vocalize without any immediate pretext, and in any case in a somewhat less predictable, more spontaneous fashion. Empirically, the need for interaction in the development of linguistic and communicative competence in humans has been convincingly demonstrated by Murray & Trevarthen (1985): in their experiment, the authors have young infants interact with their mothers via either live closed-circuit television, or via offline video images (replay). The lack of contingency and collaboration in the second condition suggests that infants behave quite differently, with a lack of commitment and occasionally showing distress, than in the live condition.

Yet the brain, as well as social complexity, have something to do with the process resulting in human language. In particular the twin phenomena of reflexivity and theory of mind are assumed to be human ways of handling social complexity and can be held responsible for the adaptive emergence of language. The concept of 'reflexiveness' or 'reflexivity' has played a prominent part in social psychology ever since Mead's *Mind, self, and society* (1934). It refers to the capacity of the mind to bend back upon itself, to be aware of its own experiences as residing in a self that is situated in a social context of interaction. That social context consists of other selves which, by a transformation of reflexiveness which is commonly called 'theory of mind', are perceived as minds comparable to the self. It is this step that is identified by Tomasello (1999) as the distinguishing trait that allowed *Homo sapiens* to engage in a rapid process

of cumulative cultural learning: the basic human *biological* adaptation compared to other primates is one for living *socially*. It is a moral step, because by recognizing the other as related to oneself, a subject is itself introduced into a community of 'persons', or rational agents, where other minds are supposed to be subject to rational interpretation and 'mind-reading' becomes a hermeneutic project, not a behaviorist one. At the same time, the dictum of rational communication provides the best warrant for the subject's own rational behavior, which is indeed, in a way, reflexively imposed from the outside, through one's own recognition of other rational beings. Theory of mind is also a specific manifestation of a more general propensity of the mind "to spread itself on external objects" (Baker 1991: 4), i.e., to project mental properties upon the world. The development of linguistic meaning, then, crucially hinges on a general Humean affect of 'curiosity', which is the love of truth (values), and indeed, it can only arise if we always already assume a regulation of the human economy of passions by moral, nonlinguistic principles like 'charity', which is a kind of trust in the utterer (Davidson 1984).

How does this help us understand language? First of all, it is reflexiveness that gives content to the formal, signal-like 'total feedback' feature of language (Hockett 1960). While total feedback is in principle a property of all communication systems using sound, in most cases it bears merely on sound alone. In the case of language, we might claim that feedback is turned into the qualitatively different phenomenon of reflexiveness, needed to explain the leap from causal reasoning (in a natural context, e.g., dealing with inanimate objects) to inference-based reasoning (in any nonnatural, symbolic setting). While speaking a speaker monitors the speaking itself. This monitoring may ultimately lead to the emergence of a 'metalinguistic awareness', or knowledge of the use of language, which plays an important role in the practical deployment of language as a process of adaptation (cf. Sections 3.1 & 3.2). The awareness, however, is of course *propositional* insofar as it symbolizes specific knowledge, and it is in this capacity that metalinguistic awareness still differs fundamentally from the procedural character of feedback, which is a mechanistic notion that does not require rational actors but operates automatically on flows of information. Moreover, because of most adults' fully developed theory of mind, this monitoring also takes place in view of hypotheses about what is happening in the interlocutor's mind. Projection, as a general property of (meaningful) behavior, is thus also operative in the formation of concrete interpretive presumptions in interaction, as when 'default', 'stereotypical', or otherwise nonmonotonic (cancelable) reasoning tends to enrich the underspecified contents of linguistic utterances (Levinson 2000).

Secondly, theory of mind seriously augments the possibilities of displacement. If people can make hypotheses about what goes on in other minds (and if the hypotheses can be verified in the course of interaction), the entire spectrum of experience-based mental contents becomes the potential substance of communicative interaction, whether or not the intentional objects are within range temporally or spatially.

This is how the transmission of knowledge from generation to generation as well as collaborative planning, and hence Tomasello's cumulative cultural leaning, are enabled. But again it is trust, and not so much the size of the neocortex, that allows us to bridge this gap between the proximally available means of verification and sanction of pre-linguistic times, and the often fictive (displaced) constructs that any full-fledged language may bring up. Even more importantly, the trust at work in even the most primitive form of symbolic interaction will constitute the beginning of 'conversational cooperation' (Grice 1975), one of the baselines of ordinary linguistic behavior. What both displacement and theory of mind have in common, then, is that they enable language to introduce fictive (subjective or virtual) entities that transcend the immediate perception of the here-and-now. Our capacity for symbolic representation thus allows us to associate things that might only rarely have a physical correlation; think of the word 'unicorn', for instance, or the idea of the future (Deacon 1997). Specifically, this also facilitates the cultural transmission of propositional knowledge, because *with* a theory of mind the possible effects of communication will no longer be restricted to 'action' but can include (new) 'belief states' as well, including ones that are not immediately useful in the conversational situation at hand. The notion of a belief, which is needed to substantiate any pragmatic theory of meaning that relies even partly on the recognition of speaker intentions, can thus be recast as just another neural (re)action to incoming information and only differs from, e.g., emotional/limbic responses of the organism (Damasio 2000) in its explicitly symbolic format, i.e., that of a proposition. The symbolic order of language implies that we have moved beyond the use of signs that entertain natural relations with their referents. Whereas an index still involves some kind of spatiotemporal contiguity and the use of an icon presupposes a relation of similarity, however abstractly that may be defined, the symbol depends on arbitrariness and, accordingly, on conventions.

Since there is no 'internal rule' that the language user may resort to in order to discover a symbol's referent (Wittgenstein 1953), the conventionality of symbols is essentially a matter that is decided at the level of the community. There are, accordingly, no private conventions (unless these are derivative, e.g., avoiding to walk on the cracks between pavement stones), and in this sense conventionality differs most definitely from the purely cognitive notion of 'entrenchment' (Clark 1996). Cognitivism, in the present context, is perfectly compatible with formal (neo-Gricean) pragmatics, in which the game-theoretic notion of an autonomous individual agent engaged in the coordination of purposeful behavior reduces the problem of rationality to an intellectual one. There is, however, no conventionality without (the recognition of) the other, too, and thus no symbol without theory of mind. A norm or convention can be regarded as an object of common knowledge, which is not just 'shared' but (minimally) 'known to be shared' within a given community. It requires reflexive knowledge and is thus not equivalent to a merely procedural conception of coordinated routines or 'regularities

of behavior', which are typically not subject to intersubjective negotiation but rather to the mechanical contingencies of stimulus-response patterns. Reflexive knowledge, in contrast, implies both self- and other-consciousness (or 'theory of mind') and cannot develop outside of general conditions of *social* experience (Vygotsky 1978). It is, in other words, motivated by use and its purpose is not necessarily to win the game. The operation of social norms, as the prerequisite for a noncognitivist understanding of how symbols (as opposed to mere signals) work, may best be seen in connection with Bourdieu's (1977) notion of 'habitus' as socialized subjectivity.

Now, D'Andrade (2002) recently pointed out that what is needed most of all for the purpose of cultural learning is the representational function of human language. In the predominantly here-and-now world of primates and other mammals, communication involves mainly directives and expressives. Mostly these instances of communication trigger some type of action in the audience, but without necessarily incorporating elements of representation. As soon as we enter the realm of the symbolic (and of beliefs), though, this distinction is invalidated by the fact that, in language, any type of speech act, directive or assertive, always also incorporates elements of representation (next to illocutionary force, as evidenced in Searle's [e.g., 1986: 219] notation of the structure of speech acts: F(p), with a force 'F' operating on a propositional/representational content 'p'). As a result, even if the intensive use of 'representatives' may distinguish human language from other communication systems, as assumed by D'Andrade, the distinction cannot be a final one. In the end, it is the capacity to represent symbolic knowledge, not just the capacity to represent, that clearly separates humans from animals. Arguably, the illusion of a sole representational, noncommunicative 'core' in language, which is somehow supposed to reflect its essential referential function, is understandable given humans' folk models of language, but it is nevertheless an analytically mistaken one, as aptly pointed out by Silverstein (1977: 149): "Reference, as Sapir noted, is the 'official' use of speech in our own (and probably many other) societies; its privileged position comes from a metapragmatic awareness of the speakers constituted by overt, learned, metapragmatic norms: we use speech in order to represent things 'out there.'"

If a large portion of everyday talk is simply verbal grooming ('phatic communion'), that may not be seen by linguists as the defining portion for an understanding of human language and its emergence. One could go as far as to say that there were good pragmatic reasons for emphasizing propositional content in the study of language, and that the more recent emphasis on nonpropositional aspects of meaning is simply a way of redressing the balance in equally (but not more) pragmatic terms. Still this does not make representation a sufficient condition for language, and the suggestion that this function may be separated from an 'action' component to language use is in fact a harmful one in the debate. All speech acts basically share the same communicative/representational structure, and rather than trying to find

out, each and every time, whether a given representational content can actually be verified (in terms of its truth), ordinary language users may simply be concerned with evaluating the status of relations (real or not; between objects, or between the speaker and objects, including other people) that *matter* to a speech community. That is to say that what a group of interlocutors may be most fundamentally concerned with, is the indication of whether or not a state of affairs can be considered a structural or a phenomenal fact, and this concern is a modal one in that it concentrates on the degree of predictability/necessity or relative arbitrariness with which a given relation is construed, not necessarily on its truth value. Chances of 'survival', certainly at the group level, are less directly linked to the individual's capacity to assess 'what is the case' and use this to 'deal with the environment' (in a purely utilitarian way), and more to that individual's capacity to conform to, and adopt, conventional judgments in these matters. And an individual's 'selective advantage' in using language may accordingly be situated at this consolidating level of social relations, rather than simply being a matter of staying alive. We suggest that it is this 'modal' function, as opposed to any strictly representational one, which is *always* present in language use and which may in fact constitute the prime motivation for the emergence of language in the first place.

As to the relationships between language, social organization, and brain structure, complex patterns of social organization (such as collaboration and division of labor) are probably easier to maintain when natural human language can be used in its representational function. But what, then, is the connection with brain structure, and in particular with long-term memory (which, by the way, need not adopt a specifically linguistic format to represent knowledge)?

> However it happened, once the representative function of language had been sufficiently developed, a new factor of cultural selection came into effect. With language to transmit knowledge to others, knowing a great many things became a real possibility. Without representative language, most knowledge dies with each individual. *Language makes possible an advantage in having brain structures large enough to store hundreds of thousands of items because it makes learning from other brains effective and efficient.* And in a cultural world, an individual who knows very large amounts of information has an advantage over an individual who does not. (D'Andrade 2002: 227; emphasis in original)

Thus, even though we found it useful to quote Wang on the distinction between biological and cultural evolution, part of the biological evolution of humans (and in particular the development of a large brain) may be the product of a form of cultural selection. The higher demands on language could not be met without a more developed brain, or without the intricate structure that we now describe as duality of patterning — or some equally potent device. Obviously these two prerequisites are not independent of each other.

Whether or not this account is accurate in all its details, there is little doubt that language developed as an adaptive phenomenon. In thinking about this issue we

should keep in mind that adaptation, as observed in biology, is not a unidirectional process. It is not teleological in the sense of being goal-initiated or goal-determined, since natural selection is an *a posteriori* process rewarding current success without setting up future goals (Mayr 1974). As there is no teleology in biology, but only strictly causal mechanisms, this type of adaptation could not be further removed from the intentionally motivated structure of adaptability observed in purposeful human behavior. Darwin himself noted this point when he discussed the 'metaphorical' structure of talk about natural selection:

> In the literal sense of the word, no doubt, natural selection is a false term; but who ever objected to chemists speaking of the elective affinities of the various elements? — and yet an acid cannot strictly be said to elect the base with which it in preference combines. It has been said that I speak of natural selection as an active power or Deity; but who objects to an author speaking of the attraction of gravity as ruling the movements of the planets? Every one knows what is meant and is implied by such metaphorical expressions; and they are almost necessary for brevity. (Darwin 1958: 88)

In addition, the ultimate function of adaptation usually transcends its initial effect, every form of adaptation creating new possibilities. In the biological literature, this is sometimes called 'exaptation' (Gould & Vrba 1982), and chances are that language in particular might have benefited from this rather typical evolutionary sequence, wherein a previous adaptation is used secondarily for a present advantage. Thus while division of labor as we know it would not have been possible without language, it was probably not the initial goal of the development of language, or of something that then led to language, even though the usefulness of a division of labor in larger groups may have favored the selection for adaptive steps that helped humans along in that direction. This is why Darwin (1958: 28) often used the term co-adaptation and repeatedly focused on the multidirectionality of adaptation processes. Consider, in this respect, Lewontin's (1978: 159) observation:

> There is a constant interplay of the organism and the environment, so that although natural selection may be adapting the organism to a particular set of environmental circumstances, the evolution of the organism itself changes those circumstances.

Similarly, Waddington (1959) and Bateson (1980) believe that causality in biology is circular rather than linear. One of the more interesting implications of this perspective is how 'ecological' thinking in psychology becomes relevant here, despite its origins in nonevolutionary observations about (visual) perception: if patterns of stimulation change when a perceiving organism is active (Gibson 1979), should we not conclude, then, that 'information' only becomes available with the act of moving, i.e., with change? And should this not prompt us to consider cognition (including, for humans, language) as producing neither a copy nor a construction of the world, but as "the process that keeps us active, changing creatures in touch with an eventful, changing world" (Reed 1996: 13)?

2.2   The adaptive functioning of language

Not only the development of language, but also its use must be thought of in terms of adaptability. The question then is: how does language, once developed, serve human needs? Does it specifically help individuals to personally survive in a (physically) dangerous environment, or does it promote the symbolic survival of the individual in a group setting? As in the discussion of the adaptive emergence of language, the answer must be looked for in the relationship between language and the substrate for language use, namely the human mind. A basic property of the mind is precisely its adaptiveness. That is why a recent psychology textbook (Nairne 1997) was entitled *Psychology: The adaptive mind*. The rationale for this choice is repeatedly explicated by the author:

> [...] we act and think for adaptive reasons. (xxv)
>
> The term adaptive mind refers to the fact that people use their brains in purposive ways, adjusting their actions, often in a flexible and strategic fashion, to meet the needs of new conditions as they arise. (5; emphasis in original)
>
> Humans interact with a world that is ever-changing, and they use the machinery of the adaptive mind to help solve the problems that they face. (154)

The importance of such observations, simple as they may be, cannot be overstated. What day-to-day adaptability is all about is coping with variable circumstances and solving problems, which in any case involves more than survival. In this process, language has an important role to play. Therefore, language itself must be an adaptable tool.

Let us briefly look at the principal ways in which language helps solve practical problems. They are essentially of three kinds: day-to-day problem-solving requires that people be able to deal with the outside world, with their own resources, and with each other — three task areas which people could not address in the way in which they now do without recourse to language.

Dealing with the world is not *per se* a banal enterprise, but it does not exactly require sophisticated forms of cognition, either. Even single-cell organisms that manage to classify the environment into 'meaningful' categories (e.g., food source vs. everything else) are really dealing with the world. This is, of course, not knowledge, let alone of a conceptual kind. Indeed, when faced with a continuum of ever-changing phenomena, language-based forms of conceptual classification and higher-order categorization make reality more than just barely manageable. They may even change or create it, in a nontrivial way. Without denying the existence of 'structure' in reality itself (flying animals are more likely to have feathers than fur), ordering the world in such a way that it can be handled symbolically is based primarily on mechanisms that reduce the endless variability and continuity. Those mechanisms involve, for instance, the formation of prototypes in contexts where they are cognitively or communicatively relevant, and the introduction of distinctions between the salient or the marked, and the less salient or the unmarked. The products of such processes are reflected in

language (e.g., in lexicon), which allows people to deal with the world in ways that are infinitely more complex than what any elementary orientation towards recognizing food, sexual partners, or danger may trigger. This is what defines the symbolic nature of language and its capacity for displacement (or fictive reference).

Making use of one's resources of properly classified and categorized knowledge of the world requires complicated processes of storage, retrieval, and planning. For successful storage in memory we need to create records of experience that link information to, and discriminate it from, other information types. For retrieval we need cues. For planning we must project pieces of knowledge unto anticipated patterns. Though rudimentary forms of these processes must take place in other animals as well, again the complex ways in which people perform such tasks cannot be imagined without the adaptive functioning of language as a symbolic system.

More obviously, people dealing with each other are highly dependent on language as a preferred means of communication. It is when thinking about how the adaptive functioning of language works in a communicative context that it becomes clear how indispensable the phylogenetic development of theory of mind was for human language to emerge. To start with, there is the simple fact that it is impossible to formulate all meaning explicitly. This means that interlocutors constantly have to make hypotheses about what it is the other means or what the other can be assumed to need to know. Such considerations, which can be thought of as instantiating the kind of 'projection' that typifies all human cognition, underlie the choice-making that forms the substance of language use. In line with their reliance on stereotypical or default (linguistic) expectations, there tends to be a systematic preoccupation in the use of language with marking propositions as either consolidating or departing from these expectations. Speakers choose linguistic forms, patterns, and strategies from the adaptively developed repertoire to 'handle' the world and others. Hearers use their mastery of the same tools to make interpretive choices. Mastery on both sides is so highly developed that much of the choice-making, due to its dependency on default expectations, is subject to near-complete automatic regulation. A significant portion remains, however, that is clearly subject to conscious reflexive awareness, and that can be accordingly 'exploited' to obtain a vast range of strategic effects. More often than not, processes are situated in between those extremes.

It is in a combination of all these factors that an answer must be found to the question of what, and how, language contributes to human life, at the level of the race, larger and smaller communities, individuals, and in day-to-day situations.

3.   Social-interactive adaptability and language use

The final paragraphs of the previous section have quite naturally introduced reference to language use, rather than to a linguistic system. As a result, there is a strong temptation to

keep talking in terms of adaptability when moving to the level of day-to-day situations. There cannot be any objection against this, as long as we realize that in doing so we are really jumping from a biological realm with its own causal processes to the domain of social interaction, involving individuals and groups as rational agents acting for specific reasons and using whatever tools language provides in the process.

3.1   An adaptability theory of pragmatics

In view of the above considerations, it is possible to propose an adaptability theory of pragmatics, starting from the observation of *choice-making* as the basic activity involved in using language, where the making of linguistic choices must be seen as a process involving all possible levels of linguistic structure, taking place with varying degrees of conscious awareness, in both the production and the interpretation of utterances. Verschueren (1999) proposes three key notions for such a theory.

First, *variability* is the property of language which defines the range of possibilities from which choices are to be made. This range is not stable but, as the product of adaptation in the more biological sense, constantly subject to change. Second, *negotiability* is the property of language responsible for the fact that, in spite of conventions and default options (as described, e.g., by Levinson 2000), choices are not made mechanically or according to strict rules or fixed form-function relationships, but rather on the basis of highly flexible principles and strategies that are both rational and reflexive. Third, language use as choice-making from such a variable range of options in such a negotiable manner would not be understandable without positing *adaptability*, as the property of language that makes all this possible in such a way as to meet — to a satisfactory degree — human communicative needs.

Introducing the notion of adaptability has the advantage of leading us to a relatively natural heuristic framework for pragmatic analysis. The core task is to study the *processes* involved, which have a specific status (called *salience*) in relation to the cognitive apparatus that does the processing, which take place in relation to certain *contextual correlates*, and which bear on *structural linguistic objects*.

On the other hand, a clear disadvantage might be that the few theoretical certainties that transpire from these interrelated key notions do not make the life of a pragmatician easier. As in any other type of analysis, we are confronted with the task of coming up with research conclusions that can be generalized. But it follows from the premises that the proper level of analysis is basically that of individual usage events — because of their extreme variability, negotiability, and adaptability. One could go as far as to say that everyone speaks a different 'language' on every different occasion. Troubling as this may seem, it is not so far removed from the observation that every individual's genetic makeup is different, a complexity in our physical being (though admittedly somewhat more stable) which pharmaceutical industries are orienting to in their new trend towards custom-made medicines.

The parallel with the situation confronted by the pharmaceutical industry is not entirely useless. While the genetic makeup is individualized, there is sufficient regularity governing individual constitutions to provide custom-made solutions with common scientific underpinnings. Similarly, though every instance of language use is unique, this does not mean that there is no common ground, or that there would not be any conventions of use and regularities. Social-interactive adaptability has its own principles which can be assumed to be widely shared precisely because they are rooted in the product of biological adaptability at the level of human cognition, rather than at that of individual languages.

One of the main challenges for pragmatics today must be to devise the necessary methodologies for discovering that common ground, those principles, and maybe even those (pragmatic) universals. Emphasis on difference, in particular intercultural difference, has sometimes blinded researchers for what even the most disparate communicative systems and styles, used in different settings, may share. In his analysis of conversational turn-taking in Caribbean English Creole, Sidnell (2001: 1266) recently addressed precisely this point:

> I argue that the organization of turn-taking in a Caribbean English Creole (Guyanese; [...]) is identical in all relevant respects to that described for American English conversation. It is further suggested that arguments to the contrary misconstrue the place of 'culture' in social interaction and, in their anthropological zeal to discover and describe cultural difference, have failed to recognize a level of species specific adaptation to the contingencies of human intercourse.

A crucial question here remains: what are 'all relevant respects'? Good theorizing and good methodology are no doubt required to answer it.

3.2   Applications of an adaptability perspective

An adaptability perspective has been adopted in divergent areas of the wider field of pragmatics. We will give just a few (relatively random, but quite diverse) examples.

First, Mey (1998) uses the notion in a discussion of human-computer interaction, where the question is said to arise of who is going to adapt to what. In this context Mey (1998: 5) introduces the following distinction:

> There's a need to distinguish between 'adaptivity' (humans adapting themselves to the computer) and 'adaptability' (the computer being adapted to human needs). It can be argued that adaptivity is being forced upon individuals, in one or several of various surreptitious ways.

Practical implications of this are discussed for the design of software interfaces. Mey's main claim is: "Adaptable computers are needed, not adaptive humans" (1998: 6). Thus the approach is more prescriptive than descriptive. More interesting questions arise when looking at how language itself is the adaptable phenomenon in a context of changing technologies. How, for instance, does a chat session differ from a conversation?

And what are the implications for the type of communication that takes place and for the way in which language resources are put to use?

A second application is to be found in the study of political rhetoric. Examples are given in Tetlock & Suedfeld's (1988) methodological paper on integrative complexity coding for verbal behavior. 'Integrative complexity' refers to the level of complexity that communicative behavior displays on a specific occasion. It is said that this can be measured for all verbal materials that go beyond a mere factual account by explicitly introducing causal relations or evaluative claims. The actual coding consists in assigning scores for degrees of conceptual differentiation and integration. Thus a conceptually undifferentiated response is one that could have been generated by a single, fixed rule. An indicator of this could be the high degree of certainty with which an utterance assigns a value to an event, or the absoluteness with which a solution to a problem is presented. A higher degree of conceptual differentiation would allow for legitimate alternatives or exceptions to the rule. At a still higher level there is not only the awareness but also an acknowledgment of different interpretations or perspectives. And finally there may be a full integration of alternatives that are accepted, carefully compared, and seen to be related. Tetlock & Suedfeld (1988: 50–51) discuss an earlier application of this method to archival material pertaining to the speech of revolutionary leaders, which

> [...] set out to test a hypothesis related to changes in complexity as an adaptive response to changes in the environment. The hypothesis was that revolutionary leaders had to view the world through a simplifying filter [...]. However, once the revolutionary movement was victorious, and its leaders themselves became the government, demands changed.

Indeed, looking at the speeches and writings of leaders from Oliver Cromwell to Fidel Castro, the degree of complexity was shown to rise, on average, from 1.67 (on a 7-point scale) before the victory to 3.65 afterwards, for very successful leaders. For the unsuccessful ones (those who did not survive their victory very long, either physically or politically), there was an average change from 2.37 before to 2.22 after. A further study of the rhetorical style of US presidential candidates confirmed "[...] that simple rhetoric helps to rally support for attacks on existing policies, whereas complex reasoning is often more useful in defending those policies" (Tetlock & Suedfeld 1988: 52). Or, adaptability at work, with clear implications for 'survival'.

Third, Bernicot (1992) applies an adaptability perspective to the study of language acquisition. She starts from the thesis that adaptation is the essential function of language. In other words, the reason for the very existence of language is the individual's adaptation to his or her physical and social environments. Then Bernicot shows how this point of view can enrich traditional psycholinguistic approaches to problems of acquisition, by asking how children learn to adjust to their interlocutors by means of language and by specifying different developmental steps in the process. Also in the realm of language acquisition there are numerous studies of adult-child interaction

that focus explicitly on an adult's adaptive simplification of his or her speech (so-called baby talk, with its relations to culture-specific patterns of interaction; see Schieffelin & Ochs 1983) as well as on changes in adult speech to children as the child's abilities develop (Ervin-Tripp 1978).

Fourth, one tradition in sociolinguistics (more precisely in the social psychology of language) commonly known as 'accommodation theory' centers around ideas of adaptation even when the term is not used (see, e.g., Giles, Coupland & Coupland 1991). It studies the contextual processes that induce language users to select socio-linguistic codes, styles, and strategies, exploring in detail what it means for speakers to 'be accommodative' in interpersonal and intergroup contexts. Strategies of stylistic convergence, divergence, and maintenance are shown to have the potential to both mark and change relationships, adding substance to the translation of the theory into an adaptive frame by pointing at the truly 'inter-adaptational' character of the processes involved.

Finally, an interesting application is to be found in the study of language disorders. An adaptation theory bearing on aphasia was first proposed by Kolk & Heeschen (1990). Its main claim holds that most agrammatics have a choice between the use of complete sentences (with all the problems that usually manifest themselves in their speech), or of systematically simplified expressions or 'telegraphic style'. Heeschen & Schegloff (1999) provide a detailed conversation analysis of two episodes of a conversation between an agrammatic patient and her best friend, one in which there is hardly any telegraphic style and one in which telegraphic expressions are central. A careful comparison of the two episodes shows clearly adaptive behavior. The patient has a choice, and recourse to telegraphic style in the interaction can be shown to serve the function of mobilizing the interlocutor to become more engaged and to provide more help. In particular, the type of help sought by the patient is the interlocutor's more robust formulation of what the aphasic person 'means to say'. This is less dependent on the patient's actual ability to say what he or she means to say, than on the specific type of conversational task he or she is involved in at the moment:

> There is a suggestion in the materials examined that story telling in conversation is a form of talk for which telegraphic production is of enhanced relevance. In part this is because story telling may be taken to require more sustained trajectories of talk by the teller, without benefit of interpolated turns by recipients. For an aphasic teller, it holds open the need for sustained talking without utterances by others on which the aphasic person's talk can be built, on which it may be scaffolded. It is precisely in that form of talk-in-interaction, in which recurrent transfer at each possible turn completion is put into potential abeyance, that aphasic speakers appear to adopt ways of talking that provide for their recipients to interpolate talk into their own. (Heeschen & Schegloff 1999: 401)

This is not to say that the speech of aphasic patients does not significantly differ from unimpaired speech, but it shows that the basic property of the adaptability of language keeps functioning in a specific way even under slightly 'deviant' circumstances.

These are just a few examples in which the concept of adaptation is handled more or less explicitly. The idea itself could probably be applied to most of the research carried out under the umbrella of a broadly conceived pragmatics. This is why an adaptability theory of pragmatics may ultimately make sense.

4.   Conclusion

What links Sections 2 and 3 of this contribution is the fact that biology and social interaction, distinct as they may be, are still not fully dichotomous, in the sense that social interaction is based on cognition and that human cognition is the product of biological processes. An adaptability theory of pragmatics cannot be fully formulated without reference to the medium of adaptation which is the human mind. With its biologically based capacity for reflexiveness, the human brain, as the seat of our minds, provides systematic metapragmatic guidance for all the choice-making that individuals are involved in when language is being used.

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Channel

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1. Digging underneath the speech/writing distinction

The first question we have to address is about the relationship between the notion *channels of communication* and the theoretical-linguistic concept of *medium*. Before answering this question, let me first draw attention to the different loads which these terms carry in social-scientific practice. The term *channel* mainly brings to the fore-front the technological, physical and material aspects of language use. In that respect, its meaning overlaps with one use of the term *medium*, as the usage of the latter seems mostly to hover between a number of possible meanings, ranging from the channels of communication over the institutions in which these channels are established to the discourse practices characteristic of the institutionalized media. Indeed, the term *media studies* covers the three meanings, although its referential scope appears to be largely restricted to the so-called *mass media* (radio, television and printed periodicals). There is also another tradition in the use of the term *medium*, one which one mostly comes across in linguistic research. In this tradition, medium refers almost exclusively to one aspect of situational variation in language use, crucially seen along the axes of a basic polarity between spoken and written language. It is the latter theoretical outlook which I will essentially take issue with here.

Let us now turn back to the question which I posed initially: why is this contribution organized around *channel* rather than *medium*? The basic position adopted here is that an approach which takes channel as its starting-point offers a more complex and more accurate window on some dimensions of situated language practices. This is mainly because a basic distinction between spoken/written is both too narrow and too crude for pragmatic research: it is too crude, because one runs the risk of over-looking the changing spatio-temporal manifestations of what can count as spoken or written language. It is too narrow because an understanding of discourse practices requires that one examines a wider range of phenomena that can be grasped under the mere headings of spoken and/or written language. Hence, I am not suggesting that one should isolate matters of physical/technological channel from matters of language use, but instead, that one should consider in detail how one may possibly benefit from an examination of the socio-historically changing dialectic between channels of communication on the one hand, and the nature of institutionalized forms of language use, on the other.

As I already indicated above, medium tends to be essentially conceived within linguistics in terms of a polar dichotomy between spoken and written language (which echoes the anthropological distinction between orality and literacy). Publications which strongly affirm this dichotomy include Halliday (1989) and Tannen (1982, 1984), and, for instance, Goody (1977) for the anthropological correlates.[1] Although the dichotomy between spoken and written language is seen in gradable and not necessarily in mutually exclusive terms, it is nevertheless fundamentally conceptualized as a basic division which is operative in language use: language use is either spoken or written (and correspondingly, societies either count as oral or literate, depending on whether they know writing). It is also assumed that the detailed inventory of the differences between speech and writing can be used as a basic tool for the description of variation in language use. So, linguists have also come up with complex sub-categories to accommodate 'mixed' occurrences as well as the effects of transfers as is reflected in a characterization of, say, a political speech as "language written |by a ghost-writer| to be spoken |by a politician|, so as to be written down again later on [when reported by the press]" (cf. Gregory & Carroll 1978: 47; Halliday 1978: 144). Yet, one can ask oneself whether any such binary cleavage of linguistic and socio-cultural practice into two 'camps' is justified, what its socio-scientific foundations are, and, most importantly, whether such a polarization is in any case sufficient to come to terms with the enormously diverse range of communicative uses which one comes across in practice. To explore this set of problems, let us look in detail at a number of cases.

1.1   Print and handwriting

To begin with, note that when linguists talk about spoken or written language, they prototypically refer to both aspects of language use and aspects of the physical channel through which language is conveyed. With this conflation of meanings in the background, one can turn to the well-documented historically pivotal period in which printing spread in Western Europe — a crucial stage in the establishment of codified written languages. This period essentially involved the transformation of one form of written language (hand-written manuscripts) into another form of written language (printed books). In order to get a handle on this pivotal transformation in the discourse practices of Western societies, which, as we all know, radically enlarged and transformed the potential for written genres, one is invited to make the most of the distinction between hand-written and printed documents and consider the larger socio-cultural impact of the technological innovation which occurred: in this case, the difference between (i) a handwritten manuscript with a local base of preservation and manual copying as the

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1.   Leutkemeyer et al. (1984) offer an annotated bibliography of research on spoken vs. written language.

sole means of reproduction, to be consumed on the premises (often also the location where it was produced) by a highly limited number of readers (who are members of particular social groups, such as monks, aristocrats), vs. (ii) a printed version of an initially handwritten text, which has been produced on a quantifiable basis and is consumed in diverse localities by larger audiences with a different social background. Note that in the course of this transition, hand-writing as a matrix of language production must have transformed itself considerably, as its role, in many instances, was pushed back to the stage of preparing a document before printing. Clearly, a mere concept of 'written language' in this case is a rather blunt instrument. The 13th century hand-written manuscripts, to our ears, have clear roots in oral traditions (especially when compared with the printed books to which we are so accustomed now). For instance, spelling inconsistencies in manuscripts are attributed to phonological variation, having to do with the regional origins of individual scribents or copiers. Yet, to interpret this as an indication of what was a more oral society can only be done retrospectively, as it presupposes the comparative notional perspective of a present-day society in which spelling is divorced from phonological variation within the language community. To the 13th century user, these manuscripts must have counted as written language and as radically different from spoken language. The rather obvious conclusion from this is that, in any case, what is classifiable as spoken or written language, in the sense of particular observable features of language use or institutionalized matrices of language production and consumption, changes over time (cf. Heath 1982).

1.2   Televization and secondary orality

Of course, one could counter now with an attempt at rescuing the usefulness of a key dichotomy between written and spoken language by insisting on a synchronic linguistic-descriptive perspective. In other words, linguists can perfectly legitimately work with a composite notion of, say, the written language, provided one stays within the boundaries of one area and one era. Yet, even in that case, I am compelled to conclude that this is not enough. Let us to this purpose turn to the twentieth century and examine the case of television broadcasting. In this context, Durant (1984) introduces the term *secondary orality* to denote the sociocultural stage in which spoken language can be mechanically recorded and preserved, reproduced and consumed more than once in a multiplicity of situations. I suggest that we concentrate on one of the most salient and prestigious manifestations of secondary orality, viz. spoken television news and compare it with a conversation which goes on at the same time in one of the living rooms where the news is being watched. When we examine the language use, we must, almost inevitably, conclude that the television news has more in common with written language than with the inpromptu talk in the living room: hesitations, pauses and non-fluency, false starts and instant reformulations are to be routinely avoided and

one can easily read off the commas, full stops and transparent syntactic structures from the individual newsreader's spoken delivery. As we all know, the delivery itself is based on a text which was written up beforehand. However, despite its orientation towards the norms of writing, television news, like the talk in the living room, will probably be classified under forms of spoken language (because of the physical fact that it is voice-produced). However, in terms of properties of language use, the two are by no means the same, and one of the obvious places to look for explanations for these differences is at the level of channel, where one can begin with stating the implications of the difference between: (i) casual speech carried by strength of voice only and destined for audiences within earshot vs. (ii) pre-scripted prestigious speech which is mechanically recorded for purposes of broadcasting and consumption elsewhere through electronic media. Yet, the fact that it is possible to analyse the comparative difference in terms of an orientation to the norms of writing in one of the two compared cases seems to suggest that, given a scalar conception, the speech/writing distinction continues to be very useful. While not denying this point, I would like to suggest that it is nevertheless insufficient.

Consider the following two elaborations on the impact of televization. First, note how the talk in someone's living room becomes different when the participants are watching a television programme as opposed to when the same party is having a meal (e.g., the amount of pausing which occurs between turns, the impositional load carried by an utterance when a co-viewer's attention is called for by the act of speaking, etc.). The fact that, in the first case, speakers talk while dividing their attention between those who are present and what reaches their eyes and ears via the television screen and loudspeakers, again inevitably compels one to look at the complexities of the channels of communication involved, in a way which escapes any conception of scalar points between speech and writing. Likewise (this is my second elaboration) it is necessary to approach the genre of a publically pronounced political speech at a party conference through a concept of channel beyond speech vs. writing, if one wants to assess the impact of the presence of television cameras at the congress hall. A subtle appreciation of the factor 'televized communication' is needed in this case if one wants to grasp the generic differences between, say, political oratory in the 19th and the late 20th century: both pre-scripted, both delivered orally, both overheard by press audiences; yet, only in the 20th century setting, to be recorded for the benefit of nation-wide, or even international, television audiences. In the latter case, one might even be tempted to argue that the television audiences have become the primary target audiences, while those who are present in the room where the speech was delivered have been assigned the additional role of enthusiastic supporters to be shown on the television screen.

Summing up: it is not only important to appreciate the subtle complexities of communication channels in particular instances, but to do so in view of the complete

range of discursive, situational, institutional and societal realities with which these are tied up. This includes questions about the distribution of complex communication channels over institutions and institutional domains, as well as questions about their relative prestige as reflected in their capacity to outweigh and complement each other in affecting certain properties of the discourse. For this sort of undertaking, one needs a type of discourse analysis, which is sufficiently attuned to generic differentiation in institutional contexts, while not ruling out the wider perspective of putting on the map a more global ordering of discourse practices. In a similar vein, Barton (1994: 90–91 and 187) advocates an approach which focuses on 'language events' as an alternative to 'literacy events', this way extending the complexity argument to the orality/literacy debate. Discussing the implications of replacing the idea of 'continua' separating spoken from written language with a concept of 'configurations of language use', he points out:

> The original investigations of differences between written and spoken language were based upon the idea that a literate culture shakes off the seeming inadequacies of oral culture and develops distinctly different ways of making meaning and of communicating. Consequently the role of spoken language and oral traditions in literate culture were played down. [...] [Yet], even in the most seemingly literate of environments, such as the law court, a schoolroom or a university office, most of the conventions of how to act and what to do are passed on orally. [...] [Spoken and written language] are not actually separable in real life, since spoken language is an important context for most literacy events. (Barton 1994: 90)

Reversing the argument, it equally holds that television news, although spoken, is fundamentally surrounded by traditional forms of literacy, which may not be transparantly visible to language users, but are nevertheless presupposed.

Thus, it is just as important to address the attendant questions of how forms of speech and writing in the course of historically changing conditions of channel have influenced each other, and how, as a result, these forms of speech and writing are caught up in socio-cognitive meta-linguistic frameworks. By the latter I mean especially forms of language awareness, but, by extension, also linguistic theories. This is certainly required if one is to explain that aspect of the history of television broadcasting in the 20th century which I drew attention to above: although the growth of televization has amounted to a fundamental re-claiming of a position of centrality of speech in society (as it now can be recorded, preserved and be used quite effectively for directly addressing large audiences — facilities previously reserved for printed documents), quite paradoxically, television turned out to be an extremely favorable vehicle for promoting the norms of written language in public speech (as is testified by the practices of television news and by the results of attitudinal research on the relatively high prestige of television practices as normative models of language use).

Add to this the following further observations: (a) that often one hears the judgement that speakers who happen to hesitate a lot, use a lot of false starts, etc. tend to be seen as not-so fluent speakers, or even 'bad speakers' altogether (even though, by the dictums of conversation analysis, they would be classified as producing some of the prototypical features of spoken language); (b) that a theoretical-linguistic concept like *non-fluency* casts speaker hesitancy in the negative terms of a departure from an ideal of fluent (grammatically correct and lexically precise) speech; (c) that, before the work of conversation analysts, linguists mostly studied written language, but took it to be the language as a whole; (d) that it was not possible to conceive of disciplines like conversation analysis, until the technological condition of audio and video-recording was available; (e) that there is certainly a connection to be found between the spread of social-scientific research into the nature of conversation and the current wide-spread strategic, not-so-spontaneous adoption of spontaneous speech forms on television and radio; and, finally, (f) that the recent move towards spontaneous orality and colloquiality in television broadcasting is matched by parallel developments in the production of certain types of printed documents. One can refer here to the use of 'conversational' models in institutional attempts at bridging the information gap with the general public (cf. the use of question/answer-formats in information leaflets). Adding up these observations, one begins to see the contours of a rather complex synchronic picture which calls for an appreciation of the complex socio-historic dynamic of changing forms and norms of language use which, in itself, cannot be understood unless one extends the scope of enquiry to matters of language awareness. Fortunately, the needed maximal differentiation at the level of appreciating the subtle conditions of channels of communication, which I have advocated so far, does not seem to go against the possibility of arriving at a more global landscape of discourse practices in a given socio-cultural context.

In fact, one can add even more observations to sharpen the researched picture further. Here I will restrict myself to just one which stresses the additional importance of the social scenarios which steer the distributional development of certain channel technologies in particular directions. Since 1976, the British parliamentary record, the *Hansard*, has been complemented first by permanent sound-recording and later by video-recording of the debates in two legislative chambers. This has been done especially for the purposes of news coverage, as the tapes are of no value to the House of Commons itself as a kind of official record. The Hansard, produced through what is an extremely expensive and labor-intensive operation involving transcribers, editors, publishers, etc., continues to remain the institution's only officially recognized form of record-keeping (despite the obvious greater accuracy of the sound/video recordings and despite the extra costs in maintaining simultaneous forms of record keeping). It is also the printed Hansard which continues to be MPs' and historians' sole sources of quotation. Clearly, the growth in audio and video recording technologies in the twentieth century has not equally affected all domains of language use. In this case,

the normative status of the printed word is surely one factor behind the reluctance to develop particular technologies of record keeping in a particular direction.[2]

2.   Beyond the verbal: The visual and the digital

In Section 1 I have shown why a basic distinction between spoken and written is too crude a distinction for pragmatic research. Let us now turn to the second part of my claim: that a basic spoken/written dichotomy is also too narrow. One additional problem which surrounds the spoken/written dichotomy is not so much concerned with the neglect of the channel-complexities underneath diverse manifestations of speech and writing, as with the realization that the dichotomy is too-one-sidedly focused on the verbal.

2.1   Multi-modality and the visual

Examining the presence of expert voices in mass media programmes, Fairclough (1995: 141) notes that, unlike in radio programmes, expert identities and expert-audience relationships are constructed visually as well as in language. Audience reactions shown on camera while an expert is talking construct the expert as an authority whose pronouncements the audience is prepared to accept. In addition, a significant part of the expert's performance is her/his non-verbal communication, as is testified by the continuous use of expressive hand movements and the use of the body in alternating address. But in a case like *The Oprah Winfrey* show, there is also the show host, who (unlike the radio programme host) is not seated and makes ample use of physical movement as an additional device for orchestrating the allocation of turns between panel, audience and experts (e.g., when literally taking the microphone to a member of the audience, or positioning herself in between panel and audience when introducing a topic). Note that the relative spatial positioning of speakers and audiences in this kind of genre is a calculated factor which media producers attend to when judging the suitability of the discourse as an instance of a televized genre. What is more, the discursive significance of the visual arrangements in the recording studio cannot be isolated from the selective montage of sequences of camera shots which make up the visual discourse which eventually reaches the television-watching audiences.[3]

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2.   Another factor has to do with legitimizing the proceedings. Unlike the video-recordings, the printed Hansard allows the institution to maintain a duality between what can be said on the floor and what enters the record for posterity. For a detailed discussion of this aspect, see Slembrouck (1992: 115ff.).

3.   Despite the rather obvious similarities in visual discourse between panel discussions on television and in, say, a lecture theatre of a university, one should not underestimate the impact of the

Therefore, with Kress[4] and Van Leeuwen (1993: 214ff.), I argue that linguistics should move towards a multi-modal approach, which transcends the narrow aspect of language and encompasses the visual. Such a claim may seem rather obvious, and, in practice, one finds indeed that most linguists tend to subscribe to it (if only tokenistically). Nevertheless, it is worth looking at some of the data which Kress adduces in support of his claim, as it brings home the same point for when one talks about written language.

One set of data concerns the early developments in children's hand-writing. Discussing a set of texts reflecting stages in the process of learning to write one's name, Kress not only draws attention to the close resemblance between the shape of early letters and drawings made by the child, but also to the successive stages in which the child organizes and re-organizes the linear sequence, while acquiring the convention of writing from left to right and while gradually transforming the shape of individual characters. The upshot of this example is that linguists have not taken the imagery aspects of hand-writing or printing quite seriously enough.[5] This becomes even clearer when one complements this case with a chronological sequence of semiotic manifestations (can I still call these simply texts?), which together reflect certain steps in the initiation into a form of literacy which, by Western standards, counts as very prestigious. The acquisition of hand-writing, as I suggested above, is partly a matter of learning a visual system which, notionally at least, manifests itself to the child as an increasing separation between the activities of drawing and writing. But, looking at what is on offer in terms of books, it is clear that the two modes of verbal and visual 'text' continue to co-exist, although their relationship shifts continually with the age of the child:[6]

age 1:   picture books: drawings or photographs but no verbal text.

age 2:   picture books: drawings or photographs with individual words, or a nursery rhyme (as in H. Oxenbury's work), or a minimal narrative text with an average of 1 line per page (e.g., R. Campbell's *Look, touch and feel with Buster*).

age 3–7:   picture books: drawings with a narrative of increasing complexity (e.g., B. Cole's *Prince Cinders*).

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channel factors. For instance, panel hosts in lecture theatres tend to be seated with the panel guests, because the division of the audience's attention between hosts and guests cannot be monitored through selected camera shots and close-ups.

4.   In a paper given at the annual conference of the Poetics and Linguistics Association, Granada, September 1995.

5.   Notable exceptions include Coulmas (1981).

6.   The age indications given here are approximations and, although plausible, they are to some extent, arbitrary.

age 7–12: children's novels: running texts, in relatively large-sized characters, with a varying number of illustrations, although not necessarily one per page (e.g., J. Needle's *Wagstaffe the Wind-up Boy*).

age 12+: adult novels, with the final destination of works of literature (e.g., J. Joyce's *Ulysses*), which can easily amount to 700 or more pages of running text in small print with no drawings, photographs or illustrations (except perhaps on the book cover).

The above chronological chain of semiotic manifestations is not only characterized by a gradually decreasing presence of visual images, but also by a growing shift in their function: from elements which are constitutive, central organizing elements in constructing a narrative[7] to illustrations of selected scenes in the verbal narrative until the point is reached where pictorial stimuli are completely absent. The fact that it is possible to paint such a history of socialization and, more importantly, that the varying (constitutive) relationships between the visual and verbal play a central role in this process is, in itself, a strong argument in favor of conceptualizing, call it medium or channel of communication, in terms which transcend the narrowly verbal and its associated core categories of spoken/written language. As a concluding example, think of text balloons in comic strips. Is this spoken language? Is this written language? Perhaps one can begin by considering comic strips as a culturally salient but distributionally limited channel of communication, which makes use of a particular type of visual composition, of which text balloons are one aspect. Note that the balloon itself functions as a locutionary indicator and the language inside it draws on a particular matrix which echoes certain features of actual spoken language for the purposes of simulating dialogue in writing. Comic strips also make use of icons to represent certain speech acts (for instance, to represent swearing: an exploding bomb or a human skull with a pair of crossed bones underneath it).

2.2   Digital hypertext

A discussion of channels of communication cannot be complete unless it also addresses the historical rupture which is accomplishing itself at the moment, viz. the advent of *hypertext* in the wake of the technological developments of *digitality* (one could also dub the latter *binarity*). The purely technological condition which makes digitality/binarity different from other channels of communication is the translation of recorded spoken language, keyboarded written text, electronically scanned handwriting, scanned drawings or computer-initiated or manipulated images into one and the same digital 'language' which can be used to store and transmit any of the listed semiotic manifestations in many cases

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7. For instance, a four-year-old, paging through, say, *Prince Cinders* may, rather than accept the storyline offered to her by the childrearer-reader, very well construct her own story around the visual images in the book, drawing on elements of her own life experience.

dealing with more than one of these manifestations at the same time. This situation we refer to as *multi-media* and one key aspect of its present appearance resides in its associated modes of monitoring, viz. *hypertext* (the latter stands for a mode of semiotic organization in which you can move from one to the next semiotic instance by clicking your mouse on a particular icon or a designated textual zone on the screen of a personal computer).

Although it has only recently become a buzz-word, there is nothing absolutely revolutionary or new about multi-media forms of communication. Your average report in a television news broadcast counts as multi-media, as it combines moving pictures with recorded sound, to which are further added: the voice-over of the correspondent, and, in many cases, also printed text at the bottom of the screen (for instance, identifying the correspondent or giving details of the locality/date of the filming). Think also of a subtitled situation comedy as a form of multi-media practice which cannot be understood unless you consider the constitutive requirements of complex forms of synchronization between the titles themselves, the talking heads and the dialogue which is heard. This synchronization includes the dove-tailing of what is heard and what is read. It is further constrained both by the number of characters which can go into the one or two lines reserved at the bottom of the screen and by the period of time which is needed for a person to read the line, taking further into account that the viewers must divide their attention between what they get to hear, see and read.

Why then has the term multi-media only recently become so pervasive? The best answer to this question is probably that with the technological resource of digitalization, multi-media communication can now avail itself of one common mode of storage and transmission, with the result that it has come within the scope of the individual user of a personal computer. In terms of assessing the relative spread over institutions and private individuals this counts as both wide and narrow, at the same time. Thus, binarity is not really a 'new' channel of communication, but it has meant the furthest-reaching complexity and integration in terms of existing channels so far: all other channels can be translated into digital format, giving rise to an enormous potential for manipulation and simulation. Hence, the question about the precise nature of binarity may in itself be less important (the answer is fairly straightforward: computing combinations of 1s and 0s). The answer to the question about the limits on translating and integrating other channels into binary format and vice versa has equally become very straightforward. As the limits on the translation process are gradually disappearing altogether, the remaining important issue is that of understanding the impact of binary integration vis-à-vis the integrated and manipulated media.[8]

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8. For instance, nowadays synchronization of subtitles and dialogue is computed digitally and, therefore, it is likely to be more precise than used to be the case, although the fundamental principles of production have not really changed.

Language and communication researchers should be interested in the 'new' types of multi-media, because their professional interest should not only go towards the new material vehicles of communication (e.g., CD-ROM, CD-WORM, CD-I, on-line communication and information-retrieval via electronic networks such as Internet or Bitnet, etc.) but also, more importantly, to the impact of these innovations on (existing or new) genres: think, for instance, of language corpora, encyclopaedias and dictionaries now available on CD-ROM, messages sent as electronic mail or voice mail, student guides now available as web pages with glossy computer graphics, etc. One reason for why generic transformations are very important sites of study is that they nearly always go together with transformations at the level of social relationships.

Is e-mail a new genre then? In most of the above cases, one must conclude the 'new' genres are actually transformations of already existing ones (without concluding that there is a stable uniform practice). In the case of dictionaries on CD-ROM, the transformational aspect is pretty obvious, but also an apparently novel genre like the electronic mail message has borrowed conventions from already established genres, in this case the memorandum. Consider for instance the visual lay-out of the messages and their organization around slots like 'From:', 'To:', 'Cc:', 'Fcc:', 'Attachments:', the practice of forwarding a message after reception, but also the stylistic expectations of informality which, for some users at least, accompany the use of e-mail.[9] At the same time, it is just as important to recognize the transformational aspects of these 'new' genres. For instance, unlike the conventional dictionary, digital dictionaries on CD-ROM allow one, say, to ask for a list of all the words which have a particular phrase or word in their definition, thus opening up certain possibilities for research into lexico-graphic practice which were ruled out in the case of conventional dictionaries (because of the sheer human effort they involved). Similarly, encyclopaedias on CD-ROM like *Encarta* are still largely made up of text and pictures, although sound fragments have now been added, and, as a result, the balance between illustrative material and authoritative exposition has changed in favor of a sense of 'experiencing' the topics discussed (in some cases, through reconstructions and simulations). The same point applies to electronic mail. Unlike the conventionally scribbled memo, the e-mail message is typed in with a keyboard, although it may carry similar expectations of impromptu production (as reflected in the relatively great tolerance towards typos). Unlike the memo, the e-mail message can cover a few thousand miles in a few minutes (a radical transformation at the level of who can be addressed in this way), while contributing to a degree

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9.   Note, however, that e-mail in itself comprises a number of genres, with different forms of ancestry. Compare, for instance, the personal message (like a memo) with the conference announcement which is mailed to a list of subscribers (in quite a number of respects, like a conventional conference circular).

of informalization of relationships (but not necessarily a de-hierarchization) within communities beyond the boundaries of a single institution or localized network. To the extent that the globalizing orientation begins to outweigh the local situation (and, in some situations, this does happen), the study of generic transformations becomes indeed a very important site for researching processes of contemporary social change, in this case, the accellerated[10] growth of forms of de-territorialization, spatial disloca-tion and partially de-centred information flows.

Hypertextual connections concern a mode of behavior which has been around for quite some time: the student of music who uses the bibliographical entry at the end of a textbook as a prompt to take a particular compact disc out of the library in another town, and who is later on prompted by the information in the CD booklet to begin reading a biography of the composer is actually making hypertextual links, which, functionally speaking, are nearly identical to the user of a personal computer, who, using his mouse, clicks a designated area in a web-page on his screen to access a sound fragment located at the server of a university abroad. But, again, it is equally important to stress the differences. Let me mention two here: (i) the enormous geographical distance which can be covered for accessing materials, without physically moving one-self, as the PC is used as a control centre for monitoring the links which are made, and (ii), perhaps more importantly, the far-reaching consequences of hypertext for the ways in which blocks of pictorial, verbal and sound information are put together and can be accessed. For instance, there is a growing importance of the screen as a 'natural' unit of information (including the amount of scrolling a user can realistically be expected to do when text producers decide on the size of actual information chunks). There is also the breakdown of a more pure form of linear sequentiality into what is often described as a multi-centred web of routes, which is perhaps the best metaphor avail-able at the moment for capturing the idea of a multitude of tree-shaped-information structures which lock into each other, with lots of 'by-passes' and 'fly-overs', and where many paths lead to one and the same node of information. Hypertext lends itself, for instance, to a kind of novel reading, in which, depending on character-related choices made by the reader, different plot-lines unfold themselves. However, most applica-tions which one comes across today do not exploit the possibilities to this extent, as there are limits to the degrees of entropy which societies can take (and innovations of this kind are nearly always situated in a field of tension between exploring the novelty for its own sake and doing 'old' things in a 'new' way). Actual hypertexts often very closely resemble more conventional kinds of information organization, e.g., in terms

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10.   With Murray (1995), I would like to stress that, although technologies of language production may accelerate certain forms of social change, the latter is far from always the exclusive effect of technological innovation.

of chapters, sections and sections-within-sections. This brings us to another important area of research: the study of the meta-practices in computer applications, including the continuous use of metaphors which echo non-computational realities (think here of terms like *memory, file, directory, mail folder, desk top*, etc.).

3.   Afterthought

Finally, it is important to turn to the impact of binary conditions of communication for data handling in linguistic research. It is an odd corollary that, despite the acute awareness of the importance of appreciating the spoken and visual dynamics of naturally occurring discourse, we have continued to see the making of a written transcription as the basic operation which must precede linguistic analysis. Quite a number of us have submitted PhD theses on televized discourse or courtroom interaction, but we have not tended to add the taped recordings as appendices to the printed volumes or watched some of the video tapes during our defenses. In short, linguists' experience of audio-visual data has in itself been mediated through a knowledge formation which is almost univocally geared towards prestigious written discourse (although we have made notable exceptions, when we took tape and video recorders into the conference room to talk about the data). Against this background, it is worth noting that digital forms of publication do allow one to integrate actual audio or audio-visual excerpts as data within the researcher's written article. Digital recordings also allows one to play, replay and juxtapose parts of a video-tape with an ease and precision which is almost completely absent from the conventional video-recorder (and which comes pretty close to the possibilities afforded by written transcriptions).

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Communication

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1. Language and communication

In the widest sense, the noun *communication* and the verb from which it is derived cover virtually any form of interaction between objects, as in *lines of communication* and *communicating vessels*, senses which directly reflect the Latin root *communis*, 'common' or 'shared'. However, the core area (which is the one that constitutes a coherent subject of interest) is the type of interaction which prototypically involves the transmission of messages between individuals acting consciously and intentionally for that end.

This narrower sense, which is also the oldest for the word in English, has tradition-ally been understood in terms of an even narrower, privileged form of communication, based on a common system of symbols, i.e., a language (cf., e.g., the definition in *Ency-clopedia Britannica Online*). The special status granted to communication by means of language is due to the special status of human language in the tradition because of its association with *logic* and propositional thinking; and that in turn must be understood in terms of that traditional bias in Western culture which accords automatic primacy to the subject of philosophically grounded *knowledge* of the world. In this context, the primary role of language is to represent the world accurately, and serious communication is understood to consist in the communication of such representations.

The existence of other forms of communication has always been recognized, of course, but it was not until this century that they ceased to be regarded as inherently inferior. The change came from a number of different sources. The central philosophical development is due to the late Wittgenstein according to whom *language 'games'*, types of interaction anchored in forms of life, are the ultimate, non-representational sources of meaning. When meaning is basically understood as 'use in interaction', communication can no longer be understood basically in terms of 'transport of *propositional informa-tion'*. The anthropological perspective on meaning, as pointed out by Malinowski (1923), highlights the same point, underlining the fundamental connection between under-standing language and understanding the shared action that it is used to channel.

In this broader perspective, understanding communication always involves two elements. Communication is a form of action, and as such its nature is to change the world rather than merely reflect it; understanding therefore means understanding what the other person is *doing*, first of all. But because it is communication (rather than food-seeking or mating) the change it seeks to bring about also involves a change

of information state: understanding therefore also involves understanding what the other person is *saying*.

The precise relationship between what is said and what is done may vary greatly, and historically it has not proved a simple matter to do justice to both sides simultaneously. One of the difficulties is that in terms of the 'event' perspective, what is said is part of what is done and is therefore subordinate to the overall action — whereas in terms of the traditional focus on propositional information, the 'thought content' is conceived as abstracted from accidental circumstances, which renders most of the event irrelevant. Going from one aspect to the other therefore typically involves not only a figure-ground reversal but also a conflict of conceptual frames — both of which are serious obstacles to integrating the two aspects into one whole picture. The whole discipline of pragmatics is in a sense construed on the basis of this geological faultline — as will be evident in several places below.

2.   Communication in an *evolutionary* perspective

When explicit, linguistic, propositional communication is no longer the yardstick on the basis of which everything else should be understood, but something rather special, the question arises of how to understand its specific position within the larger picture. One overall framework in which it has become natural to view human language as well as communication is that of evolutionary biology.

In describing the specific nature of communication within that wider picture, one basic problem is how to delimit communication satisfactorily from non-communicative interaction. The issue is made difficult by the conflicting ontological commitments that enter into the discussion. In talking about the *genetic 'code'*, a metaphor that may be taken more or less literally in the approach known as '*biosemiotics*' (cf. Hoffmeyer 1996; *Semiotica* Vol. 127: 1, 1999), one is licensing an assumption that biological processes down to the cellular level may involve emission and reception of signs. If that is assumed, it is difficult to distinguish between communicative and non-communicative forms of interaction between biological entities.

I shall assume, however, that there is a possible distinction between messages and other forms of impact, hence that communication is a privilege of beings with a form of mental life. This position faces the problem that there is no empirical way of telling exactly what animals or what types of interaction are covered by the definition. The time-honoured practice of imposing an anthropomorphic interpretation on the animal world is difficult to get rid of, since it is true even among human beings that ultimately the only way of understanding communicative activity is by 'identification', i.e., by using what comes into your own mind as a guide to what is going on in the minds of others (as regulated by what Freud called the 'reality check'). Thus, we cannot

help but see a caterpillar exposing a garishly coloured behind as trying to 'scare' the observer, etc.

Since we have no way of knowing if anything of the kind is actually going on, mainstream research recognizes a methodological principle of caution according to which scientists should assume no more complexity than warranted by the need to provide an adequate account of what goes on. The distinction, therefore, between what is truly communicative and what is interaction without a separable 'message', must remain vague from an empirical point of view, however essential it is in principle (cf. also Searle 1992). We have to make do with the definition, with its presupposed association between consciousness in some form and intentionality in some form, sidestepping the empirical issue in all problematic cases.

Communication thus conceived requires animals with mental powers sufficient to represent states of the world (however rudimentary those *representations* may be) to themselves. Only animals with such powers can act as recipients of messages, and until there are potential recipients around, acting as a sender does not make much sense. For such animals, we may distinguish between two ways of getting *information*: one involves only a relation between the individual and the external world; the other involves a relation with the external world that goes via input from another animal. The latter kind is what is of interest here: whenever another animal serves as a source of information in that particular way which is interestingly different from the way all other parts of the external world serve as sources of information, we have an instance of communication.

In an evolutionary perspective, the logical way to approach communication is by starting with simple, pre-communicative phenomena and then move towards more complex cases. Clear examples of pre-communicative behaviour are cases which give rise to inferences without being functionally associated with this signalling effect, such as deviation from normal behaviour caused by injury — which is treated as interesting information by predators, but means 'injured animal' in the same wholly natural sense that the smell of putrefaction means 'dead animal'.

Closer to communication we find behaviours which are functionally hooked up with the behaviour of other animals, such as mating behaviour or the co-ordinated behaviours of insect societies. Such behaviours can be understood as communicative if we attribute powers of *representation* to their recipients; but the methodological principle of caution means that in the absence of evidence to the contrary, we should treat them as simply triggers of certain forms of behaviour. Thus, an insect that is beginning to perform mating behaviour is presumably not communicating a message — it is simply starting to mate. The word 'communication' comes naturally when you try to describe co-ordinated behaviour that serves no other function than to trigger co-ordinated behaviour in others; but what is shared does not have to be a message — it may simply be behaviour as such. The function of the behaviour, in terms of survival

value, is in the overall benefit that a group of animals gains from entering in the kind of interaction that is made possible by the triggering behaviours.

Communication (according to the restrictive definition adopted above) only starts to occur when there is a twofold event involved such that 'brute' behaviour becomes clearly distinct from a message that is associated with that behaviour. This occurs in the case of 'display' in the sense of Allwood (1976: 74), where a sender manifests a certain behaviour with the intention of making this behaviour known. This is a plausible 'stage zero' of communication: there is both an act and a message, but the sender is 'saying' and 'doing' the same thing, as it were. As their owners will know, dogs are plausible candidates for this ability, as manifested when they want to be taken out for a walk.

A distinctive mark of display is that it does not depend on 'recognition of intention': the behaviour forms a vehicle for the message by virtue of its own natural properties. As opposed to this, I take a definition of full-fledged human communication to be captured by Grice's distinction between *natural* and *non-natural meaning* (cf. Grice 1957). Non-natural meaning, of which linguistic meaning is one variety, is found when the process of attributing meaning involves recognizing the (complex) intention of a sender: thus, in understanding a hand wave as a greeting, I attribute to the sender an intention that I should recognize the hand wave as a greeting — otherwise the 'greeting' interpretation is out. Natural meaning, in contrast, works without the mediation of an intentional sender: *those spots mean measles* and *the recent budget means that we shall have a hard year* (Grice's two illustration examples) attribute meaning to certain features of the external world by virtue of links with other features of the external world, without depending on the existence of the intentions of senders. 'Natural' meaning thus subsumes all the previous steps described above.

A description in terms of an ascending *evolutionary* scale is at risk of being understood to mean that previous steps are discarded along the way. As in evolution generally, this is a misunderstanding; actual communicative behaviour typically involves all the phenomena described above (more on that in the section on human communication below). The natural context of the evolution of communication is the existence of social groups whose survival may be enhanced by the kind of enrichment of the 'naturally' available information that is created by communication; and types of such enrichment are likely to have occurred in small instalments.

One of the types of signal that have been intensively studied is *alarm calls* of social animals. With these, one can set up a simple scenario for how non-natural meaning gradually may become superimposed upon natural meaning: an animal that hears a scream of pain from a conspecific will 'naturally' infer danger; a sound emitted in anticipation of pain will serve the same purpose; and whether the sound is caused purely by the perception of danger or it is a case of 'display', the sound serves to augment the sources of information available, thus protecting all members of the group. A step above simple display occurs when alarm calls go beyond expressing alarm in

general and become specialized for different sources of danger. The calls of the vervet monkeys, studied by Cheney and Seyfarth (cf., e.g., Cheney & Seyfarth 1980), provide the most well-known example of categorization superimposed upon the 'warning' element: snakes, eagles and leopards are signalled with different calls.

Another type of situation in which the shared environment may give rise to a cline from natural to non-natural meaning is the signals associated with harmonious group interaction — cf. the *grooming* situation made popular by Desmond Morris and more recently discussed in the context of the evolution of language by Robin Dunbar (1996).

3.   The mathematical theory of communication

The relation between the behaviour and the message is difficult to be precise about not only empirically, but also on the level of principle. Therefore it should be pointed out that from at least one important point of view, the distinction is irrelevant. The term 'theory of communication', apart from its generic sense, is also the name of what is essentially a mathematical discipline, cf. Shannon & Weaver (1949), dealing with properties of signalling processes regardless of message content.

When computers and artificial intelligence were in their breakthrough phase after the Second World War, the technical and mathematical properties of communicative processes became the focus of intense interest. The foundations of this theory had already been laid in telecommunications technology, because it is essential for constructing systems of telephony and telegraphy that the demands placed upon the communication systems can be quantified and tested against the properties of the technical equipment. In the context of the vast technical possibilities that were opening up, quantitative aspects of information and communicative capacity became central to the theory of communication, and investigations of statistical properties of signals and relations between bandwidth, time and signal power became the order of the day, giving rise to concepts such as binary digits ('bits').

This mathematical approach has a range of implications also from a pragmatic point of view. The constraints that communication as a physical process is faced with are pragmatically important, since optimization of communicative efficiency within such constraints plays a role also outside an engineering context — as illustrated by *Zipf's laws* (summed up in terms of the principle of least effort, cf. Zipf 1949). The parallel between the engineering and pragmatic perspective is also apparent in the role of feedback in stabilizing complex systems, the centrepiece in the concept of *cybernetics*, cf. Wiener (1948).

In the further discussion of mathematical modelling of human processes, however, communication did not remain the keyword of the discussion. With the cognitive

revolution around 1960, the focus changed from communication to cognition, and the question became, "to what extent can mathematical and computational processes emulate mental abilities?" At that point 'information' takes over as the central concept, rather than 'communication'.

Following up this discussion would take us beyond the scope of this article; but one major result of the discussion about the 'simulation' paradigm should be pointed out — since it applies to communication as well as to information. Pragmatically speaking, the mathematical properties of communication processes and information states are relevant as ways of capturing structural complexity in communication and cognition — but one should be careful not to generalize from structure to ontology. This holds for the same reasons that are emphasized in Searle's critique of 'strong AI' in terms of the 'Chinese room' (cf. Searle 1980, 1992): combinatorial complexity does not automatically translate into understanding. And in a pragmatic context, communication as conceived without involving understanding is not of focal interest.

4. Human communication

Non-natural meaning as defined by Grice depends on what is known as 'theory of mind', i.e., the ability to attribute communicative intentions to the sender and take this into account in understanding the message. To what extent non-human animals possess this ability is controversial (cf., e.g., Tomasello & Call 1997). Conceivably, all non-human communication is mediated by natural meaning, working by virtue of adaptations to naturally occurring features of the world, and only human communication is mediated by specific assumptions about the sender as a fellow communicator.

This once again gives human communication a special place, but in a rather different manner than the traditional distinction based on logical and propositional information. The special human properties, according to this approach, are in the kind of intersubjectivity that marks human communicative interaction, in which the mutual attribution of intention and understanding is crucial; and linguistic communication is not the only kind that has those properties.

One communicative but non-linguistic system of human communication is gesture, which has been the subject of increasing interest in recent years. A generally disparaging attitude to gestural signalling has been replaced by a growing recognition that gesture involves most of the high-level features that we associate with language, including not only non-natural meaning (gestures differ across cultures) but also abstractness and metaphoricity. Gesture, moreover, is an integrated feature of that characteristically human communicative behaviour that also includes language (cf., e.g., McNeill 1990); and spoken languages may be seen as an evolutionary extension of gestural communication (cf. Armstrong, Stokoe & Wilcox 1995).

In contrast, *display* (although serving communicative functions) does not constitute a system, because it draws directly on natural meaning. Like gesture, however, it is integrated in all face-to-face communication: unless your behaviour 'backs up' what you are saying, the message will not do its work. Whether it is recognized as intentional or not, display is a form of 'showing', and thus more directly associated with the state of the world that it communicates than linguistic communication. The tangled relations that may arise between shared environment, display and verbal communication can be illustrated by the notion of *'double-bind'*, in this case by showing the damaging consequences of discrepancies. Gregory Bateson (cf. Bateson et al. 1956, reprinted in Bateson 1972), investigating schizophrenia, described situations in which parents put their children in an impossible situation by (non-linguistically) displaying hostile withdrawal while expressing loving concern by linguistic means (cf. also below).

Because display involves 'showing', it operates under an assumption of veridicality; one would think that you can only show something that is actually there. However, again the borderlines may become blurred; display of emotion may involve a greater or lesser degree of stage-management for communicative purposes (in the extreme case involving pure deception). So in communicative situations, the total change-of-information-state of an individual will be a compound in which naturally available facts, displayed facts, stage-managed display, gesture and linguistic coding all serve as densely interwoven input to the ultimate net product constructed by the addressee.

It is sometimes claimed that you cannot help communicating, whatever you do (cf., e.g., Watzlawick et al. 1968: 48); keeping silent will also be a kind of message, as it were. However, this way of viewing it blurs the distinction between *saying* and *doing*. The valid point made by this maxim is better expressed in a different way, one that involves two separate mechanisms. First of all, communication is always only part of the input to the addressee; you cannot control the end product by manipulating your communicative contributions alone, since the receiver will be drawing inferences from everything that is going on. Secondly, there are indeed cases where *silence* may be a form of communication (cf. also Tannen & Saville-Troike 1985); but such informative silences are different in principle from cases where the 'addressee' makes inferences entirely on his own responsibility, as in Sherlock Holmes's case of the dog that did not bark during the night.

When it comes to the precise nature of human language, there has been a long and many-stranded discussion about the precise role of communicative purposes in relation to human language, involving what Strawson (1969) called a 'homeric' battle between those who see human language as based on communication and those who see communication as secondary, while the purely information-coding properties of human language are basic. This is the view according to which *propositional* structure and compositionality is essentially associated with powers of *logical thinking* rather than with the coding of these thoughts for communicative purposes. The idea goes

back to classical antiquity, where 'inner speech' was seen as the foundation for 'external' speech: if language is already involved in the inner, *mental representation*, then communication only involves a form of 'translation'. This classical idea was revived by Fodor (1975).

For most pragmatically oriented linguists, this distinction barely makes sense: language exists and is maintained in communicative interaction, and claiming that it is in some sense basically about *information* rather than interaction is somewhat contrived. Instead of seeing the information-coding powers of human language as existing prior to and outside of the realm of communicative interaction, one can see them as derivable from the capability of language to create a shared information state. Linguistic meaning should be understood in functional terms, as what is communicable by using a certain expression, not as some meaning that exists before communication enters the picture at all (cf. Harder 1996: 125).

The dependence of communication upon something to communicate is already captured by saying that language presupposes mental life: powers of understanding must come before the power of speech. In the learning perspective, the social-interactive roots of language are also essential; as argued by Tomasello, Kruger & Ratner (1993), one of the crucial factors in the path towards language is acquiring the form of social awareness that involves shared attention and perspective-taking. The existence of external languages, therefore, does not entail the existence of an 'inner language'; rather, it requires a foundation of sophisticated interactive as well as cognitive skills.

If this position is adopted, it has implications for theories of meaning that make a point of including a pragmatic dimension, but which take their point of departure in *information* rather than interaction — which is natural in a formal and computational perspective, which operates with a generalized concept of information that abstracts from differences between information as present in the machine, in the external world, and as conveyed by an intentional subject. Two theories which reflect this perspective are *situation semantics* (cf. Barwise & Perry 1983) and *relevance theory* (Sperber & Wilson 1995). Situation semantics gets its name by analysing information content in sentences as well as in sentence contexts in terms of information-carrying 'situations'. Relevance theory operates with a concept of 'cognitive environment' which involves information both inside and outside the mind; and pragmatic processes of understanding are supposed to be driven by optimization in terms of an informational cost-benefit calculus.

A generalized notion of information is useful for many purposes, crucially in contexts where different sources of information (communicative and non-communicative, mental and non-mental) are being compared. But exactly because of this generalization, a pragmatic theory based on such a concept of information cannot be precise about meaning in communication. As argued above, communicated information as part of the human world is part of a project carried out by intentional agents in an

intersubjective context; it gets its special role by being intentionally added to information that is naturally available. Thus, understanding the role of contextual information in relation to communication is only possible if there is a clear distinction between communicators and other parts of the environment.

More generally, an emphasis on the interconnectedness of interaction and information in communication is necessary, not in order to downplay information (contextually available or coded), but to be precise about its status. When information and communication are pitted against each other, what is involved is generally a conflict of interest between 'content' and 'social interaction', cf. the faultline between *saying* and *doing*. It is more profitable, however, to see both content and interaction as integrated aspects of a communicative relationship. Communication, as discussed, arises as a property of communities; and the status of the informative content of messages will reflect the status of the relevant information in the life of the community (cf. also Sinha 1988). If information is emphasized at the expense of interaction, the risk is that it will create a picture of communication in which the business of life is construed as information-processing.

5.   The study of language as communication

The study of language has been traditionally understood as either a philosophical or a linguistic domain, and hence focused on interest in '*knowledge*' or 'structure' rather than on communication. When philosophical interest in language began to home in on communicative interaction as the locus of meaning, from the different perspectives of Wittgenstein (1953) and Austin (1962), this changed the approach to traditional philosophical issues, but it did not really bring 'live' communication into the focus of philosophical investigation — naturally enough, since it is not the obvious province of philosophers to undertake empirical investigation of interactive patterns. The notions of '*speech act*' and '*language game*' were important in throwing new light on the philosophical core domains of knowledge and understanding, but could not be fleshed out into a full description of language as communication in purely philosophical terms.

For analogous reasons modern linguistics, when it took up the issue of communicative action a decade or two after philosophy did, could not provide a natural home for the study of communication. Perhaps paradoxically, linguistics confronted the issue of communication to some extent as a result of the generative revolution. The emphasis in early *generative grammar* on setting up underlying structures to separate grammatical from ungrammatical sentences more or less unwittingly brought into focus all the other reasons why linguistic utterances could be deviant.

Earlier grammatical traditions had had closer relations with social perspectives. European, Saussurean linguistics saw linguistics as part of a wider discipline

of semiology, dealing with social processes of transmission and reception of signs, and generally took texts rather than sentences as its object of description. Both European and American structuralism also had anthropological as well as linguistic dimensions: in 1964 Hymes could publish *Language in culture and society*, bringing the anthropological and the linguistic perspectives together as a forum for 'the ethnography of communication', investigating patterns of language use in a culture.

The radical *Chomskyan* separation between language and communication made the confrontation necessary in a way that it had not been before. Attempts to assert the communicative perspective in the context of a dynamic generative linguistics tended to be seen as, and also to some extent see themselves as, belonging in the periphery of a domain whose core was constituted by language structure. Hymes' advocacy of the notion of *communicative competence* (1972) presented it as something superimposed upon the Chomskyan notion of competence, not as an alternative or a critique. Sinclair & Coulthard's (1975) analysis of classroom interaction could be understood to some extent as a form of linguistics dealing with larger, interactive structures that could be added on top of the sentence structures that constituted the province of grammar. However, attempts to expand linguistics to accommodate communication met with two opposite but related problems: on the one hand, grammar got over-extended, and on the other, linguistic structures were too narrow to capture communicative phenomena adequately.

Over the past generation there has been a movement towards a revised picture, in which the study of communicative interaction is the overall frame, within which the study of linguistic elements is one approach among several. Implicit in this approach are reservations about systems and structures that are not observable from this point of view. Of the various sources of inspiration in the study of language as communication, the most central in terms of the actual practice of analysing communication is probably the one known as 'conversation analysis', which grew out of the 'ethnomethodology' school of small-group sociology.

The small-group sociological perspective can be seen as a counterposition not only to structural linguistics, but also to traditional macro-sociological perspectives — where explanation is sought in mechanisms that operate in social wholes, looking for, e.g., causes of suicide (to take Durkheim's classic example) in aggregate factors invisible to the individual. In contrast to this perspective, ethnomethodology concentrates on showing how the fabric of social life is continually created and re-created by people entering into everyday interaction (cf. Garfinkel 1972). Since everyday linguistic interaction is the phenomenon in which this process is most visible, investigation of the dynamics of this form of interaction is a logical development. The anatomy of everyday conversation is analysed in terms of concepts like turn-taking, adjacency pairs, preference organization, etc., and brought out through a rigorous procedure for describing talk as embedded in its actual interactive context including other forms of communicative behaviour such as gaze, *gesture*, paralanguage, etc. (cf. Sacks, Schegloff & Jefferson 1974).

The hallmark of conversation analysis, and the central point of influence, is its focus upon the study of ongoing activity in naturally occurring interaction, as opposed to the decontextualized study of different more or less pre-defined frames within which interaction occurs. The existence of such frames is of course not denied, but emphasis is placed upon describing how they are used, modified and recreated in the course of ongoing interaction; in this, the approach has been able to throw new light not only on 'private' conversation, but also on talk in institutional settings (cf. Drew & Heritage 1992). A further development of this point of view is found in the extent to which the context itself, rather than being given, is defined and negotiated as part of the ongoing interactive process (cf. Duranti & Goodwin 1992).

Because the traditional default assumption is that the essential task of words is to code *propositional meaning*, linguistic elements that involve context-related tasks have played a major role in discussions of language as communication, from Austin's performative verbs onwards. The role of linguistic elements in signalling contextual, communicative status has naturally been central in the argument for showing that the pragmatic perspective is inherent in language, rather than a purely external role for it. Among the authors who have demonstrated the essential role of signals of this kind are such diverse figures as Bateson (1972), Blakemore (1987), Gumperz (1992) and Silverstein (1985).

However, the argument for demonstrating the importance of coding the role of the utterance in context ('*contextualization cues*', to use Gumperz' term), has generally presupposed propositional types of meaning as its point of departure. From this point of view, therefore, linguistic elements that help to contextualize propositional meaning are 'meta' phenomena in relation to 'normal' linguistic meaning, analogous to explicitly metalinguistic statements like "The following sentence is true". Bateson, for instance, bases his interpretation of schizophrenia on this analysis, using Russell's theory of logical types to diagnose the problem as having a crucial formal dimension.

Although the 'meta' analysis is not crucial to the understanding of contextualization, it is worth going into because of the light it throws on the problem of getting an integrated picture of '*saying*' *and* '*doing*' in analysing communication. The 'meta' analysis is problematic in that some of the signals that have this second-order status are not metalinguistic in the sense that they presuppose (and are derivative of) language and categorize words rather than things, cf. Bateson (1972: 174):

> Even among the lower mammals there appears to be an exchange of signals which identify certain meaningful behaviour as 'play' etc. These signals are evidently of higher Logical Type than the messages they classify. Among human beings this framing and labelling of messages and meaningful actions reaches considerable complexity, with the peculiarity that our vocabulary for such discrimination is still very poorly developed, and we rely preponderantly upon non-verbal media of posture, gesture, facial expression, intonation, and the context for the communication of these highly abstract, but vitally important labels.

The peculiarity that Bateson pinpoints can be understood as indicative of a problem in the 'meta' analysis of such signals. Put briefly, the signals in question can also be analysed as types of action; they contextualize the message simply by virtue of the fact that they constitute the context for it (cf. Bateson above, listing 'the context' as a way of providing 'labels' for messages). Instead of being 'type two' phenomena, they can therefore be understood as 'type zero' in Bateson's framework. If, for instance, you 'bristle' at a remark, this is not a highly abstract metalinguistic signal of how you classify the previous speech act — it is a way of reacting to the previous speech act. If, additionally, it is a way of communicating your reaction, it is a form of 'display', cf. above.

Rather than being simply wrong, however, the 'meta' analysis is one half of the issue: sometimes clarifications of what is being done take the form of signals that are indeed about utterances ('this is an order!'). The interface problem between *saying and doing* is revealed in the fact that verbal categorizations may have the same role in managing interaction as nonverbal acts, in which case they are equivalent from the 'doing' perspective, while remaining distinct from the 'saying' perspective.

This can be brought to bear on the analysis of miscommunication, as in Gumperz (1992). For instance, difficulties in intercultural understanding (cf. also the separate section on intercultural communication) may be due to trouble on both levels. The most basic problem is then the mismatch in terms of context rather than language: the interlocutors do not situate their actions in relation to the same presupposed discourse world, including what counts as situational '*shared knowledge*'. But as they struggle along, this basic difficulty is compounded by the way they go wrong about the linguistically expressed '*contextualization cues*' that are designed to put the communication on the right track. (On top of this, of course, there may be purely linguistic difficulties, i.e., problems in de- or encoding the linguistic expressions themselves).

Thus, in addition to the duality between '*saying*' and '*doing*', another duality emerges: the one that involves the role of interpretations that are part of the pre-defined context vis-a-vis interpretations that are part of the interactive process itself. The development that started with the ethnomethodologists has focused on the second type of phenomenon. In revolting against a descriptive strategy focused on frozen structures (whether linguistic or social), the pioneers of communication analysis have rightly stressed the role of communicators in actively constructing the world of discourse as they go along (rather than passively perpetuating social conventions and transmitting pre-coded meanings). In doing so, they have brought out a wealth of facts about the dynamics of communication, showing the extent to which different parameters are negotiable in the course of communicative interaction. This is true even of the code itself, as evinced by the phenomenon of '*accommodation*', cf. Giles (1973), Giles & Coupland (1991); in the course of linguistic interaction, communicators adjust the way they speak to the other person in ways that contradict predictions based on the integrity of a language system as well as macro-social parameters of linguistic variation. But the first type of phenomenon, the role of

pre-defined interpretations, has not been struck off the agenda by the success achieved in focusing on the second.

6.   Communication and *background*

In returning to the role of things that are determined in advance of an actual communicative exchange, a natural point of departure is to ask about the potential dangers of a too exclusive focus on what the participants can construct on their own in the course of interaction. In a review of Cook-Gumperz, William A. Corsaro & Jürgen Streeck (1986), the author points to a risk in their approach of a totally 'voluntaristic-individualistic' interpretation, according to which the subjects are essentially free to make of a communicative encounter whatever they like (Nercissians 1989).

To the extent we approach that extreme, we lose sight again of the dynamic interplay between context and communication that was put on the agenda when interactive *parole* was brought to bear on the timeless categories of *langue*, logic and social structure. The study of language as communication has rightly outgrown its earlier position at the periphery of a presupposed 'core' of institutionalized, frozen structures; but a rounded perspective of communicative activity requires an awareness also of the relationship between empirical analysis of online activity and the way communication is framed by factors that remain in the invisible position of implicit and presupposed 'background'.

At least two different types of phenomena need to be mentioned. The first type is the actual force of social determination, viewed not as a questionable dogma of scientific description but as a fact about social life. The way in which historical and supra-individual forces shape the way we act and speak has been emphasized among others by exponents of what has been called the anti-humanist trend in French thought, most influentially perhaps Bourdieu and Foucault. Bourdieu's central concept of *habitus* profiles the process of transmission whereby collective cultural practices are inscribed in the embodied practice of members of the culture, without any active, conscious reinterpretation on the part of the individual.

To recognize the existence of such a process does not require acceptance of determinism on the overall level: the point is that the intentional actions of the individual unfold against a non-intentional background that may recede in places but can never be removed (Searle sees his own concept of 'Background' as covering the same ground as *habitus*, cf. Searle 1995: 132). Bourdieu's theory is centrally based on non-verbal, material practices, such as those involved in traditional farming (cf. Bourdieu 1972); but it is a point of his analysis that verbal practices, also those of intellectuals, differ less than intellectuals would like to think from the practice of Kabylian agriculture, cf. Bourdieu (1994).

Foucault argues the same kind of point in relation to *knowledge* — most people's prototype of a conscious, verbally explicit domain. What counts as knowledge in a

given cultural situation depends on implicit processes of boundary-marking, high-lighting and prohibition that exercise an essential influence on the processes of under-standing which take place in that culture (cf., e.g., Foucault 1966: 171). To say, in a 'humanist' vein, that we can counteract those processes of determination, is not to say that we can understand communication uniformly as a process of creative on-line (re)construction of everything that matters in the actual context. Therefore, precisely if you are trying to understand the processes of active construction, you need to see them as a figure profiled against a *background* which you also need to understand.

The second phenomenon that may serve as a corrective to too exclusive focusing on online activity is the role of forms of systematicity that are 'actively' presupposed in communicative activity, functioning as resources that can be drawn upon. It is a design feature of human language that it depends more than other known forms of commu-nication on *decontextualized* forms of knowledge and skill. The description of actual communicative events in real time cannot be understood without understanding the presupposed properties of both the code that is used and of the interactive pattern that the code is used to bring into play.

Beginning with the code, one major set of presuppositions involves 'categories', conceptual as well as phonological. Perception and understanding of human language must operate with a pre-defined generic order imposed on the universe in which human communication operates, in order for linguistic communication to be possible. The shared generic order is modified as we go along; what is presupposed is a starting point — but from the point of view of any individual interactive encounter, there are certain limits to how much the categories can be redefined. Conversely, the full store of generic categories would not in turn be conceivable without a communicative practice to sustain it: the relationship goes both ways.

The presupposed patterns of social interaction, from soccer football to parliamentary elections, are analogous to those of the code in constituting resources that increase the action potential of the human subjects that master them. They also increase the 'identity potential' of members of social groups. Shared social processes assign cultural values to activities and roles; and although these values are not automatically the prop-erty of the actual people who perform them, the actual people 'inherit' the values to some extent. Much of the significance of what is said in a given cultural context, there-fore, is defined by the values associated with the practices within which utterances are embedded. Although the participants can renegotiate some of that significance — and Habermas (cf. Habermas 1971) has even argued that it is the special privilege of communication to create scope for challenging all pre-defined assumptions — the relationship between communicating individuals and pre-existing systems cannot be fully understood from the point of view of an individual encounter alone.

Accumulated, institutionalized practices, including language as well as patterns of collective culture, thus serve an enabling as well as a constraining function. Specifically with respect to language, the mutually bootstrapping relationship between language and

cognition means that human language gets a considerable increase in communicative power because it can access a cognitive universe that is not limited to the immediate context. This in turn means that the concept of what constitutes 'the situation' is in itself made much more complex: although communication remains constituted by events that happen in a local situation, at a concrete time and place, the *decontextualized* resources that are associated with human language and institutionalized practice generally mean that the situation of the participants includes a vastly greater world of context-transcending constructs and relationships.

Apart from their role as background, historically accumulated institutionalized patterns have also created new forms of communication. Although it is rightly maintained that *face-to-face interaction* remains the primary and foundational use of language, this form of communication has been supplemented with a growing number of '*language games*' that are increasingly remote from the archetypal '*grooming*' scene.

The invention of writing and the technology that supports the exchange and proliferation of written messages created a radical change in the nature of linguistic communication. One of the effects of this invention is that utterances may persist beyond the primary context of use, thus becoming '*reified*' to an extent that is impossible with primary oral communication. The notion of 'text' presupposes the possibility of disentangling the linguistic material from the situation-of-use, so that 'the same' text can be looked at by different people and in different contexts. In a community that uses writing, not only *langue*, but also *parole* can be detached from on-line events. Tracing discussion of the problem back to Malinowski (1935), Haberland (1999) shows how this process of reification creates problems for the basic vocabulary of pragmatics; because pragmatic terms such as *text* and *discourse* are often understood negatively in relation to the narrow structural universe of the sentence, the complexities that are due to larger social processes of abstraction and decontextualization are at risk of being overlooked. The perceived detachability of '*what is said*' from '*what is done*' increases radically as a result of these processes.

Among the cultural consequences of this change, a major one from the point of view of communication is the *reification* of a body of written material that comes to be seen as the shared property of members of a culture. The distinction between history and pre-history reflects the monumental nature of this change in the way human communities understand themselves before and after this change. The element of permanence and impersonality is an important part of the reversal of priorities that accorded the norms and practices of *written language* higher prestige than those of spoken interaction, and which saw actual communication as secondary and inferior to the impersonal information content of texts.

However, the realization of the ultimately pragmatic nature of all human knowledge has reversed priorities again. Scientific and philosophical writings, once aloof from the welter of human interaction, can now be seen as forms of communication in

which the maintenance of a supra-individual collective *knowledge* community takes precedence over the link to contextual relevance in the here-and-now. We can profit from both Foucault and *conversation analysis* in understanding the pragmatic nature of this process — and also by *evolutionary* biology: the gradual development of scientific conceptualization, as described by Hull (1988), operates according to mechanisms of selection known from the history of evolution, and actual scientific 'utterances' are the communicative events that support this evolutionary process. Science, too, is a form of communicative interaction.

7. Intercultural communication

The notion of background is also central in relation to intercultural communication, an area which has been rapidly expanding in volume and importance during the past decades. The standard assumption of 'mutually shared knowledge and expectations' (a variety of which is presupposed in any '*co-operative principle*', cf. Grice 1975) may be regarded as a useful idealization in the case of in-group communication. However, it would be an insufficient foundation for a theory of communication between people from different cultural backgrounds, where there is a predictable clash in what participants take for granted (cf. also the discussion above of 'contextualization cues').

Much of the discussion of intercultural communication belongs in the context of a political climate defined by the dismantling of empire and of assumptions of cultural and racial superiority, with a background in the Second World War and the UN charter. In order to perform the necessary debunking of the idea of 'primitive' languages and cultures, an obvious avenue was to stress the importance of *universals*: other cultures do something similar with words — they just do it differently. A salient example was the uncovering of cross-linguistically recurrent elements in the area of *politeness*, cf. Brown and Levinson (1978, 1987).

From that point of view, the problem of intercultural communication was due to insufficient knowledge of 'how to say it', possibly compounded by ethnocentrism and prejudice — the classical remedy being *enlightenment* in the 18th-century tradition, with an admixture of postmodern *deconstruction* of socially constructed ideologies masquerading as facts. The persistence of more covert forms of prejudice and discrimination has been investigated in pragmatics (cf., e.g., Blommaert & Verschueren 1998) and various forms of discourse analysis, (cf., e.g., Riggins 1997). Especially in the context of immigrants and minorities in western societies, a considerable amount of research has been devoted to pointing out how *power* mechanisms in the communication process systematically favour members of the privileged culture to the detriment of less prestigious groups, also when no overt, or overtly illegal discrimination takes place (as in '*gatekeeping* encounters', cf. Erickson 1975).

However, not all difficulties can be reduced to a pattern where the remedy is enlightenment about equal rights and shared features beneath the superficial differences. Cross-cultural research into speech acts realization has found that in addition to similarities different cultures also have real differences in terms of values, for instance when it comes to politeness factors (cf. Blum-Kulka et al. 1989). And a comparison based on supposedly universal features such as *indirectness* in expressing (e.g.) your wishes may even be misleading, cf. Wierzbicka (1991: 63–64, 74), because it glosses over differences in terms of what people feel *should* be expressed: A Japanese who identifies with the principle of 'enryo', according to which it is bad to impose one's views or demands upon others, is likely to feel uncomfortable in an American context which encourages individuals to go out and get what they want — even if the Japanese is fully aware of the cultural difference. Enlightenment may enable you to understand what the other is really *saying and doing*, but it does not in all cases provide the two of you with a set of (culturally or contextually) shared purposes that you can collaborate on. Cultural differences, in other words, may present some of the same problems for communication that occur when people talk at 'cross-purposes' for more idiosyncratic reasons.

Understood in terms of *background*, the problem is that if interlocutors do not already have a mutually shared background which can function as a foundation for communication, they will have to construct one in order to go on to co-operate and communicate successfully. That takes time, as well as good will: most people prefer to play by the rules they are used to. It is important to be aware that there is no guaranteed 'natural' solution to the mutual adjustment problems that intercultural communication raises, even if both parties avoid the pitfalls of prejudice. Building a shared platform with someone from another culture means that you must change yourself: whatever adjustments you make constitute an extension of the repertoire of action that was previously part of your personality.

An extreme formulation of the same point is that a *multicultural* (as opposed to *multi-ethnic*) society may strictly speaking be a contradiction in terms: if people live among each other with wholly separate sets of cultural expectations, they do not together constitute one society, but rather a set of parallel societies sharing the same geographical space. In order to share the same society, members of different ethnic groups have to adjust enough to construct a platform that will enable them to conduct shared societal processes under a set of expectations that all groups accept, whatever their (sub-)cultural differences. This also means that it is not sufficient to understand the problem in terms of a postmodern *discursive struggle* between competing ideologies: a confrontation where one position demands cultural assimilation and another uncompromising cultural integrity is not likely to promote a process of platform-building. There are situations when the concept of culture (cf. Verschueren 1999: 92), is at risk of being *reified* at the expense of the real pragmatic complexity of the situation. "Intercultural communication or parallel cultures?" asks Söhrman (2004) about the Swiss

language situation, adding polemically that politically correct terminology often fails to describe actual reality. With respect to immigrant communities, with Holland as perhaps the most dramatically salient case, European intellectuals and politicians are increasingly facing the same issue. Globalization is making reliance on especially *'high context'* cultures (cf. Hall 1976) increasingly problematic to sustain, and in the absence of guaranteed 'natural' solutions to the problems this raises, there is a growing pressure in favour of strategies for developing solutions that are culturally sustainable (as well as socially 'constructible').

8.   Business communication

Until fairly recently, the fields of human communication and business communication had little in common. The fact that in business contexts messages are rooted in something else than speakers' personal communicative interactions and intentions constituted a fundamental difference: the features of business communication were understood to have a great deal to do with business and rather less to do with ordinary communication.

The difference remains obvious in the most salient form of business-driven communication in the community, i.e., advertising: knowing the difference between even the noblest forms of advertising and ordinary communication is an elementary part of contemporary communicative competence. One way of pinning it down would be to say that Habermas' validity presumption of *'truthfulness'* (rather than simply 'truth') is absent in the case of advertising: there is merely a disembodied intention to sell the product, detached from any personal commitment (which is what truthfulness derives from). As a property of communication, this is more fundamental than the quality maxim of 'truth': advertising standards may prevent (the more blatant forms of) deceit, but cannot provide advertisements with a real personal sender who genuinely wants to interact with me. This entails a degenerate status for advertisements considered as communication, which rubs off even on neighbouring messages, cf., e.g., Yang and Oliver (2004): the perceived news value of hard news on the internet declines significantly in the presence of advertisements.

When it comes to other forms of business communication than sales advertisements, however, general mechanisms in human communication have acquired a new relevance owing to changes in the understanding of what constitutes a business organization. The 'classical' industrial view (from Adam Smith to Frederick Winslow Taylor) was that from a business point of view employees were essentially an extension of the machines they operated. Communication, accordingly, was a kind of button that one could press when the need arose, designed to ensure smooth functioning of the whole 'machinery'. The changes that are associated with the decline of the role of mass industrial production and the ascendancy of 'immaterial' products, most saliently the whole 'virtual' sector (cf. also

the section below on 'mass communication'), has brought about a radical change, diverting attention from nuts and bolts to more human factors. *Organizations*, including their effectiveness, came to be understood as involving (organizational) culture as a key factor, also in economic terms: performance had to be understood as crucially depending on human identity and interaction (cf. Hatch 1997: 52–54, 201), changing the preferred understanding of business organization from a mechanical to a social construction. A salient example of a communicative genre that made its way into business communication is *storytelling*, cf. Gabriel (2000).

In terms of internal business communication, this meant that the world of business opened up to being understood in anthropological terms, and organizational communication assumed its place in the context of human communication generally. Values, artefacts and underlying assumptions (cf. Schein 1985) determine the way a business functions, and management depends on the ability to communicate in ways that reflect the nature of an organization as a Wittgensteinian *form of life*.

This change also raises the *intercultural* issue, in two dimensions. Internally, cf. Schein (1985), different employee groups may have different cultures (and differences between genders may be regarded as a species of cultural difference, cf., Tannen 1996: 7) — and thus they also need a shared platform in order to function as a group. The external dimension, however, is more obvious in an age of globalization, and has given rise to an explosive development in the study of international differences in *organizational* culture (Hofstede 1991) and communication (cf., e.g., Pan, Scollon & Scollon 2002). Cultural factors permeate patterns of communication to such an extent that successful business transactions in a global age may depend on a major effort in intercultural education and 'platform-building'.

Also in the area of public relations, there has been a change in the strictly mechanical view of business communication. The external implication of the 'machine operator' metaphor was an attempt to control the outward environment with the same ideal mechanical precision as the organization itself. This gave rise to the model of public relations known as 'press agentry', cf. Dozier, Grunig & Grunig (1995): communication was strictly *one-way* and designed to impose the views of the corporation on the world. However, just as internally the working of an organization turned out to depend on human factors beyond mechanical control, so did the external success of an organization turn out to depend on its position in a larger network crucially involving human dimensions. The concept of 'stakeholder' as opposed to 'shareholder' emphasizes that successful performance may depend on the ability to communicate more than just bottom lines. '*Two-way*, symmetrical communication' (cf. Dozier, Grunig & Grunig 1995), seeking to bring about mutual understanding and acceptance between corporation and stakeholders, even at the cost of having to alter corporate goals and strategies, may also be sound business policy. This too involves cultural issues, including values: the international pharmaceutical companies, for instance, have an interest in whether they are

perceived as producers of good health or as money machines, and top-down persuasion is not likely to be the only tool required. A new form of communication, sometimes called 'social advertising', has come into existence in order to serve the need to be seen as sensitive and willing to make concessions with respect to issues of public concern.

Obviously, the fact that managers of business communication have taken on board a view which involves the full panoply of human factors does not mean that there is no longer any distinction between personal, 'existential' communication and communication in a business context. Corporations are always 'strategic' in Habermas' sense, i.e., they always have ulterior purposes beyond seeking understanding, or they would be wasting their shareholders' money. But the analysis of business communication thus demands the same subtlety, and awareness of all the same factors, as the analysis of human communication in general, plus the additional task of uncovering the precise relations between those factors and the ulterior strategic motives.

9. Mass communication

In order to deal with the complexity of the modern communicative scene, it is essential to be aware of the ontological complexity that it reflects. The basic duality that was introduced above still exists: communication adds to the information that is 'naturally' available; but more and more of the stuff of which the human situation is made appears to be based, in turn, on mass communication and information. This is especially striking in relation to the media situation in the Western world.

Technical advances in communication technology during the twentieth century have radically increased and changed the role of communication itself and thereby also the human environment in which communication occurs. This process is sometimes claimed to be overshadowing (or even undoing) the results of the invention of printing, because of the increasing role of pictures and the concomitant reduction in the role that linguistically coded communication has played since Gutenberg (cf. McLuhan 1971; Postman 1986). Mass communication in the form it takes in the electronic media, combining the immediacy of pictures and the oral medium with production for a global audience, represents a new stage in the detachment of communication from concrete human interaction.

In the context of market forces which place media in a focal position, the role of communication as a key consumer commodity is in the process of changing the balance between events 'in themselves', i.e., as something taking place between participants, and 'media events' defined by the spectator or consumer role. This is true especially for activities such as sports games: in many cases, media forces are causally prior to forces associated with the activities in themselves. The same thing occurs in the case of communicative events; the two aspects are collocated in the

phrase 'talk show'. In such cases, neither information nor interaction seems to be the point of communication. Rather, mass communication is assuming the role of an ontological domain in its own right, understandable only in terms of the way it relates to other domains such as family life, material production, etc.

We saw in the beginning that communication only gradually emerges as something distinct from ordinary non-communicative processes of information-gathering and interaction. With modern mass communication, it has developed into something that is changing the fabric of everyday life — thus in a sense becoming once more indistinguishable from the rest of what goes on, although from the opposite perspective. However, rather than becoming too overwhelmed by the perspectives of this fascinating change, I think a down-to-earth note is appropriate in conclusion.

Harking back to the emphasis on the active role of individual communicators in shaping both contexts and messages, we should remain aware that everything that plays a role in communication must play a role in relation to the individual communicator. Above, I have stressed the risk of over-emphasizing the extent of the freedom that obtains within the course of a communicative exchange; in concluding, however, I would like to turn around again and emphasize that the sort of things that happen when people meet and talk are the stuff of which human life is made. It has always been the role of communication to function as an aspect of shared group life in a given environment — and so it will remain. The increasing role of large-scale processes operating over the individual's head is not likely to change the fact that the elementary quality of life is bound up with the interaction, including communicative interaction, that you have with people close to you — and the role of electronic mass communication is ultimately dependent upon the significance assigned to it within that primary group.

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Context and contextualization

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1. Preliminaries

One of the widely used definitions of pragmatics (and not the most infelicitous one) is that it deals with the ways in which linguistic utterances become meaningful through their relation to context(s), ways which allow "narrowing down the communicative possibilities of the message as it exists in abstraction from context" (Leech 1975: 77). Consequently, 'context' has become a central notion of pragmatic thinking. Rather than giving an exhaustive overview of such thinking, this article will attempt to outline some of the theoretical problems that have arisen in the discussion of the text-context link, and develop criteria according to which 'theories of context' can be categorized and evaluated.

What is to be considered a 'context' and what the 'text' (or, more generally, the 'focal [semiotic] event' — see Goodwin & Duranti 1992) which it surrounds, is a question that cannot be decided on the basis of 'objective facts': observables do not neatly categorize themselves under these two labels. Instead, seeing something as a focal event and other things as its context is already an interpretation of the perceived stimuli in somebody's environment.

In order to underline the perceptual and interpretive character of 'focal events' and 'contexts', it has been proposed to conceive of them in terms of a figure-ground relationship (Goodwin & Duranti 1992: 10ff). 'Focal events' as figures are perceived as "well outlined, sharply defined, and well articulated", while contexts as grounds "appear far more amorphous, problematic, and less stable" (Goodwin & Duranti 1992).

Another metaphor well suited to highlight the interpretive aspect of the notion of 'context' is Husserl's 'horizon' (*Sinnhorizont*, cf. Gadamer 1972: 286ff.): while the meaning of any event or thing cannot be understood by someone who does not take into account its horizon properly, the horizon itself dissolves as soon as we attempt to describe or analyze it; for whoever tries to reach the horizon will only find himself in another situation which opens up yet another horizon as far out of reach as the original one.

Both the figure-ground and the horizon metaphor hold true for lay identification of 'focal events' against their background or context, just as well as for linguistic theories, which usually work out the details of the linguistic datum (the 'figure'), but gloss over the context (the 'ground') in which it is embedded and/or from which it receives its particular interpretation. Any attempt to turn a part of the 'ground' or 'horizon'

into an explanandum will necessarily have to see this explanandum against another 'ground' or 'horizon' in which it is now embedded, and so on.

2.   Context is more than deixis

Given this state of affairs, it comes as no surprise that pragmaticists who have worked out linguistic 'theories of context' are usually not interested in the structure or the content of contexts (provided they are not linguistic entities themselves), but rather in the ways in which they are used, invoked, inferred, presupposed, or construed by and in the production and understanding of linguistic utterances. More precisely, the term 'theories of context' should therefore be replaced by 'theories of text-context relationships'.

Such theories may be categorized along three dimensions: according to the aspects of context believed to be relevant for a pragmatic analysis of language (henceforth called the indexed features or phenomena), according to the aspects of language believed to be subject to a context-bound interpretation or meaning assignment (henceforth called indexicals), and finally, according to the type of relationship which is believed to hold between the first and the second. Although these three dimensions are theoretically independent from each other, certain triples of indexed features, indexicals and conceptualizations of the relationship between the two have established themselves in the history of the discipline. In particular, the triple

- indexed feature = some feature of the physical surroundings here-and-now, such as speaker, hearer, time and place
- indexical = deictic element of a language ('denotational indexical')
- indexed/indexical-relationship = unidirectional (i.e., the context determines the meaning of the linguistic utterance)

has come to be associated with what could be called representational theories of language. The triple represents the most narrow theory (theories) of context in linguistics, but also the one(s) that have received most attention, for the following reasons:

a.   The relevance of context is confined to restricted areas of grammar from which it can be expelled by proper paraphrase; Schneider (1993) speaks of the 'semantization' of pragmatics in this case, consisting in a translation of relevant aspects of context into expressions of the object language, which is then subject to non-pragmatic, e.g., truth-value semantics.

b.   Only those linguistic utterances are seen to be in need of a pragmatic analysis which cannot be assigned referential meaning unless their context-of-occurrence is taken into account. Non-referential aspects of meaning are excluded; linguistic indexicals for these aspects of meaning are neglected.

c. The relevant indexed elements are looked upon as real world objects 'out there', to which deictic structures refer. As a consequence, context features are regarded as existent prior to and independent of speakers' linguistic activities in or relative to them. (The incompatibility of such a point of view with the above-mentioned gestalt approach to context will be noted; a critique may be found in Hanks 1990).[1]

One way to show that this approach to context is restrictive is to enumerate linguistic structures other than deictic expressions in their denotational function, which nevertheless index entities outside the 'focal event'. What immediately comes to mind here are systems of honorifics which, in many languages, relate to participants' social roles; here, we may include structurally simple systems such as forms of address or the *tu/vous* pronominal distinction, but also elaborate systems such as those of Japanese or Javanese, which affect major parts of the grammar and lexicon. In this case of what is sometimes misleadingly called 'social deixis',[2] it is not a denotatum in the 'real world out there' which is indexed, but rather a perceived social relationship between the speaker and the addressee, or the referent, or all three. But, of course, not only honorifics are chosen relative to social (role) relationships. Variationist and interactional sociolinguists as well as linguistic anthropologists have accumulated evidence for the claim that variation permeates grammar, from phonetics up to turn-taking; this variation (including its 'ideological' underpinning as part of a 'habitus' in the sense of Bourdieu) is partly an index of speakers' and recipients' social categories, and of the social relationship that holds between them. The selection of a variety from a repertoire — be it a style, register, dialect, vernacular, or language — is subject to the same complex of context variables.

Another large area of linguistic structure which eschews the narrow reading of context-dependence may be subsumed under the heading of 'subjectivity'. (The term alludes to Benveniste's 'subjectivité dans le langage' of 1958. Present-day terms would be 'empathy', 'perspective' or 'point of view'). Contrary to the narrow reading of context in which speakers enter only to the degree that they fix the 'origo' for denotational action, the impact of the speaking subject under this view extends to how his or her life-world, likings and dislikings, identification with persons or events referred to, etc., is reflected in and indexed by syntax and morphology, lexicon and prosody. This is particularly clear in the case of what Jakobson (1971) has called 'evidentials', i.e., grammatical (morphological) means by which a speaker signals his or her

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1.   For a thorough critique of the narrow approach to context, the reader is referred to Schneider (1993) and Silverstein (1976, 1992). According to Silverstein, the privileged position of the narrow construal of context in linguistics is related to (and even a consequence of) the semiotically based 'limits of [speakers'] awareness' which biases their metalinguistic abilities towards 'referential, segmental and maximally creative' features of language.

2.   The term is misleading if the notion of deixis is restricted to denotational or referential indexicals.

commitment to the truth of a statement (cf., e.g., the Turkish 'dubitative' verbal affixes). In addition, work by Kuno (1987: 203ff) and others has demonstrated how the selection of certain syntactic constructions (such as passives, subordination, sentence mood) and lexical items (certain reciprocal verbs, certain verbs of motion, etc.) can be explained by reference to the speaker's empathy. The function of prosody, particularly intonation, to display the speaker's point of view has been acknowledged since the beginnings of modern linguistics (cf., among many others, Vološinov 1976 [1926]). Only recently has it been shown that this expression of subjectivity in language is not individualistic and unstructured, but follows recurrent, conventionalized patterns.[3]

In addition to the speaker's 'point of view', grammatical structure also depends on and reflects the recipient's point of view; pragmatic distinctions between 'given' and 'new' information or 'thematic' and 'rhematic' constructions which have been shown to be central for word order and other syntactic phenomena such as left- and right-dislocations, capitalize on precisely this aspect of context. Syntax as an index to co-participants' shared background knowledge is also analyzed by Fillmore, Kay & O'Connor (1988) for constructions with 'let alone' (e.g., 'I wouldn't hire Smith, let alone Jones'), which construe a scalar model of interpretation in which the second proposition expresses the answer to a factual or hypothetical question, but the first proposition establishes some point of comparison, which by presupposed common knowledge is superior to the second. Without the knowledge that Smith is quite an alcoholic, and Jones even more so, the conjunction could not be understood correctly. The same argument can be made for other parts of syntax.

Dependence on shared knowledge is also found in the structure of the lexicon, where single lexical items point to others to which they are bound by cultural convention and with which they form a semantic field (Trier 1934). In the famous mini-story *The baby cried. The mommy picked it up* discussed by Sacks (1972), an adequate understanding is only possible when 'mommy'/'baby', but also 'mommy'/'pick up' and 'baby'/'cried' are seen as parts of a frame-like whole, such that mentioning one of them activates the other, or the first ('category-member') activates the second ('category-bound activity'), respectively. The effectiveness and elegance of the working of such a 'membership categorization device' depends on knowledge about the set-up of a 'family'; in a culture in which only grandparents take care of the children, its interpretation would be quite different from what it is in a Western cultural context.[4]

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3.   Cf. recently: Günthner (1996); Uhmann (1996); Selting (1994) on the prosody of 'indignation', 'ridiculing', 'expressive assessments' and similar 'emotional' aspects of language.

4.   Cf. Bilmes (1993) for lexical and grammatical implicature from an ethnomethodological point of view.

The few examples given here may be sufficient to show that the relevance of contextual factors for the understanding of linguistic structures is not restricted to the case of deixis. When we move from grammar and lexicon to a broader (and indeed, 'pragmatic') conception of language as social action, this relevance becomes even less disputable.[5] It is here that the 'semantization' of pragmatics has failed in particularly obvious ways: early attempts to describe the meaning of 'speech acts' by relating them to underlying 'performative verbs' are generally dismissed as misleading and inadequate today. The meaning of an utterance qua social activity (*Handlung*) cannot be reduced to a speaker's mental state ('intention') to perform such an activity; nor can it be dealt with by the semantic description of a 'performative' verb which seems to correspond to this mental state. Instead, it is the joint achievement of both the speaker and his or her recipients, to make an utterance meaningful in its context-of-occurrence. In Vološinov's words, such an activity is not simply fitted into, the result of, or caused by its context: it 'resolves' it (1976: 100; also cf. his materialistic notion of dialogue).

The most radical alternative to the 'semanticizing' approach to context has been formulated by ethnomethodologists (Garfinkel 1967), who assume any linguistic (or other) activity's indexicality to be "obstinately unavoidable and irremediable", whatever "remedial actions" investigators may engage in (Garfinkel & Sacks 1970: 349). Although lay members — or professionals — may, for some reason and for some purpose, 'formulate' parts of an interaction, i.e., they may 'say-in-so-many-words-what-we-are-doing', these 'accounts' themselves display indexical features; in this way, context becomes relevant at different hierarchical levels of (meta-)linguistic action, but it can never be expelled from it. Accounts are always informed by their occasions of use.

3.   Which contexts do we need to consider?

If we are willing to accept a wide notion of context, it is useful to distinguish types of indexed entities in order to come to grips with the complexity of the sign/context interface.[6]

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5.   As an early transition from the semanticizing to the pragmatic point of view, note Benveniste's notion of *énonciation* (1970).

6.   Various proposals have been made to list the different components of those aspects of 'context' that may be relevant for language. Dell Hymes' SPEAKING acronym has been one of the most influential ones (Hymes 1972); other influential ones are given by Halliday (e.g., Halliday & Hasan 1985), Blom & Gumperz (1972), more recently also by Goodwin & Duranti (1992) and Auer (1992). The selection and discussion of context types is necessarily restricted here to the most fundamental ones.

In a pre-theoretical, but intuitively plausible way, five dimensions of context suggest themselves:

a. linguistic contexts (sometimes called co-texts),
b. non-linguistic sense-data in the surroundings of the linguistic activity (the situation in a physical sense),
c. features of the social situation,
d. features of participants' common background knowledge other than (a)–(c), and
e. the channel of communication (the medium).

Links between a linguistic sign and its co-textual features have been thoroughly studied as means for establishing textual cohesion (cf. Halliday & Hasan 1976); here, anaphoric and cataphoric pro-forms play a decisive role.[7] (The longstanding linguistic interest in these textual functions may be a consequence of the fact that the linguistic means employed for them overlap considerably with those used for deixis).[8] But note that textual cohesion can also be established by syntactic (parenthesis, left- and right dislocation, pronoun dropping, repetition, etc.) and prosodic (particularly intonational) means.[9]

While cohesion is a matter of grammatical means, and conversational sequencing a matter of act(ivitie)s and their linking (and while the way in which Halliday et al. on the one hand, and conversation analysts on the other conceive of the text-context link is very different), intra-textual links between focal events and their co-texts are established in both cases. Research in conversation analysis has shown that conversational activities ('moves') prestructure (to different degrees) the following conversational slot with respect to speaker as well as activity selection. 'Adjacency pairs' represent a particularly strong kind of sequential link; other activities (e.g., first parts in 'action chains') leave more alternatives for the sequentially next activity open. They are related to each other by a system of 'preference organization'.[10]

In the case of cohesion, as well as conversational sequencing, 'focal events' are related to their co-texts by a relationship of (immediate or mediate) adjacency on the same hierarchical level of text structure. What represents a co-text for a given linguistic sign may also be located on a superordinate level of linguistic structure, however.

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7. Of course, it is well known that anaphoric and cataphoric links between full forms and pro-forms are not always based on referential 'continuity'.

8. For a discussion of the difference between deixis and anaphora, cf. Ehlich (1982). It should be noted that the parallel treatment of anaphora and cataphora is indicative of a planar, non-linear (and basically literate) visualization of language as a non-temporal, textual form.

9. For the latter, cf. e.g., Couper-Kuhlen (1983).

10. For an overview, cf. Atkinson & Heritage (Eds) (1984: 53–165) and Levinson (1983: 332–364).

This is the case when utterances are parts of larger speech activities, speech events, or genres. These 'larger events' will then provide the context for the 'focal event', which is embedded in them. For instance, an utterance may be co-textually embedded as an 'orientation' to a 'story'. In this case, the superordinated co-text informs the organization and interpretation of the subordinated one, just as the latter contributes and, in a way, helps to 'achieve' the first.

A final component of co-text which brings us to the fringes of the linguistic dimension of context is given by the intertextual relationship between texts produced on different occasions. Following Bakhtin (1986), it is more and more recognized that texts often (or, in some theories, always) respond to prior texts, and, at the same time, anticipate subsequent ones. (Indeed, some linguists have proposed to see context as yet another collection of texts indexed by the focal text). While Bakhtin's notion of intertextuality includes sequentiality in the sense of conversation analysis, the more interesting aspect of intertextuality refers to distant text relationships across situations. Here, texts may relate to actual other texts by referring to or quoting them; or they may index prior traditions of formal structures in text production, as in the case of re-uses or adaptations, changes or amalgamations of one or various genres (cf. Briggs & Baumann 1992).[11]

The second dimension of context is given by the physical surroundings of the speech situation, i.e., the 'things' and 'events' in the co-participants' sensual (particularly visual) reach. Everything that can be 'pointed'[12] to, including time, may become an indexed feature of a deictic expression. The second dimension of context therefore seems to be directly linked to the 'narrow' construal of context. There is, however, an alternative tradition to this rather static approach to the situational environment of speech: Malinowski (1923) first drew linguist-ethnographers' attention to a language that does not have the dignity of many written texts — i.e., being detached from the social activities of everyday life — but which is part of a stream of verbal and non-verbal activities, both of which are intertwined and depend on each other for their interpretation. His famous description of the Trobriand islanders coming back from a fishing expedition into the lagoon gives an example of such 'language in action' (where the 'in' refers both literally and idiomatically to 'action'). Here, the verbal components of the situation as it develops in time are certainly not autonomous; and their relationship to the 'context-of-situation' is far more intricate than could be analyzed on the basis of deixis alone. In fact, the verbal components are often only secondary — less essential to, less constitutive of the action than the

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11.   For further reading on the link between intertextuality and the construction of discourses, cf. Fairclough (1992).

12.   To speak of 'pointing' in this case obviously requires a rather loose usage of the term, including metaphorical extensions not present in everyday language. Since Bühler (1934), 'pointing' gestures such as the voice of the speaker, eye-movements or body orientation are accepted parts of deixis.

non-verbal ones. Nevertheless, they may take on decisive importance at some points. Bühler (1934: 154ff), who elaborated on this (what he calls) 'empractic' use of language from a more linguistic perspective in his analysis of 'situational ellipsis' (presumably without knowing Malinowski's work), aptly calls them 'diacritics' on non-verbal activities.

Bühler's and Malinowski's work underlines (without making it explicit) the ambiguous role the human body plays both as a context for a focal event (located between the linguistic text and the physical surroundings) and as a carrier for contextualizing semiotic events (cf. Goodwin & Duranti 1992 for further discussion).

As a third dimension of context, the social situation was mentioned. It includes the constellation of participants, their social roles and the social activity they are engaged in. The analysis of the different 'alignments' a co-participant may establish with a particular linguistic utterance (i.e., his or her 'participant role') is one of the main topics in Goffman's work. For Goffman, a 'social situation' is 'an environment of mutual monitoring possibilities' within a 'gathering' (1964: 135). Within such a social situation, it is not enough to distinguish 'speaker' and 'hearer', as used to be done in the traditional, cybernetically based models of communication. Instead, Goffman distinguishes, on the production side, between an 'animator' who is the 'sound box' for the message, an 'author' who is responsible for its wording, and a 'principal', 'a party to whose position the words attest' (Goffman 1979). On the reception side, the 'addressed recipient' and 'unaddressed recipients' are ratified participants to an encounter, while 'overhearers' ('bystanders') and 'eavesdroppers' are non-ratified listeners of other people's encounters.[13] Which participant role a person is in provides a context for how this person is permitted to act.

While Goffman's approach is restricted to the realm of what he calls the 'interaction order', other ethnographers and linguists (e.g., in the tradition of the ethnography of speaking/communication) would include participants' interactional and social roles and the type of 'speech event' (e.g., medical consultation, birthday party, telephone enquiry) into a definition of the social situation as well. Interactional roles may be a function of the 'speech event'; for instance, a 'medical consultation' requires participants to take over, at least temporarily, the roles of 'doctor' and 'patient'. Other (aspects of one's) social roles, which tend to be transsituationally more stable and which are not *eo ipso* bound to the type of speech event co-participants are engaged in, are social class or caste, ethnic affiliation, gender or age.

The fourth dimension of context — that of participants' common background knowledge — is of particular complexity. Research on this dimension may be located in the tradition of phenomenological approaches to the structure of the lifeworld, the essential structural principles of which have been outlined in Alfred Schütz'

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13. Follow-up work on these distinctions can be found in Charles Goodwin (1984), Marjorie H. Goodwin (1990) and Levinson (1988).

work (cf. Schütz & Luckmann 1976); it has also been elaborated in the tradition of formal pragmatics and presupposition theory (Sperber & Wilson 1986), and more recently, there have been attempts to formalize knowledge in artificial intelligence (cf. e.g., Reichman 1984; Putnam 1988).

There is an obvious overlap with the previous dimensions. What has been mentioned before in a text may become an indexed feature of the co-text of a later utterance; at the same time, it is part of the situation-specific common background knowledge participants may rely on in the production and interpretation of future activities. Similarly, social roles can only become visibly relevant for an interaction because their attributes, including rules of linguistic conduct, are part of partici- pants' shared knowledge, etc. Thus, underlining the knowledge aspect is sometimes just another perspective on context which focuses, not so much on objective facts as indexed objects, but rather on (inter-)subjective interpretations and typifications. Seen from this perspective, a useful distinction is one that relies on the reach or domain (*Gültigkeitsbereich*) of a particular piece of knowledge.[14] Knowledge is accumulated between participants during a particular interactive episode; this very specific knowl- edge may be partly forgotten after the episode, or it may be partly transferred to a stock of knowledge which accumulates between these same participants in the course of their 'history of interaction'. A larger *Gültigkeitsbereich* is involved when knowledge which is characteristic to a certain profession (reflected, for instance, in a professional code or 'register'), a neighborhood, a 'subculture', etc. becomes a relevant context of interaction. Finally, knowledge on how to behave properly within a given (ideal) community which is shared by all its members may be invoked for the understand- ing of a 'focal event'. Here, we reach the maximal domain within which knowledge is shared among participants, i.e., that of common 'culture'.

In the latter domain, looking at participants' background knowledge is not simply a different way of looking at the same indexed elements, but covers an additional range of phenomena. The 'culture' perspective is a central component of the Firth/Halliday tradi- tion of linguistic research, but also of the ethnography of speaking/communication and other branches of anthropological linguistics.[15] Attempts have been made to formalize restricted components of this knowledge, using notions of 'schema', 'script', or 'frame'.

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14.   Cf. Kjolseth's (1972) distinction between 'background', 'foreground', 'emergent grounds' and 'transcendent grounds'.

15.   Apart from earlier treatments in the Humboldtian tradition, it is once more Malinowski whose 'ethnographic view of language' was a breakthrough towards the view on language that takes culture seriously. (Cf. "language is essentially rooted in the reality of the culture, the tribal life and customs of a people, and that it cannot be explained without constant reference to these broader contexts of verbal utterance" 1926: 305). See Halliday & Hasan (1985) for an overview of this tradition; for anthropological approaches to cultural contexts, see Geertz (1973). Important

The final dimension of context is that of the channel or medium in which the interaction takes place. For many, including the 'Western' cultures, the technology that has had most impact on language is writing (cf. Ong 1982). The influence of modern or recent technologies — such as telephone, e-mail, automatic answering machines — is only beginning to be investigated.

4.   The nature of the contextual link

Enumerating types of contexts is more of an illustrative or heuristic endeavour than a theoretically rewarding or satisfying one. This is so because there is some justification in the claim that basically everything can become a 'context' for a linguistic 'focal event'. The more interesting question surely is *how* this 'becoming-a-context-for-something' is accomplished. It is precisely this question which has been moved into the forefront of pragmatic thinking recently.

The remainder of this article will therefore look at some theoretical problems concerning the link between indexed features of the context and their corresponding linguistic indexicals.

Here, we encounter two very different traditions. The first approach to the text/context link which was associated with the 'narrow approach' to context mentioned above, is characteristic of much structuralist thinking about the issue. It leaves the focal event distinct from context (and therefore autonomous). In addition to traditional linguistic work on deixis, Halliday's & Hasan's work on cohesion, Goffman's early work on the 'social situation' and early work within the ethnography of speaking/communication are typical representatives. The second approach, which will be sketched in this section, argues that every focal event conveys presuppositions about its context and thus 'contextualizes' its locus of occurrence. Typical representatives of this approach are ethnomethodology and conversation analysis, but also modern ethnography (micro-ethnography, interactional sociolinguistics) and linguistic anthropology (performance studies), neo-Gricean theories of presupposition and implicature and some research in AI.

4.1   The creativity of contextualization

Contrary to the narrow and structuralist approach to context, theories of contextualization see the relationship between 'focal event' and context as a reflexive, dialectic one. This means that it is not only the 'focal event' that receives its adequate interpre-

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contributions in modern linguistic anthropology towards a better understanding of cultural contexts and their relation to linguistic structure have derived from the interest in cross-cultural communication, particularly in the work of J. Gumperz (e.g., 1982, and (Ed.) 1982).

tation from a given context; so, too, do the indexicals which make relevant, invoke, actualize, maintain, etc. contextual frames. The latter point is underlined in Gumperz' work on 'contextualization' (Gumperz 1982, 1992a, 1992b; Auer & Di Luzio (Eds) 1992); coparticipants, so Gumperz argues, not only engage in fitting their utterances into contexts existing prior to and independent from their verbal and non-verbal activities; a major task in making interaction work consists in additionally making these contexts jointly available through what he calls 'contextualization cues'. In this perspective, which draws on prior work in 'context analysis' (e.g., by Bateson 1956[16] and by Goffman 1974), understanding consists of the semantic interpretation of lexico-grammatical structure together with the (culture-bound) interpretation of these contextualization cues, which are usually non-representational signs (prosody, gesture, choice of register, variety or style, etc.).

Many theorists of context share this basic assumption, but make a difference between more and less contextualizing indexicals, or between 'relatively presupposing' and 'relatively creative' indexicals (Silverstein 1976, 1979). A typical instance of the first kind would be local deictics (presupposing an object 'out there' to which they refer), a typical instance of the second kind would be inclusive vs. exclusive first person plural pronouns (creating a grouping of participants which has no necessary counterpart in the 'world out there'). It is a matter of debate if an indexical can be exclusively presupposing and completely uncreative; local deictics, for instance, surely also create (in addition to presupposing) an indexed object in drawing participants' attention to something, the presence of which they may not have been aware of before.

It should be underlined that the distinction between more or less presupposing/creative contexts is not coextensive with that between 'micro' and 'macro' contexts (cf. Knorr-Cetina 1981).

4.2   The vagueness of contextualization

Another important theoretical issue concerns the extent to which the identification of indexed objects is determined by their corresponding indexicals. There is good reason to believe that indexicals underspecify the contexts they point to, at least in the typical case. From research on deixis, the denotational vagueness of local or temporal expressions such as *here* or *then* is well known. Other indexicals hardly fare better; this is particularly true for 'contextualization cues' in the sense of J. Gumperz. For instance, although interactants are, for all practical purposes, able to understand the contribution of a certain pitch contour or gesture to ongoing talk, they

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16.   For a summary of this tradition of research and its importance for the analysis of 'non-verbal' communication, cf. Kendon (1990, Ch. 2).

would hardly give the same paraphrase of this understanding, when asked. The link between indexical and indexed entitity must therefore be conceived of as ambiguous and context-specific in itself. In addition, more than one (type of) indexical(s) may have to be processed at the same time, which may support each other (be 'redundant') or not (be 'contradictory').

4.3   The negotiability of context

At a given point in time, more than one context may be 'in play'. This may either be due to the hierarchical embedding of various contexts into each other, or to the different indexed dimensions of reality they represent, such that contextual frames may be invoked and remain valid at the same time (e.g., the frame of 'story-telling' and of 'classroom interaction', or of 'story-telling' and 'boasting'). It may also be the case that at a given point in time, more than one context is alternatively available, and that participants switch to and fro between these multiple contexts (cf. Goodwin & Goodwin 1992). A realistic assumption of how human interaction works would be that contexts are never completely shared by participants (Rommetveit 1988). This corresponds with the ethnomethodological claim that any (members' or scientists') attempt at explicating what a given utterance 'actually' means by contextualizing it, will be in itself an endless(ly context-bound) task: "Not only does no concept of context-in-general exist, but every use of 'context' without exception is itself essentially indexical" (Garfinkel 1967: 10; cf. his 'etc-principle').

4.4   The groundedness of context in interactional work

However much a context may be presupposing, its relevance for a given 'focal event' is not a matter of course but must be established in one way or another. Given the in-principle ambiguity of the separation between focal events and their context(s), co-participants in an interaction are constantly engaged in making sure that they orient to the same (yet changing) context(s), in which their acting will become meaningful. Valid contexts must therefore be seen as negotiated/achieved interactional facts.

Methodologically, this groundedness of context in interactional work requires analysts to validate their claims to the relevance of contexts by showing that such interactional work has in fact been done. Contexts, then, are no 'free goods' available to analysts in all sizes for the interpretation of a given text.[17]

17.   Cf. Sacks (1976), and with reference to 'ethnicity' as a context Moerman (1968). Divergent points of view have been stated in Labov & Fanshel (1977: 73, 30, 352) and Oevermann et al. (1976).

4.5   The culturality of contextualization

Contextualization as the retrieval of frame-like knowledge through contextualization 'cues' is based on shared practices within a relevant social group; relevant cues are acquired in childhood or through frequent contact through a shared history of interaction.

4.6   Indexicality — iconicity — symbolization

An unresolved theoretical problem is the exact semiotic relationship between indexical and indexed phenomena. By their very nature, indexicals 'point' to the contexts they invoke or identify; in Peirce's terms, they do so by virtue of a relationship of contiguity. However, few indexicals are pure 'indices' in Peirce's sense; usually, there is an admixture of symbolic elements (qua convention) or iconic elements (qua similarity). Again, this is well known from deixis (cf. the symbolic part of the *here/there* opposition within local deixis); yet, it extends to indexicals in the wider approach to context just as well. It is an intriguing question to ask how much iconicity and how much symbolic conventionality enters into 'contextualization cues', for example.

4.7   Using contexts

'Putting something into context' (contextualizing it), 'putting something out of context' (decontextualizing it) and 'putting something into a different context' (recontextualizing it, cf. Bauman & Briggs 1990) are both everyday and scientific activities.[18] They point to the fact that participants may be engaged in processes of contextual transformation in which 'focal events' are separated from their original locus of occurrence and their indexicals thereby cut off from the elements they had originally indexed. These events are then in need of a new context in order to become once more, but differently, meaningful. A classic example for such recontextualization is 'reported speech'; but note that the availability of speech recording as a commodity of everyday life and of the media has multiplied recontextualization resources in modern societies.

Although every (verbal/social) activity is indexical, speech activities, text-types or genres may be classified according to their relative degree of contextualization. It is possible to construe relatively self-contained and relatively de-contextualized texts in which the situational aspects of context are neutralized. Such 'displaced' (vs. 'situated', cf. Auer 1988) forms of language (text, genre, discourse) can be distinguished in oral language (where, among other things, they play a central role in the construction of narrative genres), but the possibility of achieving gradual decontextualization and 'displacement' must also be seen and analyzed as a precondition for the emergence of literacy.

18.   Cf. Schegloff (1992) who, however, starts from a very impoverished notion of context.

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Conversational logic

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1. Origins

Conversational logic (CL) can be defined briefly as a system designed to relate the 'illogical' (apparently non-fully informative, repetitive, unclear, irrelevant or not fully truthful) utterances common in most forms of human discourse to their rational and informative equivalents, in order to permit the rigorous analysis of language. A cornerstone of pragmatics since its development in the late 1960s, it has been subject to a great deal of interpretation and analysis, and has been tested and extended by application to several cultures and discourse genres. It has been incorporated into many academic disciplines: not only ordinary language philosophy within which it originated, and linguistics, into which it was brought in the early 1970s, but also fields as various as literary theory, cognitive psychology and psychotherapy, law, anthropology, and conversation analysis.

Its originator, H. Paul Grice, devised conversational logic for very different purposes than many of those to which it is currently being put. An ordinary language philosopher, Grice saw theoretical and methodological contradictions in the attempt — encouraged by the formal symbolic logicians of the first half of the century — to develop a formal language (or metalanguage) to replace ordinary language as a basis of logical analysis. They argued that by doing so the analyst circumvented the unclarities and ambiguities of ordinary language, thereby permitting its scientific study. Grice and his colleagues felt, in contrast, that it was self-contradictory to describe natural language through an artificial system, since the aim of the field was the understanding of the ordinary human mind, including its communicative processes.

On the other hand, some of the formalists' points were well taken: ordinary language *is* roundabout and ambiguous, and therefore not a basis for clear and explicit logical reasoning. But, said Grice, that was not necessarily an impenetrable obstacle. Rather than devising a meta-system, why not create a system that would enable ordinary language itself to be analyzed logically? Thus was born conversational logic, in Grice's papers of 1967 and 1975, with a further addendum in 1978 (all collected in Grice 1989).

2. The basic system of conversational logic

Grice's theory is based on the assumption that human beings are intrinsically rational and cooperative: that is, that in their interactions with one another, except in special

circumstances, their communications will be intended to be informative. That assumption is instantiated in the cooperative principle (CP):

> Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged. (Grice 1975: 45)

There exist several kinds of vagueness in the above, which (as will be discussed below) contribute to the continuing debate over its author's intentions.

To clarify the working of CP, Grice provided several exemplifications of it, not intended as an exhaustive list: the *maxims of conversation*. As he stated them in 1975 (45ff.), they are:

1. *Quantity*, split into two submaxims:

    a. Make your contribution as informative as is required (for the purposes of the exchange).
    b. Do not make your contribution more informative than is required.

2. *Quality*: Try to make your contribution one that is true; split into two submaxims:

    a. Do not say what you believe to be false.
    b. Do not say that for which you lack adequate evidence.

3. *Relation* (sometimes called 'relevance'): Be relevant.

4. *Manner*: Be perspicuous; split into various submaxims, such as:

    a. Avoid obscurity of expression.
    b. Avoid ambiguity.
    c. Be brief.
    d. Be orderly.

It has been argued by Sperber & Wilson (1986) that all of the maxims can be subsumed under one giant maxim of relevance (that is, an extended maxim 3); but among other problems, that would make it more difficult to discuss conflicts ('clashes') between 'relevance' and the other maxims. Additionally, the maxims seem to have different social and intellectual valuations. Blatant failure to observe 'quality' often appears as a moral rather than an intellectual lapse; failure of 'quantity', as a lack of communicative competence; while failures in 'manner' suggest aesthetic shortcomings.

A communication framed exactly according to the above maxims would, to be sure, be perfectly logical; but almost any discourse carried out entirely according to the maxims would be most unusual and perhaps even unintelligible. So, in order to incorporate into his system the idea that human communication could be more or less 'illogical' and yet be perfectly intelligible, Grice added a second subsystem to the

cooperative principle: conversational implicature. It is sometimes assumed that the maxims comprise the CP *in toto*, with implicature external to it. Grice himself does not discuss the exact relationship among CP, maxims, and implicatures. But since implicature is intended as one means of making conversational contributions 'cooperative', it makes sense to see them as subsumed under CP. Hearers first attempt to make sense of an utterance by recourse to the maxims alone; if this fails, they resort to implicatures to determine its meaning and its speaker's intentions.

Strict adherence to the maxims guarantees clarity and efficiency (in some sense of those terms). But (again, in contradistinction to some assumptions about CP), it does not necessarily represent 'ideal' communication, even from a purely Eurocentric or western point of view. Maxim-observant utterances do exactly and succinctly express pure semantic meaning; but they may not incorporate many of the pragmatic signals that orient participants to significant aspects of the message: discourse genre, deictic situation, seriousness, level of intimacy, mutuality of trust, delicacy of subject matter, and much more. Implicature provides that information, often as important in the full understanding of a communication as its explicit denotation. In that sense, an utterance that fails to incorporate implicature when it is culturally expected might be uncooperative and so liable to misunderstanding — hardly 'ideal'. And part of the communicative competence expected of a speaker situated in a culture is the ability to know when to expect pure maxim observance, when to be on the alert for implicature, and how to process implicature-based utterances.

Implicature, then, is a failure to be fully informative, entirely truthful, totally relevant, or utterly clear — but in such a way, and under such discourse conditions, that an interlocutor can reasonably be expected to have anticipated the implicature and be able to relate the contribution to the maxim-observant form intended by its utterer. That suggests that implicature is rule-governed. There have been several attempts at the formal description of implicature (cf. Horn 1984; Wainer & Maida 1990), but they are at best partial, and perhaps antithetical to Grice's stated agenda in proposing CP in the first place.

So Grice's system of conversational logic is composed of three equally necessary parts: the maxims of conversation, the rules of conversational implicature, and the principles stating when the latter are to be invoked. An 'ideal' communication is one that uses each aspect of CP when, and how, and to the degree, and in the form, that would best enable the hearer to understand the communication as intended by the speaker. It could be argued that maxim-observant utterances are closer to an 'ideal' than those requiring the use of implicature, since the invocation of the latter does need to be explained by additional principles, as maxim-observant utterances do not.

Much discussion within the literature on this topic concerns the way in which non-fully maxim-observant utterances are to be related to one another, as well as to their maxim-observant equivalents. As Grice notes, there are many ways in which

utterances can fail to be fully described in terms of the maxims alone. Grice distinguishes (a bit confusingly) among *violation, exploitation, flouting, opting out*, and coping with *clashes* between maxims (1975: 49). A speaker can fail to observe the maxims, yet remain within CP through the use of implicature:

1. by quietly and unostentatiously *violating* a maxim:

    A: I am out of gas.
    B: There is a garage around the corner.

2. by *opting out* of observing a maxim:

    A: Is Harry sleeping with Sally?
    B: My lips are sealed.

3. by negotiating a *clash* between two maxims:

    A: Where does Max live?
    B: Somewhere in France.

    (in which it is assumed that B is failing to observe the first submaxim of quantity in order to observe the second submaxim of quality)

4. by *flouting* or *exploiting* a maxim: that is, 'blatantly failing to fulfill it'.

    A: Is X a good candidate for the professorship?
    B: His handwriting is very legible.

Grice does not discuss a further situation; i.e., cases in which understanding fails entirely because the entire system is abrogated, whether intentionally by the speaker (e.g., in lying) or unintentionally (in case speaker and hearer are members of cultures with very different rules, or speaker assumes knowledge on the hearer's part that the latter does not have, or is insane). We can coin the term *noncooperation* to cover these cases. In passing, we might note a distinction with respect to the CP-observant cases, 1, and perhaps 3 and 4, as opposed to 2. In the first set, 'understanding' is taken as referring to the content of the speaker's contribution itself: implicature allows the hearer to reconstruct an informative reply. But in 2 (and maybe 3 as well), what the hearer (A) is informed of is the speaker (B)'s unwillingness or inability to cooperate: it is a statement of B's noncompliance with CP. In that sense it is informative in that it allows A to draw relevant and useful conclusions, even if not the ones A might have been looking for in framing the question.

Another sort of avoidance occurs in case there is a clash, not between two maxims, as in Grice's 3, but between informativeness and other communicative desiderata. Some of these concerns are: politeness (the avoidance of problematic confrontation, cf. Section 5), self-defense (avoiding providing unfavorable information about oneself),

aesthetics (humor, narrative ingenuity), and flattery (implicature presumes shared cultural background, and that the speaker considers the addressee smart enough to grasp the indirect utterance). This last might, of course, also be categorized under positive politeness, as self-defense might under negative politeness (although negative politeness, as discussed by Brown & Levinson 1987, is more concerned with interpersonal relations than the speaker's internal needs).

Students of CP have broken implicature into several categories, themselves not without controversy. One problem is that Grice considered his first set (1 above) not to involve implicature at all, although it is certainly arguable that they do, if of a very subtle kind. Then in the system as he articulated it, 2 and 3 are not considered truly implicature-creating either; only 4, where maxims are 'blatantly flouted' gives rise to Gricean implicature. I would argue rather that all four of his types generate implicature — that is, the requirement by the speaker that the hearer bring something extra into the understanding of the utterance. Only in two types of cases is this not true: one, of course, where the maxims are rigorously adhered to; and two, where CP as a whole is abrogated. One reason to subsume all of Grice's 1–4 under the heading of 'implicature' is that they are so similar that often it is virtually impossible to determine which one is involved. If we call all of them 'implicature', we both avoid impossible decisions, and explain why those decisions are impossible: the distinction is nonexistent, and the categories are fuzzy rather than discrete.

Distinctions have also been made by various writers (for helpful discussion see especially Levinson 1983: 104, 126ff) between *standard, generalized,* and *particularized* implicatures. The first would cover Grice's categories 1 and 3, in which 'implicatures arise from observing the maxims'; the second two involve cases covered by Grice's second and fourth categories, in which flouting or other deviations from maxim-observance have occurred. Generalized implicature occurs when the hearer is not required to assume a particular context or scenario: the information is generally assumed, universally or culture-wide. In particularized implicature, special contexts or cultural understandings must be assumed. As an example of generalized implicature, consider:

(1)   John brought a woman to the party last night

In which the indefinite article implicates that the 'woman' is not John's wife (or the wife of either of the discourse participants). As an example of particularized implicature, consider (2):

(2)   Boys will be boys

in which the superficial tautology requires some computation to be understood non-tautologously, i.e., as 'boys share certain salient behavioral tendencies'.

Conversational implicatures were also distinguished by Grice from other deductive processes (e.g., conventional implicature, presupposition, and entailment) in that they are:

1. *cancellable* (defeasible): premises may be explicitly added to a proposition, changing the implicature. So a sentence like

    (3)   John has three cows

    normally would implicate, 'and no more' (via quantity). But add, '... and no more', and that implicature is cancelled or defeated.

2. *nondetachable*: the implicature attaches to the *meaning* of the utterance, not to any specific lexical item or sentence form chosen to express that meaning. Thus,

    (4)   John is no rocket scientist
                not an Einstein
                not a candidate for the Nobel Prize in Physics, etc.

    all implicate, 'John is not very smart'.

3. *calculable* (more or less): the relation between the implicature-invoking utterance and its maxim-observing equivalent can be, more or less, rigorously and specifically expressed — as in example (2) above.

4. *non-conventional*: it is not part of the 'dictionary' meaning of any of the words involved. So to account for our understanding of the examples in (4), it is not necessary for a dictionary of English to define 'rocket scientist', 'Einstein', or 'candidate ...' as 'a smart person'.

5. *not fully determinable*: there is no one-to-one linkage between the form of an implicature and its intended meaning (note the caveat in example 3); so,

    (5)   John is a machine

    might mean 'John is unemotional', 'John is a hard worker', 'John is efficient', etc. (Grice 1975: 57ff; Levinson 1983: 115ff)

3. The universality of CP

If — as would seem both desirable and essential — we try to treat the expressions 'Grice's theory' and 'our current understanding of CL' as effectively synonymous, we run into a problem, especially as the description becomes more detailed. The problem arises because (as noted earlier) Grice himself was content — as a philosopher of language rather than a linguist — merely to provide a general sketch of a potentially operative model, rather than an exhaustive account that could be falsified by a single

telling counterexample (as a linguist would). Had CP remained within the domain of ordinary language philosophy, these issues would not have become vexatious. But Grice's own vagueness becomes a problem when attempts are made to use CP in the rigorous description of linguistic behavior.

Therefore controversy exists (cf. Green 1990 for useful clarification) over how to interpret and utilize CP: must we keep within the explicit boundaries of Grice (1975)? Or can (should) we expand and clarify the system to meet the needs of other theories, other disciplines, other discovery procedures than those of Grice's field? I would answer that question by giving assent to the second option: CL is still CL even when it becomes, strictly speaking, non-Gricean or at least meta-Gricean. From a linguist's perspective, Grice himself provided an architect's sketch, but the full-fledged habitable edifice is still under construction; the original blueprint must be continually extended and reinterpreted to meet the needs of those who will actually inhabit it. Viable theories necessarily grow beyond their creators' original intentions.

Other difficult problems arise in transferring a theory from a discipline like philosophy, whose methodology is largely intuitive and introspective, into another which is empirical (e.g., ethnomethodology and, increasingly, linguistics proper). A clash ensues with no obvious compromise. Similarly, the universalist perspective of philosophy combines poorly with the typological stance of anthropology and its allied disciplines. The methodological problems entailed in bringing the findings of one field into another were not immediately apparent when CL was first incorporated into transformational generative grammar in the late 1960s, under the aegis of generative semantics. Both philosophy of language and TGG were introspective and interpretive disciplines; both derived data via introspection; both were universalist in focus. So questions that were to arise later and continue to cause confusion were not considered.

Linguistics, unlike philosophy, is a sometimes uneasy amalgam of several disciplines, whose methods range from the highly introspective (e.g., most theories of syntax) to the strongly empirical (e.g., sociolinguistics and conversation analysis). As generative semantics broadened its focus to consider social and psychological context as factors influencing surface syntactic form, as sociolinguistics came to maturity, and as the analysis of conversation played an increasingly important role within linguistics proper, introspection and intuition became increasingly suspect, especially when used in isolation (as with TGG and its offspring). Similarly, questions arose concerning other assumptions of Grice's CL. The questions linguists ask in investigating language, and what linguists consider to be satisfactory and complete answers to those questions differ from those of philosophy. Linguistics requires exhaustiveness: a grammatical rule must be shown to apply in all relevant cases, or at least plausible reasons must be adduced for the existence of counterexamples. On the other hand, to demonstrate the validity of a claim, a philosopher of language need only show that a proposed thesis applies to some relevant circumstance. Linguists deal in rigorous general and universal

rules, philosophers in principles and tendencies. So, many linguists found themselves frustrated by what they perceived, from the purview of their own field, as Grice's vagueness and the open-endedness of many of his definitional statements. Especially in the more empirically-oriented ends of the field, there was consternation about Grice's intentions: Did he mean CP (or the maxims, or the use of implicature) to be universal or language (or culture) specific? He hinted at universality, but gave no examples in languages other than English, or discourse types other than dyadic conversation. There was no clue as to what it would take to falsify his implicit claims of universality.

Empirical cross-cultural testing of CP is itself no easy task. To understand how members of a culture understand conversational contributions, one must be thoroughly familiar with that culture and have spent time in it as a participant, not merely an observer. Hence less has been done in this area than would be ideal. The work of Matsumoto (1989) on Japanese suggests that members of that culture utilize CP quite differently from Westerners: the 'information' that underlies the notion of observance of the maxims is extended to interpersonal considerations much more than in the west. For Westerners, considerations of politeness and status are relegated to the rules of implicature; for the Japanese, they are aspects of the informative core of utterances — the maxims. In most discourse types they cannot be avoided. Likewise Keenan (1976) argues that in Malagasy CP is adhered to, but based on a different understanding of participants' need to know, based in turn on a higher valuation of information in a culture in which it is scarce and, hence, precious. In most Western societies, information is abundant, and cooperation is demonstrated by sharing it freely: nothing is lost by so doing. But when it is scarce, the intelligent conversational participant rations it out, as with any other scarce commodity. To the outside observer, both Japanese and Malagasy appear to violate CP; but viewed from within, understanding the assumptions of the cultures themselves, it is apparent that CP applies, but with different basic assumptions.

Across disciplines, there has been some attempt to relate the methods of philosophy to those of more empirically oriented fields and to unite CL and Conversation Analysis. See in particular the work of Gumperz (1990) on inferencing procedures in natural conversation.

4. CP and discourse genre

Grice more or less implicitly took ordinary conversation as the basis of his analysis. The question then arises whether CP is universal across discourse genres, or at any rate whether it applies identically across all. The answer to the first question would appear to be a strong 'yes': participants in any interaction (nonlinguistic as well as communicative) must be able to assume that others wish to 'make sense', and are doing so. But what it takes to make sense, to be seen as cooperative, appears to differ

from one kind of discourse to another, based on participants' understanding of the underlying purposes of the discourse type in which they are involved. (See Green 1990 for discussion of cross-discourse as well as cross-cultural universality in CP).

The more a discourse is seen as intended for the exchange of 'truth' or information, the more closely its contributions are expected to adhere to the maxims, the less expectation participants will have of the use of implicature, and the less complex will be the inferencing processes participants will be expected to perform to bring contributions in line with the maxims. Hence discourse in a classroom or courtroom is ideally expected to be highly (though not completely) maxim-observant, as informal conversation is not; a scholarly article such as this should observe the maxims more fully than (for instance) a piece of satire or fiction (cf. Searle 1979a). But, that said, the reality is as usual more complex. While courtroom discourse (in the US at any rate) requires witnesses to take an oath essentially promising strict adherence to the maxims (to tell the truth, the whole truth, and nothing but the truth), the very fact that it is considered necessary to exact such an oath under threat of penalty suggests that violations are not uncommon, and jurors must learn to spot them (cf. Lakoff 1990a, 1990b, which considers differences in the applicability of CP in criminal confession as it relates to gender-based differences in response to *Miranda* warnings among interrogated suspects).

Psychotherapy is another complicated case. While it appears superficially much like dyadic conversation, it is truth-seeking in function, so that we would expect strict observance of the maxims. But as Freud himself suggested (1911–15), in the free association characteristic of psychoanalysis, patients are expected to deviate from the maxims: indeed, strict adherence is as much grounds for interpretation as is extreme deviation. But here as in the cross-cultural cases, we must understand the apparent anomaly in terms of a special understanding of 'information'. In psychoanalysis, the 'truth' or 'information' that is sought presents itself in the form of distorted communications, intra-psychic and interpersonal. So such distortions (extreme use of implicature or even violations of CP itself) are in themselves informative, and failure to utilize them is a sign of noncooperation on the part of the patient (Lakoff 1990a).

5. CP and politeness

As noted, Grice saw the 'ideal' communication as that which most efficiently transferred information. But here too it is necessary to examine our presuppositions. In theory the most efficient communication is the one that expresses its speaker's intention in the fewest and clearest words. But if the ultimate aim of communication is to influence the interlocutor's future thoughts or actions, clarity and directness may not always be superior strategies. If a directive is expressed so baldly that the addressee is offended and refuses to comply, the effect of the speech act is nullified; if a statement is made so

abruptly that the addressee is left too distressed to comprehend it, information is not conveyed. Explaining a joke ruins it. So while politeness may entail more complex and convoluted communications that superficially seem to violate CP or at least necessitate a significant degree of implicature, in fact precisely *because* it complicates forms and require more work on the part of the addressee, it may facilitate understanding and compliance, ultimately functioning in favor of maximum cooperativeness. So politeness systems (cf. Brown & Levinson 1987; Lakoff 1973) function universally alongside the assumptions of clarity exemplified in the maxims: they act as partial explanations for the existence of implicature and participants' willingness to engage in implicature even though it is ostensibly 'inefficient'. And just as we recognize unjustified departures from CP as blatant violations of rationality and cooperativeness, so we see failure to apply the conventions of politeness where expected as serious breakdowns in communication. Just as it is possible to see acts of noncooperation as intentional (i.e., lies) or not (psy-chotic communication), and evaluate their producers differently, so we can distinguish between what I have called 'rule governed rudeness' (e.g., in legal trials and therapy — Lakoff 1989), which is intelligible if disconcerting to the uninitiated, and inexplicable rudeness, which tends to cause the communication to break down entirely.

It is useful to note as well that different forms of culturally encoded politeness involve different kinds of implicature. Negative politeness (in Brown & Levinson's system) often entails flouting of the first submaxim of quantity: too little information is given; while positive politeness is created through the flouting of the second quantity submaxim (more information is given than is really needed, as a statement of intimacy and trust). Ambiguities exist: irony, a flouting of the first submaxim of quality, may be seen as working toward negative politeness since it is a way of indirectly providing unpleasant information; or toward positive politeness, since its use implies a sharing of cultural presuppositions.

It is sometimes suggested that politeness be construed not, as here, as an indepen-dent system in competition with the maxims, but as arising out of the observation of a maxim — specifically, a submaxim of manner. While this is attractive in terms of neat-ness, it creates serious conflicts. The need to be polite typically forces a conflict with the maxims, and leads speakers into implicature; and further, politeness is maximally used under discourse circumstances in which informativeness is less than absolutely crucial. It would seem best to reserve the status of maxim for that sort of communication that is denotatively informative, as politeness is not.

6.   Other discussion of indirectness

Implicature is not the only way in which indirect modes of communication are addressed. Presupposition and entailment are other ways in which information is transmitted indirectly. The lexical or syntactic backgrounding of information that is

deemed not fully salient is a kind of indirectness, because the presupposed information is rendered less accessible. Speech act theory (Austin 1962; Searle 1969, 1979b) incorporates the notion of indirect or implicit illocutionary force. One distinction between the Gricean and Austinian approaches is that the latter is especially concerned with taxonomy: listing the forms various kinds of illocutionary forces may take in terms of verb categories, while the former concentrates on the systematic interplay of whole utterances or contributions, or even mini-dialogues. Relevance theory, as briefly noted in Section 2 above, sees all forms of indirect communication as failure to observe a supermaxim of relevance: relevance to prior discourse or to the requirements of participants and context.

7.   The future of CL

In its nearly three decades of existence, CP has proved supple enough to be of use in a wide array of academic fields. But as it has expanded, new questions are raised and old ones must continually be reexamined. Some considerations for the future include: How universal is CP, and how differently may its parts fit together, cross-culturally and cross-discourse genres? How rigorously can the forms and functions of implicature be categorized? What is the relation between politeness and informativeness: are they parts of the same system, or systems in competition? And, reexploring an idea casually alluded to by Grice, how universal is CP across all forms of human social and cognitive behavior? If, as he suggested (and as further amplified by Green 1990) CP is generalizable to such non-communicative activities as automobile repairing, then this is more evidence that the linguistic aspects of human cognition are not independent of other mental functions.

As already suggested, CP has been incorporated into many fields, and so its literature is scattered. Useful summaries are to be found in Levinson (1983), Leech (1983) and Green (1989); collections of papers on Gricean topics include Hall et al. (eds.) (1990) and H.P. Grice (1989).

While there is much we still need to know about CL, and much of its ultimate statement is still unclear, it is evident that this is a vigorous and central aspect of pragmatic theory.

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Deixis

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1. Definitional and theoretical issues

Deixis (pronounced *daiksis*) is the term used to refer to those linguistic elements which make interpretable reference only by virtue of an indexical connection to some aspect of the speech event. Typical examplars for English include *here–there, this–that, now–then,* and *I–you*. Anderson and Keenan (1985: 259) write:

> Following standard usage, we consider as deictic expressions (or deictics for short) those linguistic elements whose interpretation in simple sentences makes essential reference to properties of the extralinguistic context of the utterance in which they occur.

Similarly, Levinson (1994: 853) tells us:

> The term 'deixis' from the Greek word for pointing, refers to a particular way in which the interpretation of certain linguistic expressions ('deictics' or 'indexicals') is dependent on the context in which they are produced or interpreted.

Such definitions are problematic insofar as a great many, if not all, "linguistic expressions" or "linguistic elements" depend for their interpretation on some properties of the extralinguistic context. Indeed Levinson writes: "just about any referring expression can be used deictically" (2004: 101). Rather than a characteristic of particular isolable forms, indexicality is a general characteristic of language and interaction (for example Garfinkel 1967; Peirce 1955; Putnam 1975).[1] In order to curtail the infinite

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1. Deixis and indexicality raise a number of well-known philosophical puzzles (see for instance Kaplan 1989 and Montague 1974). Specifically, deixis problematizes what is often considered to be the central design feature of language — its context independence. As Levinson (1994: 845) notes "It is the constancy of lexical meanings, together with invariant rules of sentential composition, that are normally taken to be the principles that allow us to generate unlimited sentences and yet still understand the associated meanings." Much work in the philosophy of language has addressed these problems of context dependence/independence and indexicality and the problems posed for propositional logic (Bar-Hillel 1954; Garfinkel 1967; Kaplan 1989; Montague 1974). Some aspects of the debate are summarized in Lyons 1977, 1982 and Levinson 1983. Important insight on similar issues (although from a sometimes radically different perspective) is to be found in the work of French linguists such as Benveniste (1966) and Kristeva (1971). Finally mention must be made of the pioneering work of Buhler (1934).

expansion of the class of deictics, we need to impose definitional restictions based on the formal properties (semantic, mopholological and morphosyntactic) of particular languages. It is only through the use of such criteria that we are able to arrive at the more or less closed functional categories of person, space, time, discourse and social deixis. Crosslinguistically, the degree of "closedness" of the these classes is relative and generally the categories of discourse and social deixis are much more open, admitting of a seemingly innumerable set of non-referential indices. In the following overview I have restricted discussion to deictics which are typically understood as belonging to the class of "spatial deictics." In fact the discussion which follows challenges the idea of a unified category of spatial deictics and in several places looks closely at what are clearly non-spatial uses of these forms. A longer discussion might incorporate an examination of other classes (person, time…) but this would necessarily involve a thorough rethinking of the integrity of the class, "deictics." Furthermore the issues that concern us in an investigation of so-called spatial deixis are sufficiently particular so as to disallow direct extrapolation to other domains.

This review is divided into three sections. The present one concerns itself with definitional and, broadly speaking, theoretical issues. After delimiting the range of phenomena to be examined, I briefly sketch a model of deictic function which serves as a theoretical apparatus for understanding the relation between the semantic and pragmatic properties of these forms. In the second section I employ the terminology of the first to briefly discuss the cross-linguistic typology of deixis both in terms of its formal distribution in the morphology of different languages and in terms of the semantic parameters encoded. This section is relatively brief as a number of surveys from a typological perspective are already available (see for instance Anderson & Keenan 1985). Finally, in the third section, discussion turns to the contextualized use of deictic terms. Recent work has recontextualized deictic use within both an interactional (see Goodwin 1990; Goodwin 2000, 2003; Hanks 1990; Haviland 1996) and an ethnographic perspective (Duranti 1994; Hanks 1990; Keating 1994). In combination with a renewed interest in the anthropology, psychology and linguistics of spatial conception (see Levinson 1996a), such work offers a substantial rethinking of deixis and its embeddedness in both the particular activities and overarching lifeworlds of participants.

Part of the problem with the term "spatial deixis" revolves around everyday and received scholarly understandings of space itself. As Levinson (1992, 1996b see also Levinson & Brown 1994) notes, both Kant (1768) and Whorf (1941) tended to think of space as a relatively transparent conceptual category in relation to its usual opposite in philosophical discourse: time. Compared to the mysterious and seemingly culture-embedded concept of time, notions of space appeared to be relatively available to speakers as raw facts of everyday experience within the physical world. However, contrary to the received wisdom, it has been known for sometime that languages differ substantially in the degree to which they favor absolute vs. relative systems of

spatial reckoning (Brown & Levinson 1993; Gumperz & Levinson 1996; Haviland 1979, 1993; Levinson 1992, 1996a, 1996b). Absolute systems make use of fixed positions in order to calculate the relative position of an object. English has a subordinate and functionally specialized system of absolute spatial reckoning in the cardinal directions of north, south, east and west. In languages such as Guugu Yimidhiir, absolute fixed positions are the primary linguistic resource for spatial reckoning and therefore it is not unusual for a speaker to say, the Guugu Yimidhiir equivalent of, "pass the cup to the north." A great many important implications follow from this basic distinction which cannot be discussed here (the reader is referred to Levinson 1996a, 1996b). What is important to note for present purposes is that spatial reckoning is in fact apparently not generated out the brute facts of physical experience. This has a number of implications for our understanding of demonstrative and locative deixis.

As we shall see studies of deixis from a traditional linguistic and typological perspective frequently gloss forms in terms of relative distance from speaker. The idea that these deictics encode basic semantic distinctions of relative distance has been challenged on at least two fronts. First, the idea that deictic forms encode distance has been questioned by Enfield. In his analysis of Lao demonstratives nii^4 and nan^4 he writes (2003: 83):

> Close attention to distributional facts and the pragmatics of interlocutors' interpretations of physical space in interaction (including contingent factors like attention, common ground, cultural and personal conceptions of space) supports a lean semantic analysis of the two demonstratives, whereby neither encodes 'distance' (i.e., neither makes specification of notions such as 'near' or 'far'), and only one encodes 'location' (namely the semantically more specific 'distal' demonstrative, which refers to something 'not here'). The proposed semantics are minimal, yet they remain consistent with the use of these forms in rich contexts. ... similar analyses are likely to hold for other such typologically unremarkable systems (such as English *this* and *that*).

Enfield (*ibid*: 102–103) goes on to suggest:

> What all uses of nii^4 have in common is that the speaker is NOT saying that the referent is something 'not here'. Given that Lao speakers have one other choice of demonstrative determiner (nan^4), which encodes that the referent is something 'not here', the use of nii^4 often implies (but never entails) that the referent is something 'here'. In other words, nii^4 and nan^4 form an entailment scale (Levinson 2000: 79), with nan^4 the 'strong' member of the pair. While nan^4 is genuinely specified for 'awayness' (a locational specification that must not be confused with marking for 'distance'), the status of nii^4 as proximal arises entirely by inference due to its relation in the system to the more semantically specific alternative. Nan^4 and nii^4 are not equivalent in semantic complexity, and their status as distal and proximal, respectively, is qualitatively distinct. Nan^4 has a semantic specification for 'WHERE the referent is', while nii^4 does not.

Secondly, glosses in terms of relative distance from speaker involve recourse to a commonsense notion of space which frequently cannot account for the ways in which deictics are actually used. In this respect, Hanks (1990) suggests that much of the work on deixis has been informed by three orienting assumptions: "concreteness," "subjectivity" and "isolation". Concreteness refers to the way in which, given that we all live "in our bodies, in some phenomenal world, the 'here-now' assumes a naturalness and an appearance of 'raw experience'" (Hanks 1990: 16). The association of deixis with the phenomenal space of the concrete is coupled with the assumption

> that the center of space, the zero point, is a person; the individual who inhabits the body by which spatial experience is constructed. From this it follows quickly that the immediate 'here' takes on a subjective experience (Hanks 1990: 16).

Isolability is implicated in studies which assume that the phenomena of deixis can be limited to grammatical and lexical descriptions of the linguistic elements without consideration of the courses of action and the socially constructed world within which they occur and which they help to shape.[2] Once we bracket the concreteness of deixis, we find that notions of distance and space take on a new complexity. The semantic coordinate of distance is only one possible dimension along which objects in the world might be distinguished relative to a speaker. Furthermore, it is apparent that distance and other semantic coordinates need not necessarily be calculated relative to a speaker. Rather, bracketing the subjectivity of deixis, we may find it to be a sociocentric rather than egocentric phenomenon which relies, in terms of its communicative function, not fundamentally on the position of the speaker but rather on a reciprocity of perspectives, broadly conceived of in terms of the ability of one social actor (either speaker or hearer) to make interactional calculations based on some other participant's perspective and, at the same time, a reflexive understanding of that other's understanding of ego's perspective (see Hanks 1996a, 1996b also Schegloff 1972).

This brings us to a further set of considerations involving the place of gesture within a theory of deixis. As the quotation from Levinson above suggests, there is a fundamental association of deixis as a linguistic phenomenon and certain types of gesture, in

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2.   The alternative account which Hanks offers is built around a fundamental bracketing of concreteness, subjectivity, isolability. While these assumptions no doubt inflect and constrain the phenomenal world of social actors (to some degree) they also mask the fundamentally socially constructed nature of the here-now and the body which occupies it. Hanks' alternative account draws heavily on Bourdieu's notion of habitus as a means for understanding the structured-structuring, and reflexive positions which the social actor occupies both within the unfolding course of an interactional engagement and across a life course.

particular, various kinds of pointing (which of course need not be accomplished with the hand — see Sherzer 1973). In fact, although tempting, it is probably wrong to think of pointing as a kind of demonstrative on a par with English *this* or *that*. There are several reasons for this. In the first place, if we look at the way in which linguistic deictics and gestures are combined within particular coordinated courses of action we find that their contributions are typically complementary rather than isomorphic. Secondly, because gesture and pointing on the one hand and linguistic deixis on the other operate in fundamentally different semiotic modalities, they are capable of different kinds of reference and characterization (see Goodwin 2003; Kita 2003 and below).

Before moving to a discussion of cross-linguistic variation in deictic systems, let us briefly sketch out the necessary components of any spatial deictic expression. If we take an example such as English *there*, we can say that, like any other deictic, reference with such a term involves the identification of some figure or focal object against an indexical ground (see Hanks 1992). In the case of English adverbs *here/there* the indexical ground is often equivalent to the location of the speaker and may also take into account other aspects of the immediate interactive context (see Sidnell 1997 and below). Thus a reasonable gloss for many instances of English *there* is "the region which does not include the speaker's present location."[3] In addition to figure and indexical ground, any deictc expression involves a specification of their relationship.[4]

Each of these parameters is subject to some cross-linguistic variation which is the topic of the next section. For the moment let us briefly outline the logical limits of variation for each category. The figure can be characterized in a number of ways. In English, and in many other languages, we find the opposition between locative adverbs *here/there* and demonstratives *this/that* (typically termed adjectives — but see below) which modify nouns or occupy the same structural position as nouns. These deictics differ not only in terms of their syntactic properties but also in terms of the way in which they characterize a referent. Demonstratives specify the FIGURE as some enummerable thing and hence have plural counterparts (see *these/those*). The locative adverbs *here/there*, on the other hand, specify the figure as a region and cannot be plural (exceptional and most likely non-deictic uses notwithstanding). The indexical ground of deictic reference is also subject to a limited range of cross-linguistic variability as I discuss below. While for speakers of English and Romance languages, it is quite usual to assume the speaker's location as ground, other languages include forms

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3.   Charles Goodwin (personal communication) points out that what counts as the speaker's location is open to intricate formulation.

4.   The general relationship being sketched here is one of an INDEX. See Hanks 1996a, Parmentier 1994, Peirce 1955, Silverstien 1976 for further discussion.

which take the addressee's location as ground. Still other languages have forms for which some geographical landmark may serve as ground. Although the English deictic verb *come*, generally, takes the location of the speaker (She's coming here) or the addressee (I'm coming over there) as the indexical ground, sentences such as "I came over several times to visit you, but you were never there" (from Levinson 1983: 84) are also possible. In such cases direction is neither toward speaker's nor addressee's current position. Thus some geographic location (a homebase — see Levinson 1983) seems to function as the ground (Fillmore 1973, 1975, 1982). Finally, the relationship between figure and ground may be specified by oppositions which operate on a number of quite different dimensions. The most obvious relational feature is one of distance. Thus we have a proximate/distal opposition in the unmarked usage of English *here/there*. This opposition seems to undergrid the notion of "spatial" deixis. Demonstratives do not in fact involve a spatial contrast of the same kind. Rather, and particularly in their presentational function, demonstratives contrast as immediate *this* and non-immediate *that*. While this is often understood as a spatial opposition, distance is a derived rather than a basic notion here.

The basic components of deictic expressions and some of the possible dimensions of contrast within each component are shown in Figure 1.

Components		Dimensions of Contrast
Figure	>	thing-region-path...
Indexical Ground	>	spkr-addr-landmark...
Relation	>	proximate.../distal
		immediate/non-immediate...
		visible/invisible...
		audible/inaudible...

Figure 1. Functional components of deictic terms.

2.   Deictic semantics and morphology in a typological perspective

Crosslinguistically, spatial deictics, more than person deictics and probably also time deictics, show a great deal of variation in their morphosyntactic expression. Keenan and Anderson (1985) discuss the case of Abaza of the Northwest Caucus (the original

description is in Allen 1956: 164ff). Directional notions in this language are expressed by deictic prefixes which occur immediately after the verb-initial pronoun and before the other preverbal prefixes. Anderson and Keenan (1985: 277) gloss ʔa as 'hither' and na as 'thither' citing the following forms:

(2)   a.   (i)   ʔagra   'to bring'
          (ii)   nagra   'to take'
          (iii) gara   'to carry'

      b.   (i)   ʔayra   'to come here'
          (ii)   nayra   'to come there.'

In Abaza, then, direction can be expressed by deictics which appear as prefixes of the verbal root. These prefixes can attach to any verb which is semantically appropriate.

Hanks has discussed the morphology of Yucatec Maya deixis in great detail. I provide here only a brief sketch of one part of the deictic system which he discusses. Deictic forms in this language are most often composed of two morphemes, a base which Hanks (1990) calls an initial deictic (ID) and a suffixal or enclitic element labeled the terminal deictic (TD). Table 1, shows a selection of these bimorphemic deictic forms. IDs are displayed along the vertical axis, TDs along the horizontal one.

Table 1. Simplified Synopsis of Maya Deictics (adapted from Hanks 1990: 18–19)

		Terminal Deictics					Gloss
	ID base	aʔ	oʔ	bèʔ	iʔ	eʔ	∅	
OSTEV	héʔe(l)	héʔel aʔ						'Here it is (Tact Pres)'
	héʔe(l)		héʔel oʔ					'There it is (Vis Dir)'
	héʔe(l)			héʔebèʔ				'There it is (Aud Dir)'
DLOC	teʔe(l)	téʔel aʔ						'Right there, here (Immed)'
	teʔe(l)	téʔel oʔ						'There (Non Immediate)'
	tiʔ				tiʔ iʔ			'There (Anaph)'
	way					wayeʔ		'(In) here (Incl)'
	to(l)		tol oʔ					'(Out) there (Excl.)'
DNOM	le(l)	lel aʔ						'This one (Immed)'
	le(l)		lelo?					'That one (Non-Immed)'
	le				le tiʔ			'The one'
	le						le	'The (def art)'

Hanks notes that there are two main surface shapes in which deictic constructions occur: continuous and discontinuous. Examples in 3a illustrate continuous constructions in which TD directly follows the ID. Examples in 3b illustrate discontinuous deictics.

(3) a. (i) hé'el   a'
            OSTEV TD
            'Here it is (presenting).'

     (ii) č'áah   té'el o'
           Vb-IMPER   DLOC TD
           'Put it there.'

   b. (i) hé'el   a   maáskab'   a'
            OSTEV 2nd   N   TD
            'Here's your machete (presenting).'

     (ii) č'áah   té'   ich   k'oób'en o'
           Vb-IMPER   DLOC PREP N   TD
           'Put it there in (the) kitchen.'

These examples also illustrate another interesting characteristic of Maya deictics. In the first two examples the deictic element is the only expressed constituent. In contrast, in the next two examples, deictics are elaborated by other lexical material. Hanks suggests that this reflects a basic distinction between pronominal, prolocative and prosentential (etc.) and adnominal, adlocative and adsentential uses of the same forms. Most Maya deictics may be used in either pro-X or ad-X functions (see Hanks 1990: 17). Explaining his use of the terminology ID and TD, Hanks writes that IDs "always occur in initial position of the constituent for which they are marked, be it Sentence, the Noun Phrase, or various Circumstantial adverbial phrases, and they always precede TDs, even when the two parts are discontinuous. TDs, on the other hand, always occur in final position in the sentence or topic phrase" (Hanks 1990: 17). This is easily illustrated by sentences in which some constituent has undergone focusing or some other form of movement. Hanks provides the example given below as (4).

(4) té'   ich   k'oób'en kuč'á'ab'al   o'
     DLOC PREP N   AUX-3rd-Vb TD
     "There in (the) kitchen (is where) it's put."

In this example the locative phrase has undergone focusing and the ID base has moved with it. The TD, however, remains in sentence final position.

English may seem to be a relatively simple case in relation to the Mayan system discussed by Hanks. There are nevertheless some outstanding and problematic issues which await full investigation. The first perhaps revolves around the categorial status

of demonstrative *this/that*. When they are not functioning as pronouns (e.g., "I don't really like that.") they are typically labeled demonstrative adjectives (see for instance Anderson and Keenan 1985: 279). However, on syntactic grounds the items in question are parallel to determiners and articles (*a, the* etc.) . Thus note the examples in (5).

(5)   a.   [This / that / a / the red house]$_{DP}$.
       b.   *[Ø red house]$_{DP}$.

On the basis of distributional facts it would seem that *this/that* are DET elements (see the recent account of these issues in Lyons 1999).

There are other unresolved issues with regard to the morpho-syntax of English deixis. These problems are particularly obvious when we begin to look at non-standard varieties of English and English-lexified creoles.[5] In Guyanese Creole, the equivalents of English *this/that* and *here/there* are *dis/da* and *ya/de* respectively. In addition to the functional possibilities known from standard English varieties, GC deictics occur in post-posed positions. Examples (6) illustrate this.

(6)   a.   yu noo dem piknii *dis* a draiv laik dem na get fu iit
             'You know these children (this) go on as if they don't get to eat.'

       b.   a mii prapatii *dis* an mi hozban prapatii[6]
             'It's my property (this) and my husband's property.'

       c.   wa. dem *dis*. dis iz a mad piiopl man
             'What! These (this). These are mad people, man.'

       d.   see. *dis ya* bai
             'Say-what! This (here) guy!'

In GC and in many other varieties of English, deictics can occur post nominally (see for instance Trudgill (1990: 79)). Post-posed deictics also co-occur with deictics in base position thus resulting in what Hanks calls for Maya, continuous shapes. The system of root and post-posed deictic terms, showing possible combinations and apparent gaps, is illustrated in Table 2.

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5.   It is unforunate that very little sociolinguistic work on deixis is available. English and probably many other languages show a good deal of morphosyntactic and sociolinguistic variation in the grammar of deixis.

6.   It is alternatively possible to see this as an example of VP fronting with *dis* as an underlying subject.

   [IP [DP dis][I' Ø[VP a mi prapatii]]]

Table 2. The system of root and post-posed deictics in GC (simplified from Sidnell 1998a)

	-dis	-da	-ya	-de
dis+N	–	–	dis+N+ya	–
da+N	–	–	–	da+N·de
dem+N	dem+N+dis	dem+N+da	dem+N+ya	dem+N+de
da	–	–	–	da+de
dis	–	–	dis+ya	–
dem	dem-dis	dem-da	dem-ya	dem-de

In GC demonstratives always precede locatives although both may occur in post-posed positions (although not simultaneously). On one account, *dis/da* and *ya/de* function as suffixes attaching both to other deictics and to nouns.

A determiner must agree with its noun complement in terms of definiteness (see Lyons 1999). Thus although *di man a sel dem fish-dis* "The man is selling these fish" and *di man a sel dis-ya fish* "The man is selling this fish" are acceptable, post-posed deictics cannot combine with a DP headed by either a null determiner (generic interpretation), *di man a sel Ø fish-dis*, or an indefinte singular determiner *di man a sel wan fish-dis*.

The cross-linguistic variation in deictic semantics is at least as extensive as that which we find in terms of morpho-syntactic and lexical expression and can only be briefly sketched here. In our discussion we will draw on the terminology of figure, ground and relation which was laid out in the previous section. In terms of the characterization of the figure, we find a fair degree of variation within languages and this seems to be intimately linked to the kinds of morpho-syntactic expression. Thus adverbs specify the referent as a region, demonstratives as an enumerable thing, directional deictic verbs as a path. In some languages deictics may take morphological inflection which indicates gender and number (see for instance the case of Alamblak discussed by Foley 1986: 96). Dixon notes that Yidin has distinct demonstratives for animate and inanimate referents (Dixon 1977: 181). However, typological work on deixis has generally not documented the various modes of figure characterization, having been generally more concerned with cross-linguistic comparison of the other two components: ground and relation. More research is needed in this area. At this point it is not clear what kinds of cross-linguistic variation exist nor is it clear the extent to which variation here will be constrained by the grammatical function of the forms involved.

When we look at cross-linguistic variation in what serves as indexical ground for deictic expressions we are primarily, though not exclusively, concerned with the degree to which languages recognize the potential for speech act participants other than the speaker to serve in this capacity. As Hanks (1990) notes "egocentricity is available in language as a distinctive parameter." For a number of Maya deictics, a figure is located

relative to the location and perceptual access of both the speaker and the addressee. Anderson and Keenan (1975) also mention Palauan in this respect (as described in Josephs 1975). A somewhat similar system is described for Ponapean by Rehg (1981). The forms which Rehg calls "demonstrative modifiers" occur as enclitics suffixed to the last element in a noun phrase. These may occur in either emphatic or non-emphatic forms. Examples in 8 illustrate the latter (from Rehg 1981: 144):

(8)   Singular   Plural
       -e(t)   -ka(t)   'this (near speaker)'
       -en   -kan   'that (near addressee)'
       -o   -kau   'that (far from speaker and addressee)'

These deictic enclitics are subject to allomorphic variation which is conditioned by the final segment of the root to which they attach (see Rehg 1981: 145). The following illustrates their use with words ending in consonants:

(9)   pwihk   'pig'
       pwihke(t)   'this pig.'
       pwihken   'that pig by you.'
       pwihko   'that pig away from you and me.'

In addition to the demonstrative modifiers, Ponapean also has a set of demonstratives which Rehg refers to as 'pointing demonstratives" (1981: 150). Unlike the enclitic demonstrative modifiers, pointing demonstratives stand alone in the noun phrase and appear to have a strongly presentative function.

(10)   Singular   Plural
       ie(t)   ietakan   'here (near speaker)'
       ien   ienakan   'there (near addressee)'
       io   iohkan   'there (far from speaker and addressee)'

       iet noumw naipen   'Here is your knife'
       iet!   'Here'
       ien!   'There it is (by you)."'

Finally, Ponapean has a set of demonstrative pronouns which occur independently of lexical nouns in an NP.

(11)   Singular   Plural
       me(t)   metakan   'this/these (near speaker)'
       men   menakan   'that/those (near addressee)'
       mwo   mwohkan   'that/those (far from speaker and addressee)'

One can further observe parallel semantic distinctions of direction in verbal suffixes as shown below:

(12)   -do   'toward me.'
       -wei   'toward you.'
       -la   'away from you and me.'

The Ponapean system thus nicely illustrates the semantic and structural parallelism that one often finds across a series of deictic verbs, demonstratives and locative adverbs. This parallel organization can be taken as evidence that spatial deictics do form a natural class in any given language (a point elaborated in Hanks 1990).

Languages that incorporate a 'relative to addressee' parameter do not exhaust the possibilities here and we find further cross-linguistic variation in terms of the indexical ground of deictic reference. Thus some languages incorporate a thoroughly 'sociocentric' term by which an object is identified as remote from the speech situation. An example of such a language is Tlingit (Story & Naish 1973). CiBemba takes this one step further and introduces more subtle distinctions for both relative-to-speaker and relative-to-addressee terms. The following examples are from Welmers (1973: 286–287):

(13)   ù-nó   'this (immediately adjacent to or on the speaker)'
       ù-yú   'this (nearer the speaker than the addressee)'
       ù-yóò   'this (equally near or relevant to both)'
       ù-yó   'that (immediately adjacent to or on the addressee)'
       ù-lyà   'that (away from both)'

Finally, we find languages in which the indexical ground for some deictics is constituted by some geographical location rather than the speech act participants. I have already discussed the role that fixed geographical features may play in linguistic systems of spatial reckoning. In Dyribal, according to Dixon (1972), deictic markers may occur suffixed to noun markers (e.g., determiners). While some of the markers instantiate a system of relative spatial reckoning based on the position of the speaker, others indicate location relative to geographical features. Examples in (14) illustrate:

(14)   baydi   'short distance downhill'
       bayda   'medium distance downhill'
       baydu   'long distance downhill'
       dayi   'short distance uphill'
       daya   'medium distance uphill'
       dayu   'long distance uphill'

With regard to the relational component we find a great deal of cross linguistic variation. English speakers will be most familiar with the proximal/distal contrast relation. Other languages which Anderson and Keenan (1985) label "distance oriented systems" introduce further distinctions along this same dimension. Many dialects of English preserve the tripartite contrast between *here, there, yonder* (including Guyanese Creole see Sidnell 1998a). Spanish has a similar tripartite contrast along a single dimension of distance from speaker: *este, ese, aquel*. Most languages seem to make at least a basic distinction between proximate/distal or immediate/distal in the relational component.[7]

7.   German *dies/das* is another exception here.

A possible exception is to be found in Tok Pisin. Mihalic (1957: 11) glosses Tok Pisin *em* in *em bilong mi* as "this/that is mine." Similarly the alternate demonstrative *dispela* as in *dispela i-hous bilong mi* is glossed as "this/that is my house." However, this seems to be the exception cross-linguistically and most deictic systems involve at least one basic distinction in the relational component.

Other languages introduce different dimensions of contrast within the relational component. One well-documented type of contrast apparently not found in Indo-European languages is between visible and invisible objects. Mayan (Danziger 1994; Hanks 1990) and Kwakwa'la (Boas 1947) are languages which include a visible/invisible contrast in the deictic system. Danziger (1994: 889) cites the following forms which illustrate the visible/invisible contrast for the locative deictic series in Mopan Maya:

(15)   waye'   'here (1st person locative)'
        ta'kan   'there (2nd person locative)'
        tilo'   'there (3rd person locative visible)'
        te'   'there (3rd person locative invisible)'

Hanks notes that in Yucatec Maya another relational dimension is instantiated by forms which specify the referent as audible. Thus *hé?eb'e?* can be glossed "There it is" but is more appropriately paraphrased "Listen to the one audible to us" (see Hanks 1992: 54ff).[8]

It is quite common to assume that while the horizontal dimension may receive extensive and somewhat language-specific treatment by the deictic system, the vertical plane is experienced largely as a function of the operation of gravity and is thus available as raw, physical experience. Along these lines Fillmore (1982: 36-7) suggests that "[t]he up/down axis is determined by recognizing the direction of the pull of gravity, and is therefore not to be explained in terms of egocentric or anthropocentric predispositions of language users." Recent work by Kataoka (1998) looking at the use of spatial language by Japanese and American rock climbers has shown that many assumptions about the assumed universality of a vertical dimension dominated by the force of gravity do not in fact hold (at least across contexts such as the one he discusses). In any case, languages which introduce a vertical dimension of contrast in the relational component of deictic terms are well-documented. Anderson and Keenan (1985: 291) discuss Daga in this regard (see Murane 1974 for the description). Another example is provided by Lhasa Tibetan as described in Agha (1996).

Although cross-linguistic variation is extensive at least for ground and relation components, it is at the same time seemingly quite orderly. Thus in terms of the features that may serve as indexical ground, we note that while there are many languages in which distance

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8.   William Hanks (pc) notes "One major theoretical problem is how to separate encoded from inferred features." On this issue see Hanks 1990, Agha 1996.

(or some other phenomenal quality) is calculated relative to speaker but not addressee, the opposite is not true (in fact no languages appear to operate in this way). Similarly, although many languages grammaticalize a relational contrast along the horizontal but not (at least explicitly) the vertical plane, the reverse situation apparently does not exist. Thus one might speculate that deictic terms observe similar universal constraints as have been demonstrated for color terms (Berlin & Kay 1969, see also Weinreich 1963).[9]

3. Formulating place: Deictics in interaction

When we turn to consider the place of deixis in human interaction, we find a rich and growing area of research. A central set of issues here concerns the way in which the grounding of deictic terms in the particulars of the speech event may be temporarily suspended. For instance in "He said 'stay here while I get help!'" the value of *here* must be calculated relative not to the immediate event of speaking but in relation to the narrated event of speaking (See Jakobson 1957). These issues have been discussed extensively by Hanks (1990) and Haviland (1996) among others. The general complexity of deictic usage and interpretation is also attested in studies of acquisition. Thus both Tanz (1980) and Wales (1986) show that deictic terms are acquired relatively late

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9.   Important issues which unfortunately fall beyond the scope of the present paper are patterns of grammaticalization, lexicalization and diachronic change associated associated with deixis. The etymology of many basic demonstrative and locative deictics is somewhat obscure. English and its closest relatives (German, Middle High German, Old High German, Old Frisian, Middle Dutch) appear to have cognate forms of *here* and *there*. The Oxford English Dictionary suggests that Goth *hér* derives from the pronominal stem *hi-* 'this' but admits that the nature of the formation is obscure. We have a clearer picture for the patterns of grammaticalization for which deictics serve as source lexemes. It is not uncommon for both locative copulas and imperfective, progressive or durative aspect markers to develop from the distal locative adverb. This can be seen for instance in a number of creole languages with various lexical bases. For instance Guyanese Creole (English lexical base):

    Ramish   de   a   hous
    Ramish   LOC   PREP   house
    "Ramish is at home."

    Ramish   de   a   ron
    Ramish   ASP   ASP   run
    "Ramish is running."

In the second example the *de* in contemporary GC indicates extended duration so that *Ramish a ron* means "Ramish is running (right now)." The relationship between locative adverbs and aspectual markers in Jamaican and Guyanese Creoles is discussed in Mufwene (1986). A more general discussion of the lexical sources of progressive grams can be found in Bybee, Perkins, Pagliuca (1994).

presumably because they lack a stable referent — as people take turns talking, the referents of deictics such as *here, there, this, that* change. While such pragmatic and cognitive complexities are doubtless relevant to the acquisition process, social factors may also be implicated. In a fascinating study of the acquisition of deictic verbs in a Samoan village, Platt (1986) showed that although the Samoan equivalent of deictic *bring* (agent-object-path) is semantically more complex than deictic *come* (agent-path) the former is acquired first. She attributed this to the fact that children, being low status individuals, are not expected to beckon adults (a number of ethnographic studies have shown that movement is associated with lower status and a lack of it is associated with high status — see for instance Ochs 1988; Duranti 1994). However there is no expectation that children will not want and request objects using the Samoan verb for *bring*.

The study of deixis has undergone something of a renewal as researchers have begun to investigate naturally occurring data embedded in situated courses of action (Haviland 1996; Goodwin 1986, 1994, 1999a, 1999b; Hanks 1990). Such studies were to some extent anticipated by the earlier work of Schegloff. In his pioneering 1972 paper, "Notes on a conversational practice: formulating place," Schegloff argues that the use of a place formulation (including the deictic terms *here* and *there*) involves both speaker and hearer in a series of analyses. In the first place, a place formulation involves the operations of a location analysis. That is, in order to produce an intelligible place formulation, a speaker must do an analysis of the location of the speaker and recipient (and associated possibilities for perceptual access, see Hanks 1996a). Demonstrative *this* for instance supposes that a recipient may locate the object so designated and this turns out to have important implications for how it is used (see below and Goodwin 1986). Furthermore, a place formulating expression may engender a membership analysis as certain place terms are appropriately used only by participants in a certain relation to one another (i.e., as co-members of the category 'local'). Finally, Schegloff suggests that any place formulation will be fitted to the topic and the local relevancies of an emergent and sequentially organized course of action.

Consider the following example from a telephone conversation between two friends:

TC 11	(b):	#28
15	Pya:	I'jus c- c-can't get going aheheh
16		(0.2)
17	Bus:	Oh you didn- you didn hear thuh the news didju.=
18	→	=We were out there before Thanksgiving.
19		(.)
20	Pya:	Oh, you were?
21	Bus:	Yeah

22			(0.6)
23	Bus:		Were we?
24			(1.0)
25	Pya:	→	Oh, out here?
26	Bus:		Yeah.=
27	Pya:		=Yeah. Yeah. Right. Right.=
28	Bus:		=Yeah. Annie's gonna have a baby.
29	Pya:		Oh really?
30	Bus:		Yeah.
31	Pya:		↓We:ll: congratulations.

Here Pyatt has called Bush to inquire after a mutual friend. After it becomes clear that Bush is not informed with respect to the friend's whereabouts, Pyatt explains that he received a message saying that the missing friend was "out in the desert an' he ran out of gas." A few turns later, Bush asks if Pyatt "went out there last weekend?" *There* apparently refers to a shared house in the desert. In the fragment we are looking at, Bush begins a new sequence saying "Oh you didn- you didn hear thuh the news didju.="[10] Clearly, such a way of beginning strongly projects the telling of some news by Bush. Indeed, anything that occurs after such a "pre-announcement" is vulnerable for being heard as the news projected. So when Bush follows immediately with, "We were out there before Thanksgiving," Pyatt is set with the task of deciding how this next installment fits with the rest of the talk. There are at least three alternatives. First, "We were out there before Thanksgiving" might be heard as the news itself. Secondly, it could be heard as the beginning of the news-delivery but not itself the news whose telling has been projected (e.g., "We were out there before Thanksgiving and we saw an enormous…."). Thirdly, it could be an account of why Pyatt has not heard the news. These alternative understandings of how the talk here fits into the sequence of which it is a part have consequences for the interpretation of *there* in line 18. Specifically, if the talk in question is heard either as the news itself or as the beginning of the news delivery, *out there* can be heard as referring to "in the desert" a place for which neither of the co-participants is, at the time of speaking, present. Call this *out there¹*.

out there¹ = "The desert"
 Speaker   Recipient
     (Referent)

On this hearing, this *out there* and previous uses of *there* to refer to the *desert* are co-referential. Alternatively, if this "We were out there before Thanksgiving," is heard as

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the account for why Pyatt has not heard the news, *there* can be heard to mean "with Pyatt," that is, this *there* is Pyatt's "here."

*out there*² = "with Pyatt"

Speaker   Recipient
            Referent

Pyatt's initial response — what Maynard (2003) calls a "news receipt" — suggests that he hears the talk at lines 17–18 as some kind of news delivery. However, Pyatt apparently discovers his own error and subsequently revises his understanding of 'out there' at line 25. At this point then, the relation of "We were out there before Thanksgiving" to the sequence as a whole becomes clear — it is, in fact, an account of why Pyatt does not already know the news (Bush and his wife Annie who is the likely recipient of the talk at line 23 have held off telling people about her pregnancy until after Thanksgiving and they saw Pyatt last when they visited him before Thanksgiving).

This fragment illustrates that participants' understanding of deictic terms is dependent on the sequential context of action in which they occur.

Much recent work on deixis has developed, from a number of theoretical perspectives, Schegloff's (1972) notion of a commonsense geography. Schegloff (1972) originally discussed the idea of a commonsense geography in relation to political boundaries. This is but one possible geographic framework which may be invoked in and presupposed by place formulating practices. The spatial knowledge which provides the surface upon which deictic usages operate is an area which deserves serious empirical investigation of both an ethnographic and interactional sort. It is this concern with the ethnography of geographic knowledge which makes Hanks' (1990) description of the Yucatec deictic system so valuable. In Hanks's account the formal characteristics of the deictic system are elaborated and illustrated through the use of examples which are contextualized in their indigenous settings. As such it is possible to see the severe limits of the glosses so frequent in the typological literature (proximate/ distal etc.). Other work has continued this investigation of the articulation of deictic forms and local geographies within situated courses of human action. Sidnell (1997) discusses the way in which forms glossed as "here" and "there" are interpreted as referring to spaces bounded by property divisions. Because space is understood as reflecting pre-existing relations of kinship, the use of a deictic term such as "here" can have broad reaching significance in this context.

In a number of recent papers Charles Goodwin has elaborated the notion of a semiotic grid which may be seen as a highly local instantiation of a commonsense geography. Semiotic grids such as munsell color charts (1999b), hopscotch patterns (2000), maps (2000), graphic representations of human action (1994), archaeological sites (1994), and even a kitchen table (2003) are features of the human built environment which offer a highly structured set of possible denotata for deictic referring

practices. As Goodwin has demonstrated on a number of occassions, knowledge of the properties and uses of these semiotic grids is often associated with a particular discipline and its experts. Deictic usages may thus presuppose significant training and are similarly implicated in practices of socialization to a professional community. Deictic usages and the semiotic grids they operate upon then can also be seen as embedded within particular "ways of seeing." Furthermore the notion of a semiotic grid allows one to significantly elaborate concepts of transposition and relativization by investigating the formal properties of the media upon which such deictic usages operate. For instance in a recent paper on pointing, Goodwin illustrates the ways in which the archaeologists combine moving points, demonstrative deictics and directional deictic verbs to delineate complex shapes and patterns in the surfaces upon which they work.

Earlier work by the Goodwins (Goodwin 1980; Goodwin 1986), had established the interactional importance of deictic terms combined with gesture. Charles Goodwin noted that:

> [t]he organization of a relevant and appropriate framework of mutual visual orientation becomes a practical problem for participants, a problem that they must work out together in the course of their interaction (1986: 29).

Although the focus of that paper was gesture it is clearly the case that deictic terms are particularly important in this regard as well. The following example is offered as an illustration of one function of deictic terms in interaction. In particular the fragment exemplifies the way in which deictics, combined with gestures, function to organize co-participation within situated contexts of multi-party action. The larger context is a dinner party attended by eight people and hosted by two university students (Beth and Ann). The following analysis focuses on Roger's use of 'anticipatory' *this* in line 27 and the role this deictic plays in creating a conversational opening in which Roger delivers his telling.

Jeopardy Question (JS.V:9:34.06)

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5      Beth:    oh: honey. What wz the jeopardy question
6      (Ann):   hhhmph
7      Beth:    maybe somebody could answer it.
8               (0.2)
9      Beth:    we watch jeopardy.=we play together.
10              an:   he was late coming home so he called me
11              to say:   tape it.
12              (.)
13              anso I taped it.
14     Ann:     [hehihih
```

15	Beth:	[I got home,
16		(0.2)
17		an I ( ) think its over,
18		an I turn the teevee on:,
19		(0.2)
20		an it wasn't over
21		it was like the final jeopardy question?
22	Roger:	so she pressed stop.
23	Beth:	so I [pressed stop on] the video recorder
24	Roger:	[on the recorder]
25	Beth:	instead a [turning the teevee back off]
26	Ann:	[( ) oh::: no:::::]
27	Beth:	[AN SO WE'] re watch [ing the whole jeopardy]
28	Ann:	[( )] [he h e he h heh heh heh]
29	Beth:	(an feelin' [soo dumb)]?
30	Roger:	[it goes like this
31		they got the question
32		an then they--they turned up
33		the f[irst person,
34	Ann:	[that is soo funny
35	Roger:	who got it wrong.
36	Beth:	right
37	Roger:	they turned up the second person
38	Beth:	who got it [wro:ng
39	Roger:	[who got it wrong
40		an it goes off.
41	Beth:	an then it wentoff an

Here a story is jointly told by two participants. While the details of the telling need not concern us here, it is important to note that Beth's question to Roger (line 5) becomes a warrant for a story telling, in the form of an account.[11] Furthermore the question

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11.   The reason for this is fairly straightforward. During the show in question a host offers "answers" (e.g.,The largest body of water in North America) and the contestants must respond with the appropriate "question" (e.g., What is Lake Superior?). The relevant point here is that, when Beth asks about the question she actually means the "answer" from the point of view of the game's organization. At the same time the fact that Beth seems to know the "question" but not the answer is somewhat counter to the expectations of anybody who knows something about this game-show. As such she is accountable for her query here and in fact the story that follows has nothing to do with the actual question/answer but is rather an account of the state of her partial knowledge (and Roger's).

in line 5 is designed for a recipient who is knowledgeable. The form of the question thus presupposes that Roger should be able to recognize a specific question from an episode of Jeopardy (i.e., the object of Beth's inquiry here). As Charles Goodwin (personal communication, see also Goodwin 1987) notes, this formulation displays to the co-participants a state of prior knowledge and a domain of experience shared between Beth and Roger. So from the outset of the story which follows (and for which line 5-7 becomes a warrant), Roger is implicated in the telling. What concerns us here is the way in which the passing of the story-telling from Beth to Roger is accomplished and, specifically, the role deixis plays in this accomplishment. In this respect note that during Beth's talk (lines 5-21), Roger is disattending while the other participants are gazing at her at the relevant places. Thus Roger's talk in lines 22 and 24 is supportive and does not, in its design, indicate any intention to usurp the role of teller. One way he brings this off as supportive (rather than competitive, i.e., offering a competing focus) is by delivering it while gazing at the plate in front of him rather than at the co-participants. At the outset of line 27, the participants, with the exception of Roger, are all gazing at Beth as she delivers her talk.

However at the beginning of line 29 Beth begins to raise her hands over her face thus removing access to the target of the co-participants' gaze. At the same time, Roger begins his talk ("it goes like this") accompanied by a gesture in which his hands are raised to the eye-level of the co-participants. During the talk in line 30, he moves his gaze from the plate going first to Ann as he raises his hands, and then, as his hands come down (precisely over "this") across the far side of the table.

As Sacks pointed out, a storytelling often takes more than one turn to complete and thus involves a suspension of the relation between possible turn completion and transition relevance (See Sacks 1992; Sacks, Schegloff & Jefferson 1974). As such, stories told by more than one participant may involve complex speaker transitions.

As Beth raises her hand so as to cover the current target of the recipients' gaze (her face), Roger offers an alternate point of visual focus by the use of a hand gesture. Most relevant to our immediate concern here, Roger uses the deictic *this* to indicate to the coparticipants that an alternate point is being offered. In fact, deictic *this* can be seen in the context here to request the gaze of the co-participants, since understanding of such a deictic term may rely crucially on visually accessed information. Similarly a recipeint's gaze, directed at a gesture, may be understood as a public display of co-participation in the talk-in-progress.

Roger's use of the deictic-gesture combination establishes an imaginary surface upon which narrated actions, represented in gesture, can take place. Thus questions are "turned up" on this imaginary surface in front of Roger, the existence of which is first established by the demonstrative combined with a framing gesture. The culmination of this reorientation comes when Ann, who was Beth's primary interlocutor during

her telling, brings her gaze to Roger directly over the self-repair hitch "they-they" in line 32 (see Goodwin 1981).

Goodwin (pc) remarks, "the deictic *this* (or *like this* as a special construction) by proposing the relevance of visual orientation to a particular place can be used as a tool to get others to redirect their gaze, and this in turn is implicated in larger participation structures through which basic discourse identities such as Speaker and Hearer are organized as interactive phenomena and made visible."

When we look at short sequences of video recorded talk-in-interaction such as this one we find deictics thoroughly embedded in coordinated courses of action. I have (following Goodwin 1986) illustrated one function of deictics in interaction — that of reorganizing co-participation and providing a framework for mutual orientation. While we may usefully abstract away to the universal semantic and pragmatic components of deixis for the purposes of cross-linguistic typology, investigation of their place in interaction involves us in a set of issues having to do with the structure of the built environment (commonsense geographies and semiotic grids), and the organization of participation and orientation through gesture, gaze and talk. Deictics thus provide a striking illustration of the rootedness of language forms in both the phenomenal world and situated courses of action of the participants who produce them.

A number of philosophers have asked whether it might be possible to substitute objective (i.e., non-indexical) for subjective (indexical) expressions. The research reviewed here, based on audio-visual records of human interaction, shows how and why such a substitution would never be able to preserve the sense and significance of the original, indexically formulated expressions (see Sacks 1992).

4.   Directions for further research

The past few years have seen a florescence of studies of deixis. Still, many questions remain completely or partially unanswered. In terms of pragmatic theory, we find in the literature a number of different accounts of deictic functions. This diversity, while perhaps indicative of a healthy debate, also makes comparisons which draw from the accounts of different authors, complicated. In the discussion here I have drawn on Hanks' (1992) elaboration of the figure-ground-relation terminology. From the perspective of typology, we do not at this point have a complete description of cross-linguistic variation. More importantly we have no typological explanation for the extent and limits of the variation which has been documented. However, initial inspection reveals some strong implicational universals (see Comrie 1980). Thus, as I have noted above, although we find some deictic systems which include a horizontal dimension of contrast but not an explicitly vertical one, the opposite does not hold.

It seems likely that such implicational relationships hold universally for many other dimensions of contrast within deictic systems.

While the prospect of such work is exciting, even more promising is the continuing work on deictics in interaction. We can only hope that future researchers will continue to explore the relation between interaction, lived space and linguistic form which has been so cogently illustrated for the Maya by Hanks (1990). Such work contributes both to our understanding of deictic function in particular and our understanding of interaction in general. Further work in this vein will no doubt also aid in our attempts to build a more descriptively adequate framework for typological studies.

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Implicitness

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Implicitness is at one time an intrinsic feature of natural languages and a powerful instrument of communication. Consequently, the study of implicitness can be tackled from at least two different but not unrelated perspectives. On the one side, it properly belongs to the domain of language use, and it is the task of pragmatics to spell out the conditions under which an expression is associated to implicit meanings either conventionally or in some specific context of utterance. On the other side, it presupposes a view of language that allows for meanings to be contextually actualized to various degrees in the process of communication. In fact, when faced with the problem of defining what implicitness amounts to, the first difficulty we come across is whether there is anything of what we say that is ever totally explicit.

If inferential pragmatics, as started by Grice, has established itself in the literature as the most powerful apparatus for the treatment of the communicative side of implicitness, mature theories of semiotics have long pointed out that the link between what is said and what is meant can only be grasped inferentially, thus providing the general paradigm for the development of theories of meanings as dynamic, negotiable entities (Eco 1997; Violi 1997). It is therefore within this paradigm that both the semantic and the pragmatic sides of implicitness phenomena find their natural theoretical locus, while cognition represents the empirical domain that provides the motivations and principles of their functioning.

Anthropology provides a third, fundamental perspective on implicitness. Implicit meanings are in fact related to what is said as much as to what is not said via a complex set of culture-specific norms which tacitly prescribe what can be said when, where, by whom, in what manner, and under what particular circumstances. Correspondingly, each of the salient components of a communicative event prescribes culture-bound silences which allow for the inferential derivation of implicit meanings (Hymes 1962, 1972, 1974). Cross-cultural differences in the use and evaluation of silence have been explored by, among others, Basso (1972), Bruneau (1973), Tannen (1985), Lehtonen & Sajavaara (1985). Within an ethnographic approach, Saville-Troike (1985) has provided a grid for the interpretation of silences of a broad range of types within a number of pertinent levels and domains, suggesting for each level the potential function of silence as prime, substitute, surrogate, as well as frame, cue, and background. The power of silence as a social and political instrument is discussed in Jaworski (1993).

Finally, sociolinguistics has contributed important insights in the study of implicit meanings attached to codeswitching and code-mixing, styles of speech linked to sex, age and social status (Goffman 1967; Gumperz 1982).

In this article we shall concentrate on linguistic approaches to implicitness. Even so, we will restrict the exposition to an overview of the most basic notions related to implicitness in general. The broader theoretical issues involved will be mentioned briefly in §3. It should be remarked, however, that to some linguists, including the writer, implicitness is related not only to propositional contents but also to aspects of meaning resulting from speakers' attitudes and emotions, as well as aspects of the (even non-intentional) effects an utterance may have on the hearers and their interpretations. Consequently, general concepts such as coherence, politeness, and involvement enter the discussion of implicitness phenomena. The restricted set of phenomena discussed below may ultimately have to be reinterpreted in such terms (see 2.6). Moving from similar remarks, Östman (1986) treats implicitness as the defining characteristic of pragmatics. Though there are many borderline cases, in principle, pragmatics does not deal with explicitly communicated meaning. Implicitness, in that kind of framework, refers to any linguistic choices that a speaker can in principle deny that he or she has made. It goes without saying, then, that in Östman's view implicitness goes far beyond what can be covered by the notions reviewed below.

1.   Historical note

In linguistics, the debate on implicit meanings is long and intricate, dating back at least to the years when the claim for the autonomy of syntax seemed to relegate semantics to a purely interpretive role.

In those years, a large amount of publications were produced to demonstrate that the well-formedness of syntactic structures owed a lot to hidden aspects of sentence meaning. The pivot of the debate was the notion of 'presupposition', and various theories were put forward that brought to the foreground the complex interplay of syntax, semantics and pragmatics in the identification of sentence meanings.

The picture became even more complex when pragmatics established itself as an autonomous discipline, and the exploration of such notions as 'utterance meaning' and 'speaker meaning' was undertaken. Grice drew the attention of philosophers and linguists to what an utterance can convey implicitly in his work on conversational implicatures and since then the study of implicitness has undergone continuous refinements, extending beyond the traditional boudaries of rhetoric to the domains of psychology, sociology, ideology research, the study of literature, artificial intelligence, to mention but a few.

2.   Semantic and pragmatic categories of implicitness

In the linguistic literature, implicitness phenomena have been dealt with under various headings. Entailments, presuppositions, sous-entendus, implicatures, explicatures, implicitures are the most widely used terms. Some of them have been mostly studied by logic and logically-based semantics, others are typically pragmatic. Since they are inferentially computed, they may also be referred to as 'inferences': it should be clear, however, that the term 'inference' can be used as a synonym for 'implicit meaning' only in so far as it denotes the outcome of an inferential process, not the process itself. The latter may in fact involve further implicit premises which are not inferences in the sense assumed here.

2.1   Entailment

The notion of 'entailment' is a relation between semantic units, that is propositions, and it is drawn from classical logic. As such it is defined in terms of valid inferences, or, alternatively, in terms of truth values:

> A entails B (A ⊩ B) iff B is true whenever A is true (or, in all worlds where A is true, B is true).

This is a fundamental category in logic, because it is the basis for all other logical relations, such as equivalence and contradiction. Thus, the proposition underlying the sentence "Molly is a cat" entails the proposition underlying the sentence "Molly is an animal":

(1)   CAT (M) ⊃ ANIMAL (M)

As a consequence one cannot assert that Molly is a cat and deny that it is an animal: the result would be a contradiction.

Entailments are part of the content of what is said, and can neither be cancelled nor detached. Entailments became particularly attractive in linguistics when the notion of presupposition started to be debated. Semantic theories in fact saw the possibility of formally defining presuppositions as a special type of entailment.

2.2   Semantic presupposition

Although linguistic surveys of presuppositions assume Frege (1892) as the cornerstone of modern discussions on presuppositional phenomena, the distinction between what an expression *praesupponit* and what it *denotat* is not a modern conquest. Horn (1996) points out that the relation — although not as much formalized — emerged in the Western tradition in the presupposition-dependent sophisma of choice for the medievals "*Do you still beat your ass?*", which in turn derives from the 3rd century B.C. Megarians' "*Have you stopped beating your father? Answer yes or no*".

There is no denying, however, that Frege's classical paper on sense and reference made the philosophical debate on presuppositions most appealing not only to philosophers but also to linguists. Frege argued that both the following sentences

(2)   Kepler died in misery.
(3)   Kepler did not die in misery.

presuppose the existence of a presumably unique referent for the singular subject 'Kepler', but this presupposition is not entailed by the sentence, that is, it is not part of its semantic content, otherwise it would undergo all the logical processes that logical forms do, and the results would be absurd: if the affirmative sentence had the logical form "Kepler died in misery and the name Kepler has a referent", its negation would be "Kepler did not die in misery or Kepler has no reference", which is absurd.

Frege therefore concluded that presuppositions attached to proper names and referential entities, as well as to time clauses, differ from entailments in that they survive negation.

Frege's analysis of singular terms was criticized by Russell on account of its incapability of explaining the meaningfulness of sentences including terms that have no reference, such as

(4)   The present king of France is bald

The solution offered by Russell in *On Denoting* (1905) — a new theory of descriptions which banished descriptions like 'the present king of France' from logical form while replacing them with a conjunction of assertions which allowed for negation to operate either with a narrow or with a large scope — dominated for half a century, until it crashed against the new approach proposed by Strawson (1950), within the ordinary language philosophy framework.

Strawson (1950) claimed that most puzzles can be got rid of if we distinguish between sentences and the use of sentences to make statements, and he consequently defined a notion of presupposition as an inference relation, holding between statements, based on a semantic entailment (or necessitation), thus formulated:

i. $A \Rightarrow B$ ("A necessitates B" or "A semantically entails B" if and only if whenever A is true, B is also true).
ii.   A presupposes B if and only if $A \Rightarrow B$ and $\neg A \Rightarrow B$.

According to this definition, then, semantic presuppositions came to be seen as a subtype of entailment — specifically, that type of entailment which remains valid even when A is negated. Therefore, given a sentence like

(5)   Papyrus stopped publishing poetry.

we can infer that

(6)   Papyrus used to publish poetry.

To prove that the inference is in fact a semantic presupposition we can apply the negation test, and see whether the inference can still be drawn: from (5a) we can infer (6).

(5)   a.   Papyrus has not stopped publishing poetry.

As the result shows, (6) is a semantic presupposition according to the definition provided above. To further illustrate the point, consider (7), another inference which can be drawn from (5):

(7)   Papyrus no longer publishes poetry.

Unlike (6), (7) does not survive if we negate (5) — cf. (5a) —, therefore we cannot properly consider it a semantic presupposition.

As these examples show, semantic presuppositions are assumed to be explicitly anchored to some linguistic form or material appearing in the surface form of the utterance. In our cases the anchorage is provided by the lexical item "stop", but quite a few expressions can be responsible for presuppositional inferences. They are called 'presupposition triggers'.

Presupposition triggers fall into two main categories: lexical and syntactic. In what follows we shall review the most important ones (for a longer list, see Levinson 1983):

(a) *Definite descriptions*. Inherited from the philosophical debate briefly reported above, is the generalization that all definite descriptions, including proper names, carry with them existential presuppositions. Sentence (8)

(8)   Sue is dancing a macarena.

presupposes that in some possible world, there is a person called Sue and that there is some dance called 'macarena'.

(b) *'Factive' predicates*. These are a special class of predicates whose syntactic behavior has been shown by Kiparsky & Kiparsky (1970) to depend on the semantic presupposition associated with the *that*-clause they govern. Factive predicates include epistemic verbs like *know, realize, ignore,* and emotive predicates like *be surprised, be glad, regret, mind, forget, deplore, resent, care about*: they all differ from non-factive verbs like *suppose, assume, allege, claim, believe, fancy, conclude, conjecture* because by using the former, but not through the latter, the speaker presupposes that the embedded clause expresses a true proposition, and makes some assertion about that proposition:

(9)   I regret that he is completely drunk. He is completely drunk.
(10)   I suppose he is completely drunk. # He is completely drunk.

(c) *'Implicative' verbs.* In addition to factive verbs, which presuppose the truth of their complement sentence, Karttunen (1971) has identified another class of verbs which also involve presuppositions, but in a different way. These verbs, which Karttunen called implicative verbs, include *manage, remember, bother, get, dare, happen,* as opposed to non-implicative verbs like *agree, decide, want, hope, promise, plan, try.* According to the semantic definition of presupposition stated above, sentence (12) below does not 'presuppose' that George kissed Naomi, because if we negate the sentence the alleged presupposition fades away:

(11)   George managed to kiss Naomi.)) a. George kissed Naomi.
(12)   George did not manage to kiss Naomi.)) a. George did not kiss Naomi.

The negation of a sentence with an implicative predicate implies the negation of its complement. However, note that (11) also suggests that George at least made an attempt to kiss the woman, and that the action involved some difficulty. These further implicated meanings actually survive in negative contexts, and we have the feeling that they are part of the truth conditions of the sentence — if someone did not even try, it would be impossible to regard (11) as true — hence they qualify as presuppositions:

(13)   George managed to kiss Naomi.)) b. George tried to kiss Naomi.
(14)   George did not manage to kiss Naomi.)) b. George tried to kiss Naomi.

To conclude, an implicative verb carries a presupposition of some necessary and sufficient condition which alone determines whether the event described in the complement took place. The main clause can be looked upon as a statement about whether this decisive condition is satisfied, and under what spatial and temporal circumstances. An asserted main sentence with an implicative verb, however, also commits the speaker to an implied proposition which is not a semantic presupposition, but is all the same tightly connected to what is said — we might say it is part of semantic content of the predicate.

(d) *Change of state, inchoative and iterative verbs* also presuppose their complements:

(15)   George has stopped smoking)) George used to smoke
(16)   When he met Sue, George started to stammer.)) George did not stammer before meeting Sue.
(17)   Sue re-read his thesis.)) Sue had read his thesis before.

(e) *Verbs of judging.* Fillmore (1971) and McCawley (1975) discussed the implications of such verbs as *accuse, blame, criticize,* and labelled them 'lexical presuppositions'. The sentences below

(18)   Sue is accused of/blamed/criticized for slamming her husband.

involve the propositions "Sue slammed her husband" and "slamming one's husband is bad", but, Fillmore remarked, *accuse* asserts that Sue did it and presupposes that it

was bad, while *criticize* asserts that the deed was bad and presupposes that Sue was responsible for it.

Connotations also belong to the realm of lexical presuppositions. A classic example is *assassinate*, a verb which is used to assert that the referent of its grammatical object is killed, but, as with *murder*, there is a presupposition that the killing was intended. Hence, the awkwardness of

(19)   The rebels accidentally assassinated the king.

Moreover, the use of *assassinate* is linked to a set of presuppositions concerning the victim — the victim had a powerful political role, which stopped with his death, and removing the power was the motive for the assassination. Thus one does not "assassinate" a parrot, a rock star or a poet, nor does one assassinate a political leader for some irrelevant personal troubles.

(f) Presuppositions may be triggered by the *syntactic form of the sentence*: clefting and pseudoclefting, for example, convey specific presuppositions:

(20)   It is George who kissed Naomi.
(21)   The one who kissed Naomi is George.

While the conceptual meanings underlying (20) and (22) are identical and coincide with the conceptual meaning underlying the unmarked construction (22)

(22)   George kissed Naomi.

that is, "there is an individual called George and there is an individual called Naomi and they were involved in an act of kissing", the actual meanings conveyed by each of the sentences vary as a function of the different distribution of information that is asserted and information that is presupposed: (20) presupposes that someone kissed Naomi and asserts that it was George; (21) presupposes that only one person kissed Naomi and that was George. The relationship between what is asserted and what is presupposed varies if different constituents are focalized: thus, in (23) it is presupposed that someone was kissed by George and it is asserted that it was Naomi.

(23)   It is Naomi that George kissed.

Similar remarks hold for prosodic emphasis in spoken language: in (24) it is presupposed that somebody kissed Naomi and it is asserted that it was George.

(24)   GEORGE kissed Naomi.

(g) *Temporal clauses* presuppose the truth of the content they convey:

(25)   Before leaving, George shut the windows.)) George left.
(26)   After their father's death, they sold their large house.)) Their father died.

(h) *Non-restrictive relative clauses* are not negated when the main clause is negated: they are therefore able to carry presuppositions:

(27)   Hillary, who is a famous lawyer, has four children. >> Hillary is a famous lawyer.

(i) *Counterfactuals* presuppose that the contrary of what is stated was the case

(28)   If you had listened to my warnings, you would not be in trouble now. >> You have not listened to my warnings.

(29)   If she had not called him 'pig', he would not have felt so poor. >> She called him 'pig'.

All the cases discussed so far as examples of semantic presuppositions are based on the negation test. It has been shown, however, that semantic presuppositions also survive in another context, that is when the sentences which carry them are made into questions. So the existential presupposition triggered by the proper name in "Sue is dancing a macarena" survives if we ask "Is Sue dancing a macarena?" and the same can be checked to hold for all our examples (b) through (i).

Survival to negation and question is not, however, a guarantee that the identified inference is a semantic presupposition. In order to include presuppositions within the class of logico-semantic categories we must demonstrate that they are aspects of meaning associated with a linguistic expression in a stable and invariant manner, that is, they do not vary when the context of utterance varies.

Unfortunately, critical analyses of presuppositional phenomena have shown that this is not the case: some alleged presuppositions may disappear in some contexts, and this proves that they are neither stable nor invariant aspects of meaning. Consider a sentence like (30).

(30)   Sue cried before discussing her PhD thesis.

According to our criteria, in (30) the temporal clause triggers the presupposition that Sue discussed her PhD thesis, but if we replace the verb "to cry" with "to die", the presupposition disappears:

(31)   Sue died before discussing her PhD thesis.

This follows from our knowledge of the world: we know that if someone dies, he will no longer be able to do anything, and this type of knowledge is stronger than the type of knowledge involved in drawing the inference from the temporal clause.

Presuppositions cannot only be cancelled: they can be suspended, as in (32).

(32)   Tom will regret kissing Sue, if he ever did it.

Despite the factive verb, there is no way of assuming the truth of the fact that Tom kissed Sue from (32).

Other kinds of contexts can block presuppositions: if they are dependant on verbs of saying, for example, presuppositions are not inherited by the complex sentence. Sentence (33) does not presuppose that he was not recommended, because the truth of the whole sentence depends on the sincerity of his saying.

(33)   Tom said that he was glad he had not been recommended.

Nor can presuppositions survive within the scope of propositional attitude predicates: (34) does not presuppose that there is only one heir, as the definite description would imply.

(34)   Tom believes he is the only heir.

Propositional attitude predicates and verbs of saying therefore behave like 'plugs', in that they prevent presuppositions triggered by specific lexical items to become presuppositions of the whole sentence. As such they are contrasted by Karttunen (1973) with 'holes', such as negations, modal verbs, and questions, and with 'filters', the latter being represented by the connectives *and, or, if...then* which sometimes do sometimes do not let presuppositions pass.

The whole problem connected to the inheritance of presuppositions in complex sentences is known as the 'projection problem' and it has been reputed to be the fatal flaw of semantic presuppositions. Although some scholars have tried to make up for the projection inconveniences by suggesting solutions for accomodating presuppositions in the problematic contexts (Kempson 1975; Wilson 1975; Wilson & Sperber 1979; Gazdar 1979), the projection problem has laid bare the uncontroversial fact that presuppositions are sensitive to the context. Consequently, they cannot be dealt with in entirely semantic terms: rather, they have to be treated as pragmatic phenomena.

2.3   Pragmatic presuppositions

A pragmatic theory of presupposition has been urged since the mid 70s, the seminal ideas being proposed by Stalnaker (1974, 1978) and Karttunen (1974). If semantic analyses claimed that presuppositions are relations holding between sentences or propositions, pragmatic analyses of the phenomenon share the basic idea that the distinction between presuppositions and assertions should be drawn not in terms of the content expressed by a sentence but in terms of the situation in which the sentence is uttered, which amounts to saying in terms of the attitudes and intentions of the speaker and his/her audience. On this account, it is not sentences which presuppose, it is speakers: presuppositions are something like the background beliefs of the speaker, propositions whose truth s/he takes for granted, or seems to take for granted, in making his/her statement. In presupposing p, the speaker treats p as a non-controversial element in the context of utterance. To presuppose something is to take it for granted

in a way that contrasts with asserting it (Soames 1989: 553); to assert p, is to propose adding the propositional content of p to the common ground, that is to the context. It is clear, however, that the notion of context operative here is crucially not a static construct but a dynamic model cooperatively constructed in conversations and represented by a working-set of propositions.

As Green (1989) remarks, it is a simple task to show that presuppositions need not to be in fact true, rather than just assumed to be so, for unless they were treated as assumed to be true, sentences like (35) could be considered semantically anomalous, when in fact they are entirely meaningful and merely reflect their speaker's bizarre view of the world.

(35)   Tom does not realize that Shakespeare wrote Paradise Lost.

Presuppositions cannot be thought of as expressing common knowledge, either. Some linguists have claimed that presupposed propositions must be mutual knowledge, that is, both speakers and addressees must assume them to be true, and such assumptions must in turn be mutually shared, but this characterisation of presuppositions is inadequate. Otherwise sentences like (36) would be self-contradictory.

(36)   Nobody realized that the female candidate was the best qualified.

It is therefore legitimate to wonder by whom pragmatic presuppositions should be taken for granted and by whom they are granted. The most plausible answer is that speakers treat presuppositions as noncontroversial, even though they may in fact be controversial and not taken for granted by the addressee. The addressee, on the contrary, does not have to take the presupposed proposition for granted to consider an utterance of it as true or false. The addressee only has to be willing to infer that the speaker does, and that the speaker expects him/her to believe it. It is on the basis of this asymmetry of roles that such utterances as (37) are commonly understood as intended to convey to the addressee that his/her slip is showing.

(37)   Do you realize that your slip is showing? (=51a, Green 1989: 82)

There are, therefore, arguments in favour of a definition of presuppositions independently of truth-conditions. Once this move is done, however, the picture does not automatically turn more clear. Quite to the contrary: understood as inferences licenced in a given context which cannot be identified with logical implication or entailment, capable of operating through the mechanism of exploitation, that is doing as much work when they are apparently violated as when they are observed, presuppositions closely resemble other non-truth conditional aspects of speaker meanings, to which we shall turn below, that is implicatures.

A possible way to find homogeneity within the large heterogeneous class of presuppositional phenomena is to enlarge the perspective, and observe the functions that

information implicitly conveyed by presuppositions carry out in text/discourse behind and beyond the multifarious forms in which they are manifest(ed).

Textual information is organized hierarchically, following an order of priority which is dependent on the selection of a specific point of view. As a consequence, some pieces of information get focused, while others are left in the background. Presuppositions are but one of the many linguistic devices allowing such hierarchical distribution of meaning (Eco 1990). Presuppositions contribute to the shaping of texts by distributing information into background and foreground, that is, by setting out a kind of textual frame which contains pieces of information that are given as uncontroversial by the interactants and which determine the point of view from which the text develops. As such they can be challenged. Challenging a presupposition amounts to rejecting the proposal of assuming that piece of information as common background for the current discourse, which implies (a) denying the speaker the right to use the words he has used, and (b) denying the speaker the possibility of further developing the topic thereby introduced. As Ducrot (1984) pointed out, given a sentence like "Bob has stopped smoking" two implicit meanings can be identified, namely that Bob does not smoke any longer, and that Bob used to smoke before. The latter is presupposed, while the former is 'posé', that is implicitly given. It is to the former, not to the latter, that such replies as "I can't believe it" are addressed.

Assuming the textual perspective is not without consequence as to what counts and what does not count as a presupposition. If the function of presuppositions is to create a background-foreground dynamics, then the results of logical inferences, and notably entailments, cannot properly be considered presuppositions. On the other hand, presuppositions should be kept distinct from further implicit meanings (*sous-entendus*, Ducrot 1984) that may be contextually conveyed by a sentence like "Bob has stopped smoking", such as "You should do the same" or "Bob has an iron will", which derive not so much from the words used in the sentence as from the act of uttering the sentence itself.

2.4   Implicatures

As with entailments and presuppositions, the genesis of implicatures is philosophical, but unlike the former, the latter originate within a conversational, pragmatic approach to communication.

Implicatures were identified, defined and theorized by Grice (1967 in Grice 1989: 41) who argued that

> for a large class of utterances, the total signification of an utterance may be regarded as divisible in two different ways. First one may distinguish, within the total signification, what is said (in a favored sense) and what is implicated; and second, one may distinguish between what is part of the conventional force (or meaning) of the utterance and what is not... Furthermore, what is nonconventionally implicated may be (or again may not be) conversationally implicated.

Nonconventional implicata of the conversational type are in a systematic correspondence with the assumptions required in order to maintain the supposition that the interactants are observing the Cooperative principle and its maxims. The Cooperative Principle is formulated as follows:

> Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged.

and it is articulated into four maxims prescribing that the speaker should be informative (the maxim of Quantity), sincere (the maxim of Quality), relevant (the maxim of Relation or Relevance) and perspicuous (the maxim of Manner).

The cooperative principle does not aim at dictating the laws of our social behavior: it aims instead at describing the rational working of our mind in finding out what a speaker means when he says something.

A participant in a talk exchange may *violate* the maxims, and in so doing he may be misleading. He/she may also *opt out* from cooperativeness, that is, he/she may decide not to say anything, not to contribute to the ongoing interaction. Or he/she may *flout* a maxim, by blatantly failing to fulfil it. Now, if a speaker is able to fulfil the requirements of a maxim, if he/she is not trying to mislead, and is cooperating, then the hearer is faced with a problem: How can the utterance he/she has produced be reconciled with the overall Cooperative Principle? It is this situation which typically gives rise to a conversational implicature, and when a conversational implicature is generated in this way, it is said that a maxim has been *exploited*.

Grice's famous examples will be repeated here for the sake of argumentation.

A person is standing by an obviously immobilized car; someone approaches him and the following exchange takes place:

A: I am out of petrol
B: There is a garage round the corner.

On the assumption that B is cooperating, A will try to figure out how his/her utterance may be made to fulfill the Quality maxim. He will therefore recover the implicated meaning that the garage is open and has petrol to sell.

The following is an example that involves exploitation, that is a procedure by which a maxim is flouted for the purpose of getting in a conversational implicature by means of some figure of speech.

A is writing a testimonial about a candidate for a philosophy job, and his letter reads as follows:

> "Dear Sir, Mr X's command of English is excellent, and his attendance at tutorial has been regular. Yours, etc."

> Clearly, A is not opting out, he is cooperating, but he is neither giving the requested information nor is he giving the right quantity of information, thereby implicating that Mr X is not good at philosophy and that is reluctant to write this down.

The maxim of quality is flouted by means of irony and metaphors: e.g., when you say of someone you trusted completely but who has betrayed your trust that "He is a fine friend", or when we use such expressions as "You are the cream in my coffee", which characteristically involve categorial falsity.

Finally, the maxim of manner is flouted by deliberate ambiguities, or by failures to be brief, like in the comment of a reviewer who chose to write

> "Miss X produced a series of sounds that corresponded closely with the score of 'Home sweet home'" instead of writing "Miss X sang 'Home sweet home'".

The implicature triggered by the selection of a longer expression in lieu of the concise verb "to sing" amounts to the information that it is impossible to properly call the performance of Miss X "singing"; hence the conclusion that Miss X's performance was very poor.

2.4.1   Generalized and particularized implicatures

The implicatures discussed so far derive from the utterance of particular utterances in particular contexts, but there are other sorts of conversational implicature which remain constant in all contexts. This is what happens for example in (36).

(36)   George went into a house yesterday and found a tortoise inside the front door.

The implicature arising from the use of "into a house" is that it was not George's house. Similarly, if a man says (37) he is implicating that it was not his wife that he went out with.

(37)   Last night I went out with a woman.

As this kind of implicatures remain constant under all circumstances of utterance, they are called 'generalized implicatures' and as such they are contrasted with the ones exemplified above, which are called 'particularized implicatures'. A Generalized implicature can, of course be cancelled or suspended in contexts that explicitly deny it, thus behaving in this respect like particularized implicatures. They cannot, however, be "detached", that is, it will not be possible to find another way of saying the same thing which simply lacks the implicature in question.

Implicatures are therefore characterized by Grice as implicated meanings that can be worked out on the basis of (1) the conventional meanings of the words used, together with the identity of any references that may be involved; (2) the Cooperative Principle and its maxims; (3) the context, linguistic or otherwise, of the utterance; (4) other items of background knowledge; and (5) the fact (or supposed fact) that all

relevant items falling under the previous headings are available to both participants and both participants know or assume this to be the case.

Some important consequences follow from such a characterization:

a.   Implicatures are not part of the conventional meaning of an expression; rather, they presuppose it;

b.   Calculating a conversational implicature is not a matter of truth conditions: the validity of an implicature is not required by the truth of what is said (which may be true while its implicature(s) may be false): implicatures are not carried by what is said, but only by the saying of what is said;

c.   As a consequence of the fact that to calculate implicatures is to calculate what has to be supposed in order to preserve the supposition that the Cooperative principle is being observed, implicatures turn out to be essentially indeterminate in nature: there may in fact be more than one possible explanation for them.

Of course there may be clashes among the maxims: thus a doctor who says of his patient that "one of the valves of his heart has narrowed, and consequently the blood no longer flows well" instead of simply saying that he has had a "mitral stenosis" will certainly violate the quantity maxim because he speaks longer while he could have used a shorter way, but he will do that in order to fulfill the maxim of manner prescribing "not to be obscure".

2.4.2   *Conventional implicatures*

Grice identifies another kind of non-truth-conditional inference, which he called 'conventional' implicature. Conventional implicatures are non-truth-conditional aspects of meaning which differ radically from conversational implicatures in that they do not derive from any superordinate pragmatic principles such as the Cooperative principle and its maxims: rather, they are conventionally associated with some expressions or lexical items. Grice (1961/1989) suggested that *but* can be analyzed as having the same truth functional content as *and*, and, additionally, a conventional implicature that there is some contrast between the two conjuncts: thus (38) implicates that 'poverty' normally contrasts with 'honesty', and asserts that George is both poor and honest.

(38)   George is poor but honest.

Analyses in terms of conventional implicatures have been provided for *therefore* (Grice 1975/1989: 44), *even* (Kempson 1975; Karttunen & Peters 1979), and *yet* (Wilson 1975).

It follows from the fact that they are independent of pragmatic principles that conventional implicatures cannot be calculated in the way conversational implicatures are; nor can they be cancelled when the context varies, as they do not depend on the context but on the lexical items. Finally, they can be detached from the expression they

are attached to: we can replace *but* with *and*, and the implicature vanishes while the truth conditions remain constant.

In a sense, as Levinson (1983) noticed, if such are their defining properties, conventional implicatures are not especially interesting objects: their conceptualization amounts to nothing more than the acknowledgment that truth-conditional semantics is incapable of dealing with the meaning of natural language expressions — which indeed is the starting point of Grice's reflections on meaning.

The few examples discussed in the literature actually seem to encourage a dismissive attitude towards this notion: Kempson (1975) claims that in any case there are too many candidates for one category, and Karttunen & Peters (1975) propose that conventional implicatures are equivalent to pragmatic presuppositions, while Marconi (1979) has looked at them with suspicion and Blakemore (1987) has openly criticized their theoretical legitimacy.

2.5   Scalar implicatures

Not all maxims enjoy the same status. Some seem to have a privileged status, but there is no agreement as to which ones. Grice himself acknowledged that the first maxim of quality "does not seem to be just one among a number of recipes for producing contributions....other maxims come into operation only on the assumption that this maxim of Quality is satisfied" (Grice 1975/1989: 371). Sperber & Wilson (1986), on the contrary, have elaborated a theory entirely based on the primacy of the maxim of Relation.

Among the other maxims, the one that has most attracted the semanticists' attention is the maxim of Quantity. It is from discussions on this maxim that the notion of "scalar implicature" has arisen. Horn (1972, 1973) and Gazdar (1979) have contributed to show that we can find in the lexicon of a language items which can be arranged in *scales*. A linguistic scale is a set of lexical expressions belonging to the same grammatical category, which can be arranged in a linear order along a gradient of informativity or semantic force. A scale has the general form of an ordered set of 'scalar predicates', included, according to the notation of classical logic, between hooks: (i1, i2, i3....in). The scale states a semantic relation between the predicates: i1 entails i2, i2 entails i3, and the relation holds for any sentence constructed with these predicates, but the reverse is not true. Here are some examples of such scales:

⟨all, most, many, some, few⟩; ⟨and, or⟩; ⟨excellent, good⟩; ⟨hot, warm⟩; ⟨always, often, sometimes⟩; ⟨know, believe⟩; ⟨certain, probable, possible⟩.

According to our definition, a sentence like (39) entails the proposition in (40).

(39)   All linguists like sex.
(40)   Some linguists like sex.

That is, when one is true the other is also true. But another general consequence can be predicted as following from a scale: if a speaker asserts something about a lower, or weaker scalar predicate, s/he thereby implicates that s/he is not in the position to assert the stronger one. Thus, if someone says (40), not only is sentence (39) not entailed, it is also implicated that the speaker does not know whether all linguists love sex. In order to demonstrate that the latter is an implicature, in fact a special subtype of implicature called a 'scalar implicature', we should recall Grice's characterization of implicatures as non-truth-conditional aspects of meaning which can be computed on the basis of the Cooperative principle and its maxims. Indeed, a plausible argument built upon such premises might read as follows:

> "The speaker said p;
> There is an expression q which is more informative than p (such that q entails p);
> q is not essentially longer or more complex than p: therefore the choice of p is not dictated by obedience to the maxim of manner ("be brief");
> by choosing p instead of q, the speaker has violated the maxim of quantity, which prescribes that one should be adequately informative;
> assuming that the speaker is cooperating, we must conclude that s/he wants us to conclude that s/he knows that q does not hold, or at least that s/he does not know whether q holds or not;
> in so doing s/he is following the maxim of Quality, according to which one should not say things for which one lacks adequate evidence."

It is worth noticing that scalar implicatures thus generated derive from what has NOT been said, and that they are epistemically qualified, that is they bring into play the state of knowledge of the speaker.

Quantity-based scalar implicatures — inviting someone to infer from the use of *some…* that for all one knows *not all…* — are therefore driven by some sort of shared knowledge, namely by your knowing (and by my knowing that you know) that I expressed a weaker proposition in lieu of an equally unmarked utterance that would have expressed a stronger proposition entailing the one I did express.

Another way of expressing this intuition is that scalar predicates, and related scalar propositions, can be viewed as having a lower and an upper bound. The lower bound is entailed (some= at least some) while the upper bound is implicated (some= at most some) as a cancelable inference generated by the first maxim of quantity.

Scalar implicatures are an important contribution to the treatment of lexical meanings, as they allow to posit one central meaning for words which are then subject to carry implicatures of various kinds in different contexts. They are not, however, without problems. Consider an utterance like (41). The invited inference would normally be what is explicated in (42).

(41)   If you tidy up your room, then you can go to the cinema.

(42)   You can go to the cinema if and only if you tidy up your room.

Now, the two connectives "if" and "if and only if (iff)" should actually form a scale ⟨iff, if⟩, the former being stronger than and entailing the latter. Consequently, it should be possible to draw an inference from "if" that "NOT iff", but the implicature works in exactly the opposite direction. It appears therefore that we need an independent principle of informativity which, in some cases, allows us to read in more information than an utterance actually carries.

Setting Quality aside, Horn puts forward the hypothesis that the remaining maxims should be collapsed into two fundamental principles regulating the economy of linguistic information: the Q-Principle and the R-Principle. The Q-principle is a lower bounding hearer-based guarantee of the sufficiency of informative content ("say as much as you can"); it combines a Quantity maxim and some submaxims of Manner, and is systematically exploited to generate upper bounding implicata. The R Principle is an upper-bounding correlate of the Law of the Least Effort dictating minimization of form ("say no more than you must"); it combines the Relation maxim, a Quantity maxim, and some submaxims of Manner, and it is exploited to induce strengthening or lower-bounding implicata.

Q-based implicatures are calculated on what could have been said but was not: H infers from S's failure to use a more informative and/or briefer form that S was not in a position to do so. R-based implicatures typically involve social considerations rather than purely linguistic motivations. They are typically represented by indirect speech acts (euphemisms).

In a long discussion of the notions of informativity and minimization, Levinson (1987) revises Horn's theory, proposing a number of competing pragmatic principles in systematic interaction.

2.6   Politeness implicatures

As Grice himself acknowledged, there are all sorts of other maxims (aesthetic, social, or moral in character) such as "Be polite", that are also normally observed by participants in talk exchanges, and these may also generate implicatures (Grice 1967/1989). In fact, as Brown & Levinson (1988) remark, a great deal of the mismatch between what is said and what is implicated can be attributed to politeness. Politeness, however, is an essentially social phenomenon. Thus the concern with the 'representational functions' of language (to use Halliday's terminology) which dominates the literature on implicatures, should be supplemented with attention to the 'social functions' of language.

Brown & Levinson's model is based on acceptance of the central role of Grice's Cooperative Principle and on the further assumption that all competent adult members of a society have (and know each other to have) a public self-image ('face') which shows up in two distinct but related modalities: a) positive face, the positive consistent

self-image or 'personality' that participants in an interaction crucially desire to be appreciated; b) negative face, the basic claim for rights to territories, to freedom of action and freedom from imposition. Social interactions are strongly conditioned by face preserving strategies. It is the reciprocal awareness of such 'face' sensitivity that, together with observance of the Cooperative Principle, allows the inference of implicatures of politeness. Thus, the dynamics of directness-indirectness gets an explanation in terms of the face-threatening/face-preserving mechanisms. Indirectness crucially involves a trigger, signalling to the addressee that what the speaker said is not what he meant. One plausible candidate for the trigger is some violation of Gricean maxims, which invites an inference whose actual working is guaranteed by the notion of face. Thus, an utterance may provide a hint for the search of a relevant interpretation by "raising the issue" of some desired act ("What a boring party": I would like to leave), while vagueness, overgeneralization, understatements, incompleteness can be used for implicitly conveying potentially threatening acts such as criticisms or disagreements.

A totally different approach is represented by Leech (1983), who assumes that goal-directed linguistic behaviour is shaped by the interaction of a 'textual rhetoric' and an 'interpersonal rhetoric', each made up of sets of maxims for the derivation of implicit meanings. Grice's Cooperative Principle (CP) belongs to the interpersonal rhetoric component, together with a Politeness Principle (PP) articulated in a series of maxims such as Tact, Generosity, Approbation, Modesty. The two principles interact, according to Leech, so that the PP explains what the CP would induce to judge as inappropriate.

2.7   Explicatures

The debate that has followed Grice's theory of implicatures has taken for granted that there is a level of linguistic representation of what an utterance literally means which can be established independently of any pragmatic consideration and can be used as a premise for the derivation of implicit meanings.

It is one of the most valuable insights of Sperber & Wilson (1986) that the recovery of the proposition expressed by an utterance involves inferential processes as much as the recovery of implicatures: this fact, however, has hardly been noticed in the studies on meaning. Thus, given an utterance like (43): this utterance will communicate a set of assumptions including those under (a-d).

(43)   Mary has said to Peter "It will get cold",
      a.   Mary has said that the dinner will get cold
      b.   Mary believes that the dinner will get cold very soon (not just in the future)
      c.   The dinner will get cold very soon
      d.   Mary wants Peter to come and eat dinner at once.

Assumptions (a) through (c) differ crucially from assumption (e): the former include as sub-parts one of the logical forms encoded by the utterance. They are constructed inferentially, by using contextual information to complete and enrich this logical form into a complete proposition ("propositional form" in Sperber & Wilson's terminology), which can then be embedded into an assumption schema typically expressing an attitude to it. Therefore, (a–c) can be considered "developments" of a logical form. By contrast, (d) is not a development of the logical form underlying the utterance: again, it is constructed on the basis of contextual information, but it develops information possibly recoverable from an encyclopaedic memory containing a frame for "dinner at home".

The difference between (a–c) on the one hand, and (d) on the other is stated by Sperber & Wilson in terms of explicit vs. implicit communication, explicitness being defined as follows:

> Explicitness:
> An assumption communicated by an utterance U is explicit if and only if it is a development of a logical form encoded by U.

On the analogy of "implicature", an explicitly communicated assumption is called an 'explicature'. An explicature is consequently to be seen as a combination of linguistically encoded and contextually inferred conceptual elements. As also implicatures are the results of inferential processes, Sperber & Wilson reject the traditional view that the distinction between the explicit and the implicit in discourse can be drawn as a distinction between what is encoded in and what is inferrable from an utterance. The crucial question to answer then becomes: what are the limits of explicitness, up to what degree of explicitness are we authorized to develop a logical form, and what exactly are the boundaries which separate explicatures from implicatures?

A plausible answer is provided by Carston (1988) (for a discussion see Récanati 1989). Assuming the tripartition (a) sentence meaning, (b) what is said and (c) what is communicated, Carston argues that it is possible to extend the Gricean apparatus, in the specific form of the relevance principle elaborated by Sperber & Wilson 1986, to determine what is said on the basis of sentence meaning. The pivot of her argument is the Functional Independence Criterion. Explicatures in fact differ from implicatures because the former are pragmatically constructed (relevance-constrained) as the minimal truth-evaluable propositions which can function as input for a truth-conditional semantics, while the latter are functionally independent assumptions which can function as premisses and conclusions in the inferential processes which take explicatures as starting points for the computation of what is communicated.

As to the question of the boundaries between explicatures and implicatures, Carston suggests that the principle of relevance is able to constrain the process of enrichment into explicatures, so that logical forms are prevented from being overloaded, encroaching on

the territory of implicature. As a matter of fact, the linguistic decoding of an utterance takes variable amounts of processing efforts depending on the length and complexity of the utterance itself. Moreover, further energy is absorbed by the setting up of a context of assumptions (selected out of all the pre-existing assumptions and possibly others drawn from the physical environment) against which the cognitive impact of the utterance can be assessed. The interaction of the explicature with the context involves a variable number of applications of a variable number of inferential rules: the more of each, the greater the global cost of utterance understanding. It is therefore a need of our cognitive system to limit the enrichments to the ones which provide the relevant proposition, that is, the most economic and at the same time the informationally richest one.

If carried to its extreme consequences, the discussion on explicatures turns out to be potentially subversive of Grice's overall program, in that it shows that the distinction between what is said and what is implicated does not neatly correspond to the domains of semantics and pragmatics as Grice wanted to have it. Instead, there is a penumbra area between what is said and what is implicated, which involves that implicitness is a matter of degrees, and that subtler analyses are needed in order to cope with this state of affairs.

2.8   Implicitures

For one thing, as Bach (1994) points out, the phenomenon of semantic indeterminacy, or semantic generality and non-specificity, better known as semantic underdetermination, is pervasive and multifaceted. Such sentences as (44) and (45)

(44)   Steel is not strong enough
(45)   Willie almost robbed a bank

are perfectly well-formed syntactically, but do not express a complete proposition: for them to express a complete proposition it would be necessary to specify 'for what' steel is not strong enough in (44), and something like the scope of 'almost' in (45). The latter sentence may in fact communicate that Willie tried and nearly succeeded in robbing a bank, or that he robbed something else which was only less big than a bank, or possibly that he did something to the bank which was nearly a robbery.

The two examples therefore highlight two different ways in which a sentence can be semantically underdetermined: (44) is a case of constituent underdetermination, (45) a case of structural underdetermination (see also Bertuccelli Papi 1995). Some more examples of constituent underdetermination are listed below:

(46)   This watch is cheap (relative to that one)
(47)   Men prefer blondes (to brunettes)
(48)   Mr. Bond is too old (to be a good secret agent)
(49)   Cinderella was late (for the party)

As the lexical material between brackets show, implicit constituents vary in nature, ranging over locations, activities and situations.

Semantically underdeterminate sentences therefore represent a class with the specific property of leaving out a conceptual element which must be supplied before a proposition is yielded. The process whereby the complete proposition is identified in such cases is not, however, the same as the expansion or enrichment process advo-cated by Sperber & Wilson (1986) and Carston (1988), because in the cases discussed by them a complete proposition was already there — it only was not the one the speaker might have plausibly meant, and consequently it was not reputed by them to be the proposition expressed by the utterance, but only a logical form, or a blueprint, of the proposition.

Therefore, Bach prefers to think of the process as "conceptual strengthening", in that the insertion of lexical material leads to a conceptually more elaborate proposi-tion than the one strictly expressed. Thus, Bach grants that there are pragmatic aspects of what is said which are to be kept distinct from what is implicated, but in his view these aspects cannot properly be considered 'explicit': rather, they are implicit in what is said, and can be called 'implicitures'.

Two types of implicitures can be distinguished, depending on the process by which they are identified: (a) if the sentence is semantically underdeterminate, that is, no complete proposition can be identified, then a process of *conceptual filling* is required; (b) if the speaker cannot be plausibly supposed to mean what the sentence literally means, then a process of *fleshing out* is in order. The filling in of a propositional "radical", as he calls it, is a matter of completion; the fleshing out of the minimal propo-sition expressible by an utterance is a matter of expansion.

The implicitures thus identified are clearly distinct from implicatures, in that, as the name suggests, they are implicit IN what is said, while implicatures are implicated BY (the saying of) what is said. Implicatures are therefore external to what is said, while implicitures are built out of what is said.

3.   Implicitness and cognition

As these notes may have shown, implicitness is a pervasive, multifaceted phenom-enon, involving important theoretical questions which touch upon the complexities of language understanding as a whole.

When considering the cognitive side of implicitness, the basic question is: why is implicitness allowed at all in human natural languages?

The search for a plausible answer starts from the rather trivial observation that the primary aim of the mind in processing verbal (and non verbal information) is to achieve and constantly improve knowledge of the world. In order to reach that aim, the

mind can resort to different modes of knowledge and to different modes of processing. These are ruled by a general principle of economy, according to which the mind tends to obtain the maximum with the minimum effort.

In so far as it is reasonable to assume that languages are (globally, if not in the details) structured in such a way as to favour — not to hinder — the functioning of the mind, a plausible answer to our question is that implicitness is such a widespread phenomenon because either the mind can resort to it as a way of simplifying and speeding information processing or, when extra effort is required, the processing costs are balanced by the quantity and quality of information thereby gathered. How exactly all this works is still a matter of contention. Among the hottest questions that the research on implicitness has to answer, are the following:

a. The instruments for explicating explicitness are inferences. What are the types of inferences that are used in the recovery of implicit meanings? The three basic modes of inferencing that philosophy has handed down to us are deduction, induction and abduction. How and when are they activated? How do they interact with imagistic reasoning, associative processes, and other forms of pragmatic, everyday reasoning?

b. Types of knowledge. Inferences operate on information units of various types and formats: shared knowledge, private knowledge, stereotyped knowledge in the form of frames, scripts and schemas may all be resorted to in order to recover implicit meanings. Can their activation be foreseen to some extent?

c. The levels of implicitness. Implicitness is a multilayered phenomenon. Implicit meanings can be conveyed at micro- and macrolevels. How do they interact with the dynamics of text/discourse comprehension?

d. The degrees of implicitness. Implicitness is not an all or none phenomenon. There is a gradient of explicitness which goes from silences, the extreme where the speaker does not say anything but means a lot, through the half said, where explicit hints are given of what the speaker means but does not want to say (Bertuccelli Papi 1996), to the other extreme where the speaker says a lot but does not mean anything. Which strategies underlie the various stages of implicit communication?

e. What are the limits of implicitness? Up to what extent can we omit saying something without any communication failure? Here the balance between effectiveness and efficiency as parameters of discourse structuring comes into play (de Beaugrande & Dressler 1981).

f. How transparent can implicit meanings be, and for whom? Who are the addressees of implicit messages? Implicitness is able to select among the audience the people who will recover the intended message while inviting others to other forms and levels of comprehension, thus suggesting the relevance of polyphonic approach to interaction (Ducrot 1984).

g. How does the rational apparatus set out to account for the rational side of implicit communication interact with the emotions, attitudes and values of speakers and hearers (Bertuccelli Papi 1997; see also the above comments on Östman's 1986 view of implicitness)?

h. Finally, how is implicitness related to language acquisition and language impairment/rehabilitation? And, diachronically, which role does implicitness play in the processes of grammaticalization and degrammaticalization?

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Non-verbal communication

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1. Introduction

Non-verbal communication (NVC) has been envisaged in this review mainly from a (broad) pragmatic/linguistic perspective, more specifically from that of several language sciences (see §3–6).[1] Naturally other, non-linguistic views could be adopted and indeed have been adopted (see §2), and many topics are covered at the same time by different (sub)disciplines. The option chosen here does not neglect these cross-sections but seeks to assess the amount of work that has (or has not) been done in NVC in relation to their relevance for linguistics and pragmatics. Because of this choice of approach only works concerned with face-to-face interaction are discussed, and special attention is paid to gesture. General topics such as conceptions and definitions of NVC (§1.1–1.2), (sub)categories (§1.3) and functions (§1.4) are reviewed at the beginning of the text, while theoretical models (§7.1) and methodological remarks (§7.2) are studied in later sections.

1.1 Broad conception and scope (literal definitions)

NVC is usually defined as the kind of communication achieved through any code, medium, or channel other than verbal language. Obviously this definition literally derives from the syntagm *non-verbal communication*, but its negative character offends some (surely many) specialists, who prefer other more positive terms. Criticisms of the

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[1]. This paper aims to be a general introduction for the unitiated to a vast domain and also an abstract for those who are working on some of its topics. The review is based on works published mainly in the last thirty years (since 1972) and specially in English but also in some Romance languages (French, Spanish, Italian, Portuguese, and Catalan). Unfortunately works published in other languages (in particular German) are not taken into account (and of course this is my fault). I prefer to state frankly the limitation instead of presupposing that only works written in English are worthy of consideration (as is often the case in many grounds and reviews). Another bibliographical limitation concerns the kinds of works consulted: doctoral theses, manuscripts, and individual (usually brief) articles are in general not included; most of the comments is of collective works (in which more specific references can be found). Other attempts to produce similar states of the art on NVC can be found in Wieman & Harrison (1983); Ellgring (1984); Scherer & Wallbott (1985); Burgoon (1993); DePaulo & Friedman (1998).

term and of the verbal/non-verbal dichotomy have been frequent in the literature (see, among others, Scheflen 1979; Koneya 1981; Wiemann & Harrison 1983; van Poecke 1988; Moerman 1990).

As a form of communication, NVC meets all the requirements of this general phenomenon, such as a functional, procedural, dynamic, irreversible, and meaningful character, and a presupposed systematicity which qualifies it for scientific study.[2] As a non-verbal entity, NVC relies upon an implicit definition of human verbal language, which is the basis for its delimitation. This relation is not only the source of the negative character mentioned above but also of some controversies on what should be conceived as specifically human, verbal language (as a cognitive capacity), and oral, natural languages (as manifestations of that capacity). For instance, on the one hand, until recently a topic as important as sign language was often associated with NVC, although no one today doubts the linguisticness of sign languages and their relevance for general linguistics.[3] On the other hand, the expansion of the scope of the term means that any informative or behavioral phenomenon — some very far from word ('verbal') production — will have been studied sometime or somewhere as NVC. In this conception, a simple equation states that NVC is the result obtained by subtracting language from communication, but the epistemologic paradigm resulting from the operation does not seem very fruitful — in fact, quite the reverse.

1.2 Some basic concepts & distinctions (narrow definitions)

The scope of definitions of NVC varies mainly according to the parameter of intentionality, deliberateness, or consciousness (on the side of the sender and, partially, also of the receiver) and secondarily according to the (usually implicit) conception of verbal language. The most usual border is drawn between definitions based on the concepts of *information* and non-verbal *behavior* versus definitions based on the concepts of *communication* as interaction (see Wiener et al. 1972). While in broad definitions NVC includes any kind of non-verbal messages (or non-verbal signs) proper to informative processes, more narrow definitions restrict it to non-language (or better *non-linguistic*) phenomena that are interrelated — often in an intricate way — with verbal language and can be found in interactive or communicative processes. Sometimes these phenomena have been termed *paralinguistic*, i.e., according to their etymology as something *beside*

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2. None of these characteristics will be revised here (but see Knapp 1984). Other entries of the Handbook of Pragmatics are devoted to them, cf. 'Communication' in this volume, cf. also *Human Communication Research* and *Communication Monographs*.

3. Topics directly related to sign language are not considered in this review.

linguistics, irrespective of their origins or channel (vocal or gestural). However, this term is used mainly for vocal communication (see §1.4), although a priori there are no clear reasons for holding that vocal communication is closer or more similar to verbal communication than gestural communication is.

NVC is presented in narrow definitions as communication achieved by non-linguistic mechanisms which participate in human interaction in connection with verbal language. In this view NVC could be defined as a series of intentional processes — or a procedural *ensemble* — based on multimodal interchanges of signs which provoke the reciprocal modification of the behavior of interlocutors in a social context. This behavioral modification is attained through the intersubjectivity of sharing common codes (knowledge of rules, experiences, and emotions) and through the mutual recognition of intentions on the part of communicators.

However the frontier between language and non-language is situated in different zones by different specialists, and misconceptions about the exact meaning of terms like (non-) verbal or (non-) vocal language are very old. Some attempts to clarify them were made more than thirty years ago (Lyons 1972; Leach 1972), where it was asserted that a precise distinction between language and non-language is impracticable in the long run, because there is no way of establishing sharp separations between linguistic and non-linguistic components in human interaction. In fact verbal language is performed through a vocal (auditory) channel, simultaneously with other vocal and gestural signals, or through a non-vocal (usually written) channel, simultaneously in this case with non-verbal markers (like punctuation, distribution of space, document styles, etc.). Intonation is an unquestionable linguistic feature, but a non-verbal one (at least if *verbal* is understood in its usual sense, i.e., 'made of words', and not as a simple synonym of *linguistic*). Therefore the need to consider *linguisticness degrees* (Lyons 1972) is immediately apparent, and different scales could be established between (*regular*, unmarked) words, onomatopoeic words, ideophonic mechanisms, interjections, and several kinds of gestures like emblematic (autonomous) gestures, deictic gestures or other coverbal gestures (the case is similar to that of iconicity; see Müller 1998).

Moreover, the synchronization between mechanisms of language production and other non-linguistic (vocal and gestural) mechanisms has been stressed in the literature for more than thirty years as well (Kendon 1972; Condon 1976; cf. Heath 1986 and more recently Streeck 1993; Guaïtella 1995; Poggi & Magno Caldognetto 1997; de Ruiter & Wilkins 1998; Goodwin et al. 2002). The contradiction between the evidence of data and the traditional maintenance of a categorical distinction applied to *verbality* became more and more obvious, until McNeill (1985) — in his provocatively titled 'So you think that gestures are non verbal?' — warned of the misconceptions surrounding the verbal dimension and the term itself. The reasons adduced for the studies mentioned and others that followed them place NVC (the domain) in jeopardy and convert

NVC (the term) into a kind of *academic ghost* which survives not for scientific reasons but because of a clear historical tradition and social expansion.

Whichever particular conception of NVC is stressed, and apart from certain theoretical problems in the foundation and coordination of studies (§7), surely the most striking feature of the studies on NVC over the last quarter of the last century is the progressive establishment of a paradigm (in the sense of a research program or context) for analyzing multimodal communicative signals and procedures, whose roots lie in cognitive competence and whose performance evolves in interaction. At present, only the inability to embrace different sources of data in theoretically accountable models justifies the many distinctions in sampling and analyzing data that appear in a synchronized, convergent or even syncretic way throughout the production and reception processes. For this reason the (sub)categorization of NVC is another of the leitmotivs of the domain.

1.3   (Sub)categories of non-verbal communication

Beside language (i.e., broadly speaking grammatical rules, verbal elements and prosodic features), two other communicative modalities are apparently basic in human communication: *paralanguage* or vocal (non-verbal) communication, and *kinesics*, understood as the study of human communicative movements, i.e., *gestuality* in the wide sense (or manual gesture, facial expression, gaze, touch, and posture, in a more analytical view; see Poggi 2002, who supports the existence of a lexicon for each modality and the need for scoring; but cf. Bouissac 2002). Poyatos has emphasized in many studies what he calls the triple basic structure of human communication (language, paralanguage, and kinesics), and Lyons' original proposal (1972) to consider all the non-verbal (vocal or not vocal) mechanisms which support language as *paralinguistic* has been left behind. The very recent work by McNeill et al. (2001) reinstates the triple structure mentioned in form of (coverbal) gesture, prosodic features, and the structure of discourse (cf. also Arndt & Janney 1985 and their concept of *InterGrammar*, i.e., the attempt to integrate verbal, prosodic and kinesic choices in the analysis of speech).

Paralanguage, or *vocal communication* — to use a term that most of us would prefer — has been recently analyzed in an encyclopedic form by Poyatos (2002), in three volumes covering more than a thousand pages. Laver & Mackenzie (2001) offer a useful (and much shorter) study on categories of vocal communication establishing several objective criteria for its description.

While vocal communication refers to the auditory sense, kinesics refers to the visual sense, and its role is so evident that it tends to appear as a catch-all term to represent all NVC domains and channels. Poyatos' division of kinesics into three submodalities (gestures, manners, and postures) has not been generally accepted, and no clear distinction is made in this subdomain. Historical reviews show that

almost any treatise on gesture has its own taxonomy, and some submodalities such as posture and facial expression are not analyzed in the same way in the different works. Ekman & Friesen's (1969) taxonomy is still one of the best founded (but see Kendon 2004), with the distinction of five categories of non-verbal acts (including facial expression): emblems, illustrators, adaptors, regulators, and affect displays. The five categories are distinguished according to three criteria: the origin, the use, and the codification of the acts.

At present the distinction between gestures that accompany utterances (cover-bal gestures) and other kinds of gestures is generally accepted and is probably the most fundamental (although the role of facial expression is doubtful). McNeill (1992) has popularized what he calls the 'Kendon continuum', a scale on which signs are distributed according to their dependence on the verbal language: gesticulation — language-like gestures — pantomimes — emblems — sign languages. Another basic distinction is that of McNeill (1986, 1992) between iconic and metaphoric gestures (though not everyone accepts it — see de Ruiter 2000), and other common (sub) classes of gestures include deictic gestures and batons or rhythmic gestures. Some-times a class of interactive gestures is also distinguished (see §4.3 and cf. Nespoulous et al. 1986 and Bavelas et al. 1992, 1995).

Vocal communication and kinesics are the two modalities of NVC that have been studied the most, but other dimensions are usually identified as well: *prox-emics*, the dimension with the longest tradition (the classical works of Edward T. Hall and O. Michael Watson), devoted to the study of perception and managing of space, and by analogy *chronemics*, the study of the regulation and perception of time in interaction. Following both this terminological procedure and the criterion of channel we can talk — using some rather odd words — about other less developed (sub)modalities such as *haptics* (the study of touch), *oculesics* (eye contact behavior), and *olfactics* (olfactive stimuli). Finally, in the broad sense discussed above (§1.2), some other submodalities such as synesthesic/somatic behavior, physical appear-ance and environmental aspects of the context have been included in NVC, although the distance between them and verbal language seems even greater than in the pre-ceding subdomains. Many handbooks, compilations and readers on NVC include specific sections on these topics (see also Poggi 2002 and cf. §2 and §7.3).

1.4   Functions of non-verbal communication

In the traditional conception of many linguists from many streams NVC was no more than a complement that was subordinate to verbal language. Verbal language was the star of the show and the center of the communicative power of the individual. NVC was envisaged as superfluous, anecdotal, neither essential nor central. In contrast, the new paradigm that has emerged over the last quarter of a century conceives NVC as a

functional resource that belongs to the communicative competence of the individual and which is displayed simultaneously with oral linguistic production, subordinate not to the language machinery but to the global, functional and intentional communicative aims. The new functional power that NVC has acquired can be understood at least partially as the loss of the exclusivity of verbal language as the center of interaction or communicative processes.

NVC accomplishes several interrelated functions at a range of levels: broadly speaking, the psychological, the sociological, and the biological levels. In the psychological dimension, NVC allows for the presentation of self (in fact a psychosocial matter) and for expressive functions (for instance, affect displays). From a sociological viewpoint, NVC can be seen as a series of interactive mechanisms that facilitates interaction (for instance, by regulating turns in conversation) and which also explicit the context as conceived by speakers. In biological terms, NVC is undoubtedly a clear manifestation of adaptive theories which allows for a better accommodation to the habitat.

Many subfunctions can be distinguished at other sublevels, as several microanalyses have shown. The convergence and syncretism of NVC with verbal language expands some well-known functions (such as contextualization cues) to the possibility of substituting or complementing verbal meaning, and especially of modalizing it, mainly through vocal features, facial expression and coverbal manual gesticulation. Both complementing (with coverbal gesturing and vocal devices) and substituting (with autonomous gestures or emblems) verbal language, NVC shows clear pragmatic functions linked to the managing of the context (for instance, deixis), the regulation of the interaction and the stylistic and emotional expression of communicators (for instance, formality, politeness, and involvement), and the illocutionary force deployed in the interchange of actions (for instance insulting or greeting).

2. A historical overview and a synthesis of contemporary trends

Some of the topics that configure NVC today have historical precedents from before the twentieth century, but the domain as a whole does not. Classical rhetoric devoted attention to gesture (especially in Cicero and Quintillian) as a mechanism associated to words in the phase of *actio*, that is to say, declamation or *énonciation*, in updated terminology. Other illustrious precedents of the studies of NVC can be found in classical monographs on gesture of the medieval and modern centuries (Bulwer 1644 [1974]; Austin 1806 [1966]; Bacon 1875), also in the rhetoric stream. These treatises culminate in De Jorio's (1832) work on Neapolitan gestures, recently translated into English and analyzed by Kendon, who considers it as the first scientific work on gesture, although Austin's monograph is also scientific in many senses if we consider the topics tackled — for instance the concept of synchronization, his terminology, and his great concern with notation.

The rhetoric approach is the first to present some of the topics studied in NVC today, but at the beginning of the twentieth century it disappeared or dissolved into the progressive modern psychological and anthropological approaches. Obviously many other approaches developed throughout the twentieth century, some of them with precedents in the nineteenth century: for instance, the historical and the biological. The historical approach dates back to De Jorio (1832) himself, to Karl Sittl's classical book on the gestures of the Greeks and Romans (1890), to Giuseppe Pitrè's comments on Sicilians gestures (1889), and became consolidated in the second half of the century (see Schmitt 1984, 1990; Bremmer & Roodenburg 1991; Kendon 1997, 2004; Corbeill 2004). The biological or ethological approach is based on the classical work of Charles Darwin on human and animal expression of emotions (1872), and also developed throughout the twentieth century (Hinde 1972; Eibl-Ebesfelt 1988; see an example in Smith et al. 1974, on tongue-showing; cf. also Corson et al. 1980; Papousek et al. 1992; Armstrong et al. 1995; and the journal *Evolution of Communication*, specially the issue 1(2), 1997). Leaving aside these (and other very specific) points of view and summarizing contemporary trends, at least five main perspectives can be distinguished. (Clearly this selection is an oversimplification and multiple cross-approaches may be found which define slightly different pictures in the extensive literature on the subject.)

2.1   The psychological viewpoint

The psychological approach is the one underlying most studies on NVC. The precedents are very old. Wundt (1900) devotes much attention to gesture, and Ruesch & Kees (1956) is a milestone in the approach's evolution; it can be considered as the first handbook of NVC and indeed it was this work that officially coined the term. Though it does not take account of vocal aspects (as can be inferred from the subtitle of the book: *Notes on the visual perception of human relations*), the study is a modern presentation of topics that remain key items in the discipline today.[4]

Later studies such as Ekman & Friesen's (1969) proposal, Knapp's (1972) and Mehrabian's (1972) pioneering works on several aspects of interaction, Condon's studies of synchronization (see Condon 1976) between different communicative mechanisms, Argyle's studies (see Argyle 1975) on functions of NVC, and the *Journal of*

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4.   See especially 'Biology and Culture as Two Determinants of Nonverbal Communication' (Ch. 2, the debate between universal and cultural patterns of behavior; see here §2.4 and §5.1); 'The Varieties of Nonverbal Languages' (Ch. 3, the taxonomic challenge; see §1.3); 'The Role of Context in the Interpretation of Action' (Ch. 7, maybe the most pragmatic side of NVC; see §4 and §5); the study of disturbed interaction (Section IV, see §3.3); and the assessment of the need to design a theory of NVC (Ch. 20, see §7.1).

Nonverbal Behavior (published since 1976) also represent the psychological approach. In addition, emotions and specially facial expression have usually been analyzed from this view, both in little known works such as Nummenmaa (1964) and in the well-known contributions of Ekman and colleagues (Ekman 1973; Ekman & Rosenberg 1998; cf. also Russell & Fernández-Dols 1997).

2.2   The anthropological viewpoint

Mallery's (1881) work on the sign language of American Indians could be seen as a forerunner of anthropological studies of NVC, and in fact Mallery (1891) is one of the first studies of a cultural pattern such as greeting (cf. Schiffrin 1974; Duranti 1992; Wierzbicka 1995). Efron's (1941) anthropological study on NVC is extremely important and still very relevant today. The work of Efron and La Barre (1947, 1964) paved the way for the later analysis of NVC in relation to cultural roots. Efron compared the gestures of Italian and Jewish immigrants in New York with those of their original countries, and also analyzed the adaptation of the successive generations to the new country. His work demonstrates the fallacies of some theories or fictions of certain anthropologists who associated the concept of race with certain NVC patterns.

2.3   The sociological viewpoint

Although one of the first and most traditional debates of NVC confronts biology and culture, i.e., ethology and anthropology, social factors and sociological reasoning have a relevant role in NVC studies (see an example in Schuler 1944). Erving Goffman's contributions are evident in many works and raise important questions, and classical precedents such as Mauss (1950) or Leroi-Gourhan (1964–1965), linked to the anthropological view, should also be mentioned. Later Scheflen & Scheflen (1972) have enhanced the view of NVC as a form of social control. Patterson (1983) expands on this idea and develops it in issues such as power and dominance (cf. Ellyson & Dovidio 1985), persuasion, feedback and reinforcement, deception and impression management (cf. also Heslin & Patterson 1982 and Philippot et al. 1999).

2.4   The semiotic viewpoint

The first studies on NVC from a semiotic angle appeared in the sixties (Sebeok et al. 1964; Hecaen 1967; Greimas et al. 1970). Volume 10 of *Langages* (1968), a monograph on 'Pratiques et langages gestuels', is one of the first considerations of NVC as a semiotic issue, where nature and culture are combined (as praxis and communication) and where the problems of identifying and describing minimal units are evident. Bouissac (1973), in his mathematical attempt to establish a notation system of gesture (cf. Bouissac 2002), Tantam (1986) and several studies included in

Nespoulous et al. (1986) and Cavé et al. (2001) follow this tradition, with a general conception of semiotics as a system of systems which has to explain the challenge of sign and the process of signifying. Hanna (1996) conceives the emblematic gestures from a semiotic point of view.

2.5   The linguistic viewpoint

Efron's work (1941) has a clear linguistic component, which is shown in the subtitle and symbolically in the preface, signed by Franz Boas, precursor of ethnolinguistics (Edward Sapir made a well-known reflection on gesture that demonstrates that he was also conscious of its relevance). Other less well-known *incorporations* of NVC topics in linguistics (or vice versa) can be found in Critchley (1939), in relation to philology and phonetics, Vendryes (1950), and Danguitsis (1943) and Cortelazzo (1969) in relation to dialectology. Trager (1958) marks the beginning of paralinguistics, and Bolinger (1968) states that sound is embedded in gesture, points out the synchronization between gesture and vocal features and recognizes the relevance for linguistics of many topics of NVC (see also Bolinger 1983, on intonation and gesture; and Kendon 2000). Recent work on gestural phonology (see Albano 2001) can also be understood as following this tradition in some respects).

The interrelation between linguistic and non-linguistic aspects of communication and the linguistic approach applied to communication is manifested in the interdisciplinary work of *The Natural History of an Interview* (see McQuown 1971), in some studies on the relation between NVC and syntactic structure (Lindenfeld 1974) and especially in the intellectual adventure of Birdwhistell (1970), who introduces the term *kinesics*. Birdwhistell defended that all gestures are culturally patterned (against the opinion of some ethologists and psychologists who proposed universalistic theses). He tries to prove how a kinesic-linguistic analogy is possible at the level of units (the kinem as the phoneme, and so on) and how linguistic machinery can be put to the service of the analysis of kinesics. Although some aspects of his work are brilliant (its systematicity, meticulousness, objective notation), the analogy is untenable (especially at the morphological level) (see Brunel 1977; Kendon & Sigman 1996; Torrego 1971). The issue has reemerged today, in the form of the hypothesis of compositionality of (all or some) gestures, i.e., the possible (re)combination of recurrent components with distinctive minimal power like phonemes (Webb 1998; Sparhawk 1978).

Two more general issues inevitably associate the study of NVC with language: the origin of language and the substitutes of (oral verbal) language. Regarding the former, and after some old prohibitions in academic circles, Hewes (1976) gathers arguments in favour of a gestural origin of human language, and data from non-human primates and evolutionary evidence suggest that vocal and manual sign systems must have had an important function (for different views see Leroi-Gourhan 1964–1965;

Kendon 1996; Gallagher et al. 2001; Levelt 2004). Regarding the substitutes of (oral verbal) language, both in the case of pathologies and in situational restrictive contexts, many vocal and non-vocal systems have been designed with this function. A sociolinguistic view of language substitutes can be found in Adler (1979), and Busnel & Classe (1976). Sebeok & Umiker-Sebeok (1976) and Umiker-Sebeok & Sebeok (1978, 1987) compile works on speech surrogates, aboriginal sign languages (cf. Kendon 1988), and monastic sign languages.

3.   Psycholinguistics, neurolinguistics and non-verbal communication

Nowadays it is understood that neither gesticulation nor many other mechanisms of NVC are simply a casual, arbitrary background for verbal utterances, as maintained traditionally (and implicitly) by many linguists, but resources for action and meaning generation. However, the precise place of NVC mechanisms in a psycho- or neurolinguistic theory is not yet clear. Sanders (1985) refers to relevance as a possible key concept for research in NVC, like McNeill (1992), and it seems somewhat surprising that certain theoretical approaches such as the relevance theory and the prototypes theory have hardly been applied to NVC studies (see applications in Payrató (2003) for emblems and the concept of gesture family, and in Landragin et al. (2001) for human-computer interaction). Similarities between the status of many gestures and that of interjections and onomatopoeic words and ideophones suggest that this is another area worth exploring.

3.1   Gesticulation, speech and thought

As early as Bulwer (1644 [1974]: 121) we discover references to the 'Discoursing Gesture of the Finger' and the fascination with its communicative power:

> In all the declarative conceits of gesture whereby the body, instructed by nature, can emphatically vent and communicate a thought, and in the propriety of its utterance express the silent agitations of the mind, the hand, that busy instrument, is most talkative, whose language is as easily perceived and understood as if man had another mouth of fountain of discourse in his hand.

More than three centuries later, in a psycholinguistic cognitive paradigm McNeill (1992) replaces the metaphor of the fountain with the metaphor of the window, and gives solid reasons for seeing gesture as a window into the mind. McNeill points out that gesticulation can be considered properly as a manifestation of language and that there are three sets of rules "governing how speech and gesture synchronize" (1992: 26): the rules of phonological, the semantic, and the pragmatic synchrony. Other aspects of synchrony between speech and gesture were noted in classical studies (see §1.2) and in recent works (Aboudan & Beattie 1996; de Ruiter & Wilkins 1998; Nobe 1998; cf. also Rimé & Schiaratura 1991 and Bavelas 1994).

Kendon (see Kendon 2004 as a synthesis) has also maintained that gesticulation is an integral part of speaking and that participants in conversation "use gesture and speech in partnership and can shift the respective roles of gesture and speech in the utterance from one moment to the next in ways that seem rhetorically appropriate" (Kendon 2000: 61). As long ago as the early seventies, Kendon (1972) defended multiple structural analogies between gesture phrases and tonal units, recently reappraised by McNeill (see McNeill 2000). The conception of gestures as manual symbols and the evidence that gestures and speech share a computational stage was already defended by McNeill (1985): gestures occur only during speech; gestures and speech have parallel semantic and pragmatic functions; gestures synchronize with parallel linguistic units, are affected like speech in aphasia, and develop parallel to speech in children.

McNeill's hypothesis is that "speech and gesture are elements of a single integrated process of utterance formation in which there is a synthesis of opposite modes of thought — global-synthetic and instantaneous imagery with linear-segmented temporally extended verbalization" (1992: 35). His theory develops the concept of *catchment*, to explain the regularities of gestures during discourse, and centers in the *growth point*, i.e., the point from which the meaning expands and differentiates (see McNeill 2000; McNeill et al. 2001).

Other hypotheses stress the function of gestures as devices to facilitate the lexical access from the mental lexicon. The fact that gesticulation may play a function in the word search was suggested already by Freedman (1972), among others. The hypothesis has been presented in a range of studies (see Hadar & Butterworth 1997; Krauss et al. 2000; Beattie & Coughlan 1998; Beattie & Shovelton 2001) and suggests that "a specific class of coverbal gestures ('ideational') facilitates entry to the semantic lexicon and, through this, facilitates lexical retrieval" (Hadar 1998: 349).

A recent discussion of all these hypotheses can be found in McNeill (2000) (cf. also Messing & Campbell 1999) and another complementary view (the information packaging hypothesis) in Kita (2000) and Alibali et al. (2001), which claims that gesticulation serves to stress perceptual-motor information for speaking. Calbris (1990, 2001) sustains that gesticulation allows interaction between the concrete and the abstract domains, and de Ruiter (2000) proposes a theory for the production of gesture and speech, named *sketch model*, which is based on William Levelt's theory for speech production.

3.2   Acquisition of non-verbal communication

Acquisition of NVC patterns runs parallel to the development of linguistic competence, but as yet we have little information on how the overall process evolves. Developmental studies on NVC have only become relatively frequent since the seventies (cf. Raffler-Engel 1971; Peng & Raffler-Engel 1978; Lock 1978; Raffler-Engel 1980).

Blurton Jones (1972) deals with NVC in children, and several works in Key (1977), Key (1980), Nespoulous et al. (1986), and Papousek et al. Eds. (1992) present different aspects of the topic (see also Volterra 1981). More recently also Santi et al. (1998), Cavé et al. (2001), and especially Iverson & Goldin-Meadow (1998) include new, relevant information on how NVC patterns develop progressively in the growth of the individual.

McNeill (1986) compares iconic gestures of children and adults and points out that the first metaphoric gesture found was at the age of five, and the first one freely created was at nine. Different ages present different kinds of gestures, and the relation is not progressively proportional to age: some classes of gesture decrease while others augment. Raffler-Engel (see in Raffler-Engel 1980 and in Hoffer & St. Clair 1981) deals with the acquisition of NVC embedded in conversational activity, and her works break new ground in developmental kinesics. Other recent works can be mentioned in the areas of acquisition of emblems (Guidetti 1998, 2001), synchronization of gesture and speech (Butcher & Goldin-Meadow 2000), and of other communicative devices (see Bernicot et al. 1998 and the Volume 24 (2000) of the *Journal of Nonverbal Behavior*).

3.3   Pathologies of non-verbal communication

Critchley (1939) already devoted a chapter to the neurology of gestures, and neurological and pathological considerations have been present in almost all studies of NVC. Pathologies of NVC are a very important source of data for basic and applied research, since dysfunctions highlight unmarked, regular behavior and communication. As early as the sixties, Alajouanine & Lhermitte (1964) dealt specifically with NVC in aphasia, as did Cicone et al. (1979), although the latter do not refer to the first (the *omissions* of this sort are not exceptional in this topic — and in the overall subject — and suggest a certain lack of coordination). Many other works on aphasia and gesture have been published since then. One of the latest, by Lott (1999), can be considered as the state of the art (cf. Goodwin 2000b).

Freedman (1972) and Grant (1972) wrote pioneering studies of NVC in the mentally ill, followed by many later contributions (see especially Corson et al. 1980; Schiefelbusch 1980; Blanck et al. 1986; Nespoulous et al. 1986; Feyereisen & de Lannoy 1991; Santi et al. 1998; Cavé et al. 2001). Volterra & Erting (1990) discuss developmental differences in the use of gestures and signs between hearing and deaf children. Di Sparti (1988) deals with verbal/non-verbal dichotomy and right/left hemisphere, and Lausberg & Kita (2001) examines hemispheric specialization in a pathological context (cf. Feyereisen 1986; McNeill & Pedelty 1995). Broadly speaking, movements of gesticulation are controlled by the same cerebral areas as those which control speech production, and the analysis of how disorders affect verbal and non-verbal abilities either jointly or separately is excellent evidence in support of theories on language,

gesture, and communicative competence and in support of evaluating modular or non-modular cognitive approaches.

4.   Pragmatics, discourse analysis and non-verbal communication

NVC mechanisms create meaning in the interaction context even more evidently than verbal language does. Moreover these resources reveal the conceptualization of context by interlocutors. For both reasons its character is pragmatic *par excellence*, and a *joint venture* between pragmatics and discourse analysis, on the one hand, and NVC studies on the other, would be a profitable scientific enterprise. Goodwin (1986, 2000a), Goodwin & Goodwin (1986, 1987), and Goodwin et al. (2002) represent this cross-section well, with a special emphasis on the organization of face-to-face inter-action. Besides, often stressing the cognitive dimension, several authors have drawn attention to a range of topics in which verbal language and NVC are tied and shape a single entity. General subjects such as interethnic/intercultural communication or the expression of emotions, or many specific topics such as denotation-connotation (van Poecke 1988), interjections (Eastman 1992), focalization (see in Cavé et al. 2001), metaphorization (Cienki 1998), politeness, aggressive verbal behavior, or semantic relations as homonymy and synonymy may also be advantageously reviewed from the perspective of multimodal signals. As an example, the role and the different meanings of the smile are studied from this view in Poggi & Chirico (1998).

4.1   Non-verbal (speech?) acts

Although in several passages of his well-known book John Austin recognized that non-language devices could produce the same effects as standard speech acts, speech act theory is based on the implicit assumption that only language has illocutionary power. However, autonomous or emblematic gestures can be envisaged as authentic illocutionary mechanisms (see Payrató 1993) or illocutionary markers (Kendon 1995). Riley (1976) explored the illocutionary force of emblems, and Fein & Kasher (1996) expand Austin's notions to the interpretation of gestures and words in comics. In Labov (1972), for instance, gestures can be found as *intensifiers*, as elements used by the speaker to make evaluative comments.

Even in the less clear case of many coverbal gestures the problem arises of where language finishes and where gesture begins, so intricate is the interrelation. Slama-Cazacu (1976) proposed the concept of *mixed syntax* to explain the possibility of inserting gestural sequences in (vocal) utterances where some components are elided. Friedman (1982) analyzed the modification of word meaning by non-verbal cues, and many authors have also tried to show and to explain how gestures can become like words and/or how

the significance of gesture is established (see Streeck 1988 and Kendon 1997, 2004). Heeschen et al. (1980: 141) explicitly stated that "nonverbal acts are not only prerequisites, necessary accompaniments, or substitutes of language proper, but that they are means of action in their own right, the employment of which depends heavily on the different strategies on face to face interaction". All this evidence seems to point to the need to reelaborate the concepts of speech act and illocutionary force in the context of holistic communicative abilities (see for instance the study on the communicative role of silence by Agyekum 2002; see also Tannen & Saville-Troike 1985).

4.2   Deictic gestures and spatial orientation

The frontiers between language and gesture are also fuzzy as regards deixis. On the one hand, deictic elements have often been classified as symbolic or gestural, recalling the firm association between *pointing words* and pointing gestures. Moreover, some gestural deictic forms are so fully connected to the corresponding linguistic system (for instance lip pointing, and the Cuna language, see Sherzer 1972) that they can be considered as parts of it (in fact in some cultures these gestures are considered as part of the concept of what language is).

The relation between language and space has been a topic of interest for many years (Jarvella & Klein 1982; Emmorey & Reilly 1995). Sousa-Poza & Rohrberg (1977) assessed NVC in relation to type of information and cognitive style, and Sonnenfeld (1980) examined orientation styles (though without referring to Sousa-Poza & Rohrberg's study). McNeill et al. (1993) presents the concept of *abstract deixis*, and Gullberg (1999), Hindmarsh & Heath (2000), Özyürek (2000), and Emmorey & Casey (2001) deal with different aspects of deixis and spatial orientation. Kita (2003) is entirely devoted to pointing (cf. Kita & Essegbey 2001), and Haviland (1993, 2000) reports different ways of expressing spatial orientation in different languages, contrasting gestural and linguistic resources (see also Levinson 1992 for an introduction). Summing up, different languages and cultures show different (absolute, relative) orientation systems according to parameters such as cardinal points, referential objects, or the speaker (and his/her cognitive styles).

4.3   Discursive styles, functional variation and conversation

It seems obvious that there must be relations between discursive styles and some aspects of NVC, and not only regarding spatial orientation as mentioned in the preceding section. For instance, the well-known proposal of verbal styles made by Martin Joos (1961) (intimate, casual, consultative, formal, frozen) can be compared with the different distances distinguished in proxemics by Edward T. Hall (intimate, personal, social, public), as Hall himself did (e.g., Hall 1974). Scherer & Wallbott (1985) developed behavior-style scales as indicators of psychological states and of situational variables in discourse.

At the present time we have little information about text types and NVC, but some work has been done in relation to topics (i.e., familiar topics favour gesticulation) and receivers (which could be understood as *foreigner non-verbal talk* favours gesturing). Erikson (1979) analyzes NVC patterns in interviews, Heath (1986) in medical interaction, Davis (1995) and Calbris (2001) in political speeches. Martirena (1982) examines some typical features of spontaneous talk linked to NVC (such as interruptions of continuity) and McNeill (1986) offers some information about types of gestures and genre variation (narration/exposition). Atkinson Gorcyca et al. (1982) analyzes variation in NVC patterns between deaf children and chimpanzees, and reports how variations increase in informal situations ("the more formal the setting the fewer the signs", 1982: 219), in analogy with (non-) careful speech. Roth (2000) analyzes the way from gesture to scientific language, and Streeck & Kallmeyer (2001) the interaction by way of inscription.

Most studies of NVC and face-to-face interaction have focused on natural conversation (see Beattie 1983; Atkinson & Heritage 1984). Scherer & Wallbott (1985) summarizes the functions of NVC in conversation (at four levels: semantic, syntactic, pragmatic, and dialogic; cf. Rosenfeld 1987). Several works have dealt with the structure of speaking turns and stress the role of NVC in turn taking (see Duncan 1980), others with conversation strategies (Cosnier 1978). As regards interactive or regulatory gesturing, many typologies distinguish a class of this kind of gestures (even Kaulfers 1931, in a broad sense; see recently Bavelas et al. 1992, 1995). McClave (2000, 2001) specifically studies head movements during conversations; cf. also Kita 1999).

The need to take account of NVC data in discourse analysis is also argued in Gosling (1981). The relation between gesticulation, cohesion, and discourse structure is explored in Kendon (1972), Levy & McNeill (1992), McNeill & Levy (1993), Contento (1998), and McNeill et al. (2001), showing different degrees of isomorphism between discourse and NVC. As regards inference processing, Contento & Lorenzetti (2001) demonstrate NVC's role.

5. Sociolinguistics, linguistic anthropology and non-verbal communication

In spite of the important role of individual differences (see Rosenthal 1979) an asocial approach is unthinkable in NVC studies, at either the micro- or the macroanalytic level. However, cultural factors have prevailed over social variables in the majority of studies.

5.1 Sociocultural factors and non-verbal communication

Weiss (1943) devoted an article to the social character of gestures, and Barakat (1973) also refers to their social significance. Argyle (1972) deals with NVC and social interaction,

and Duncan (1980) stresses the relevance of NVC for sociolinguistics and the need to analyze verbal and non-verbal aspects of communication. Ethnic and cultural differences have been taken into account in works such as Graham & Argyle (1975) and Contarello (1980), among others, and gender differences have received a great deal of attention (see as an introduction Vrugt 1987). Challenging a commonly held belief, Shuter (1977) demonstrated in an experimental study that not all Italian people should be considered to be part of a 'contact' culture (only men).

Sherzer (1991, 1993) shows how emblematic gestures can be analyzed in social interaction from an ethnographic view (cf. also Brookes 2001), and Streeck (1994) emphasizes the role of the audience. Streeck (1988) and LeBaron & Streeck (2000) analyze formation of gestures and emerging conventions, while Posner (2003) analyzes ritualization processes which result in emblems (cf. also Stokoe 2000). Chauvin (1999) analyzes children's games in a geolinguistic framework, and Coburn (1998) stresses the concept of communicative competence (see also Creider 1986). The role of social presence in NVC patterns is analyzed in Manstead & Ricci-Bitti (2001).

Some studies have approached the analysis from a sociological or ethnomethodological view of coordination of speech and kinesics (Schegloff 1984; Heath 1986), while others have stressed the concept of construction of social interaction (Goodwin 2000a). From this perspective, "gesture is not simply a way to display meaning but an activity with distinctive temporal, spatial, and social properties that participants not only recognize but actively use in the organization of their interaction" (Goodwin 1986: 47).

Key (1977) explicitly referred to dialects and varieties of nonverbal behavior, and the crucial role of cultural factors has been known since the classical studies (§2.2). The influence of cultural context and the similarities and differences between cultures have been analyzed at least since Efron (1941), with the background of the debate between *universalistic* or *culturalistic* approaches, applied to possible universal patterns such as smiling, eyebrow raising, eye avoidance, hand raising, and several other displays (which have contributed to the traditional myth of the unique, *natural*, nonverbal behavior of mankind). In fact many contributions since then have dealt with other intercultural topics: see for instance a particular case in Collet & Chilton (1981), on laterality in negation, and compilations such as Wolfgang (1979, 1984). Very recent samples of different cultural NVC practices can be found in Cavé et al. (2001) and in the *Journal for the Anthropological Study of Human Movement* (1980–).

5.2   Multilingualism and non-verbal communication

Efron (1941) also referred to gestural bilingualism, and other references to the relations between multilingualism and NVC can be found in Cortelazzo (1969) and Raffler-Engel (1971). However, the data on the topic are few and far between (except for second language learners, see §6.2). Lacroix & Rioux (1978) is one of the few analyses

of NVC of bilingual speakers (French-English in this case). They report clear interindividual differences between 'English NVC' and 'French NVC' but they do not find different intraindividual patterns (cf. Raffler-Engel 1971, 1986). Kita (1990) analyzes gestural correlations of verbs of movement in English-Japanese bilinguals, Santi & Ruiz (1998) gestural strategies of French-Spanish bilinguals in interviews, and Ussa & Ussa (2001) the multicultural case of U'wa bilinguals. In the light of the gestural differences between speakers of typological different languages (English, German, Japanese, Chinese, Spanish, Basque) in coverbal spatial gestures (see Müller 1994; McNeill 2000; Ibarretxe-Antuñano 2003; Slobin 2004), inquiries into the case of proficient bilinguals would be very interesting.

6. Applied linguistics and non-verbal communication

Applied linguistics is a vast area and applications of NVC are multiple (cf. Wolfgang 1979, 1984; Feldman 1992; Hickson & Stacks 2001). The relevance of NVC for applied linguistics is ubiquitous. Many applications are related to pathologies, communicative disorders and their therapies, even in the case of psychotherapy (see Wolfgang 1984). Talking faces (see Massaro 2001), human-computer communication (Bunt et al. 1998; Wachsmuth & Fröhlich 1998; Bunt & Beun 2001), and integral simulations and avatars (Cassell et al. 2000; Gibet & Julliard 2001; Kipp 2001) can be applied to many situations. Other topics related to NVC such as punctuation, translation, and *literary anthropology* (to quote Poyatos) are also of evident interest for applied linguistics (see Poyatos 1983, 1997, 1998; Korte 1998).

6.1   Lexicography of gesture

Dictionaries of gestures (especially emblems) have a long history, beginning with the monographs of Austin (1806) and De Jorio (1832). Mallery (1881) can also be considered a dictionary, and since then many works have described repertoires of gestures of many cultures and languages (see Kendon 1981, 1997; Payrató 1993). The repertoires are often accompanied by analysis of the samples, and we should mention studies such as Johnson et al. (1975) for American English, Calbris (1990) for French, Poggi & Magno Caldognetto (1997) for Italian, and some comparative essays (Saitz & Cervenka 1972; Lamedica 1982; see also Kendon 1981, 1997). In other cases there are only compilations of gestures linked to one language (for instance Meo Zilio & Mejía 1980–1983, for Spanish) or of gestures from all over the world (for instance Bäuml & Bäuml 1975) or a large geographical area. In these latter cases the methodological problems increase, as in Morris et al. (1979), a pioneering work on the geographical distribution of symbolic gestures in Europe. Methodological considerations have been followed from Hayes

(1940) until the recent — prepared but not yet published — dictionary of Berlin gestures (see Serenari 2004 and Posner et al. in press); discussion is presented in Poyatos (1975); Kendon (1981); Payrató (2001); Bouissac (2002); cf. also Kreidlin (2001).

6.2   Language learning

Green (1968) devoted an entire book to producing a repertoire of (Spanish) gestures for the learning of Spanish. Brault's (1963) concern was also with (French) kinesics and the classroom, and many studies since these pioneer works have dealt with the non-verbal behavior of teachers (Grant & Hennings 1971) and with NVC patterns and the learning of languages, both first and non-native (Wolfgang 1979, 1984; Johnson 1985; Neill 1991). Second language interactions and the relation between interlanguage and the gestural performance of L2 learners have recently received considerable attention (see Bernicot et al. 1998; Gullberg 1998; many studies on Cavé et al. 2001).

7.   Concluding remarks

According to certain publications at the more popular end of the market, the study of NVC is fascinating and vital (supposedly for finding lovers, establishing social relationships, progressing at work, catching out liars…). This funny, classical, view of being able *to read somebody like a book* reproduces a metaphor that is similar to the more academic one which considers the body as a discourse (*the embodiment of culture*)… but in stark contrast to the often expounded view that NVC is of no importance at all. Wiener et al. (1972) explains the reasons for this undervaluation very well. Most researchers would agree that studies in the field should ignore both these (over- and undervaluated) judgments.

7.1   Theoretical considerations

Looking to the future of NVC studies it is obvious that building a theory on negative foundations is very difficult (see Scheflen 1979 and Ellgring 1984 for different attempts). Therefore it would be very useful to clarify what a theory about communication should be (but the topic goes beyond the domain of this review; see the work mentioned in note 2). Another very relevant question — and one that is in fact the opposite of the one above — also goes beyong this domain: to what degree should a theory of pragmatics in particular and of language in general accommodate NVC data? More than twenty-five years ago Key (1977), Duncan (1980), von Raffler-Engel (1980), and many others mentioned the need to analyze verbal and non-verbal data in an integrative paradigm. Beattie (1981) raised the point of an 'essential synthesis' between linguistics and NVC, and some of the models developed have taken into account NVC

data jointly with (strict) language items, with the aim of explaining multimodal phenomena and cross-modal strategies which result in different communicative patterns: cf. especially Arndt & Janney (1987) and their proposal of *InterGrammar*, Santi (2001), and recent developments in multimodal semantics and multimodal human-computer interaction (see Bunt & Beun 2001).

The works of Kendon, McNeill, Poyatos and many others provide sufficient evidence to suggest that language, vocal communication, and kinesics form a tridimensional or multimodal entity that should be analyzed in a holistic way. Finally, this is tantamount to asking whether nowadays linguistics or indeed all studies about language use can maintain that they are concerned exclusively with *verbal* (in what sense?) elements. From the view of the NVC domain the answer may perfectly well be *no*, but it is the disciplines themselves that must give the real answer in their scientific evolution (and in the last twenty years the answer has been *yes*).

The advance in theorizing in the mentioned disciplines should be assessed by the dialogic move between a holistic approach (language and communication as a whole) and micro or particularistic approaches (on specific abilities and domains: facial expression, manual gesturing, proxemics, haptics…). Similar dynamics control the advance of other scientific disciplines, with the resulting changes in paradigms or, in more modest terms, with the resulting modifications of research programs. In the case of NVC and pragmatics (and maybe general linguistics), the establishment of a research program founded on the (cognitive) communicative capacity, as revealed by the multimodality of the processes of social interaction seems a stimulating challenge for the new century.

7.2   Methodological considerations

Methodological considerations are inseparable from theoretical inquiry and have been essential in the progress of studies (just recall the beginning of films and videos, or the frame-to-frame technique for detecting synchronies).

Twenty years after its publication, Scherer & Ekman (1982) remains an excellent, comprehensive (but not updated) summary of information about the different methodologies that can be used in the vast domain of NVC. Other methodological contributions can be found in Ricci-Bitti & Cortesi (1977); Donaghy's (1984) review of many NVC projects; Scherer & Wallbott (1985); Levinson (1992); McNeill (1992) for eliciting, describing and analyzing gestures; Bavelas (1994); Teston (1998); Laver & Mackenzie (2001).

Goodwin (1993) describes a useful set of equipment and explains how to record interaction in natural settings, and informatic, statistical help or support can be found in several studies (see Cavé et al. 2001). The regular use of videotechnology is one of the future *frontiers* for linguistics (at least for pragmatics!), as the tape recorder was years ago. It is the only way to record the interrelation of multimodal systems at work.

In future, surely the main methodological problem that should be resolved is the establishment of a unified basis for sharing and discussing common data, and more specifically the use of standard notation systems for the description of the items (viz. IPA in phonetics). The problem of notation is a classical one, and different solutions have been offered to represent verbal and non-verbal elements all together (cf., a.o., Haviland 2000 and McNeill et al. 2001, and search in Internet for the following keywords of notation systems: Anvil, CHILDES/CLAN, CoGesT, ELAN, EXMARaLDA, FORM, Observer, Transana). The need for common elicitation, descriptive and analytic tools is obvious (see for instance Creider 1986; Poggi & Caldognetto 1997; and Payrató 2001 for emblems), and if the issue is not solved in a satisfactory way the positive evolution of the discipline will be imperiled.

7.3   Final historical comments

Since the publication of the first handbook (Ruesch & Kees 1956) in the middle of the twentieth century, studies of NVC have spread rapidly, especially since the seventies: some useful bibliographies have been compiled (Davis 1972; Key 1977; Obudho 1979; Davies & Skupien 1982) and what can be considered as the first readers have been edited (see as examples Hinde 1972; Harper et al. 1978; and Wolfgang 1979).

The expansion has been even more evident since the eighties and the nineties (the list is clearly too long to be reproduced here; see e.g., Burgoon et al. (1989); Santi et al. 1998; Messing & Campbell 1999), with a progressive degree of institutionalization, for instance the formation of *GeVoix*, in France. Recent years have seen new contributions (see Cavé et al. 2001), the organization of several important conferences (Berlin 1998; Orage 1998; Porto 2000; Urbino 2000; Orage 2001; Austin 2002; Toronto 2002; Seoul 2004; Lyon 2005),[5] the publication, since 2002, of the journal *Gesture*, and the constitution of the *International Society for Gesture Studies* (ISGS).

At this point, and taking into account the pretheoretical and fragmented status of NVC as a discipline, the temptation is to compare this situation with that of pragmatics years ago (and indeed nowadays, though to a lesser extent). It was then that, in the IPrA

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5.   See more information (and some papers) in http://semioticon.com/virtuals/multimodality. htm. Many recent references and very useful *electronic* information on NVC (papers, publication lists, journals, videotapes, research centers…) can be found at http://www3.usal.es/~nonverbal/ (Jaume Masip, University of Salamanca). A great deal of relevant information about gesture (and the relation between gesture and speech and NVC in general) can be found on the websites of three laboratories devoted to its analysis (Chicago, Nijmegen, and Berlin):

a.   McNeill LAB Centre for Gesture and Speech Research (http://mcneilllab.uchicago.edu)
b.   The Nijmegen Gesture Centre (http://www.mpi.nl/research/other/lc-gesture)
c.   Berlin Gesture Center (http://www.berlingesturecenter.de/)

announcement, the discipline was envisaged as a "large, loose, and disorganized collection of research efforts" (to quote from a letter written by Jerry Hobbs, see Verschueren 1987: 15). Now, after the fiftieth anniversary of Ruesch & Kees' (1956) initial proposals, the youth of NVC studies can serve as an explanation for the lack of internal articulation, but it should not exempt practitioners from the effort to coordinate their research and to remember the basic contributions of earlier works.[6] The excessive weight of the Anglo-Saxon culture and perspective (simply look at the universities of the almost thirty editors of *Gesture*) should be (minimally) balanced, following the advice of Key (1977), more than thirty years ago. Also at the institutional level, more chances to study NVC should be provided, in whatever form (regular university courses, postgraduate courses, summer school, e-learning…). And last of all, and surely most importantly, the coordination of studies and the establishment of a critical mass of researchers should open up possibilities for their scientific evaluation, so that — as Vine (1986) suggested ("Does nonverbal communication have a future?") — the interdisciplinary nature of works should not serve as an excuse for an undisciplined character. The difficulty of describing and explaining human communication as a complex phenomenon can justify almost anything except banality.

7.4   Afterthought

As already stated in the text (see 1.2), the term non-verbal communication has survived not so much for scientific reasons as due to its wide use, its vagueness (at least in some cases) and also to a certain historical inertia. One pertinent question remains: does non-verbal communication represent or reflect something more than a very general context?

Lovers of statistics and rough data, even those that are unreliable, have no difficulty in showing that the concept of non-verbal communication is very much alive. A very recent search (made at the beginning of 2006) in Google for the expression gives 2,660,000 hits (compare: 1,790,000 for *pragmatics*, or 442,000 for *multimodality*). The search for *non-verbal communication* 2005 produces 1,680,000 hits (compared with "only" 765,000 for *pragmatics* 2005, and 187,000 for *multimodality* 2005). Other searches confirm that the term is usually hyphenated, and that differences appear if the term research is attached to the previous syntagms.

Clearly, the reason for the differences is that the term NVC is used for (too) many things and in (too) many combinations. In fact, this impression seems to coincide with

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6.   For instance, when McClave (2001: 69) refers to the "degrees of *linguisticness* (Kendon, personal communication)" in her excellent contribution to the study of gestures in sign language performance, it would be reasonable to recall Lyons' (1972) classic contribution mentioned before (see §1.3). On a more dangerous and less excusable level, it is astonishing to hear more than once in presentations on international conferences on NVC that intonation is not a linguistic (for *verbal*) issue.

that of some (surely many) specialists, who feel that the scientific value of NVC as a term or concept is very limited: many practitioners would prefer to eliminate it and replace it with specific terms. However, some others (probably a minority) defend the concept. Indeed, there is no denying the term's resonance and success.

Maybe this is the start of a non-trivial dilemma for the new century. Should we abandon the term NVC and its scientific paradigm and embrace other wider paradigms (communication, pragmatics, social interaction, cognitive psychology…) and their subtopics (gesture, facial recognition, haptics, communication pathologies…)? Or, on the contrary, should we seek to unify a new, narrow paradigm and, in an inevitably constructivist enterprise, try to build a body of "independent", consistent knowledge? Probably the first option is the more profitable; and the next few years are likely to offer more evidence for describing the advances made, and for daring to answer the question with more foundation than intuition.

Meanwhile, the terms *multimodality* and *multimodal communication* are spreading. They express both the positive idea and the integrative image which are lacking in the term *non-verbal communication*, and the fact that their use is spreading does not seem to be a matter of chance (see, among others, LeVine & Scollon 2004 and Ventola et al. 2004).

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Presupposition

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1. Introduction

Since Frege (1892), the notion of presupposition has been a central topic in philosophical-linguistic investigation. Presuppositional phenomena in language have played an important role in the development of semantic and pragmatic theories of language and communication during the past decades. Currently, presuppositions are treated primarily in the framework of dynamic semantic theories, that is, theories in which the meaning of a sentence is defined in terms of context change. A number of theories following this tendency converge on the claim that presuppositions are genuine examples of the semantic/pragmatic interface (van der Sandt 1992; Beaver & Zeevat 2004).

Despite the pervasive nature of presuppositions in language use, this phenomenon has turned out to be hard to explain in a straightforward way. Intuitively, presuppositions are propositions whose truth is taken for granted during a communicative interaction. But there has been no consensus about how presuppositions should be conceived, as semantic or pragmatic relations between sentences, between sentences and propositions, or between speakers and propositions.

One of the broader assumptions in the literature is that presuppositions are normally associated with or *triggered* by particular lexical items and syntactic structures, known as presuppositional *triggers*, or *inducers*. For example, definite descriptions, such as *The King of France*, trigger an existential presupposition (the existence and the uniqueness of a denotation) and factive verbs, such as *regret* and *know*, presuppose the truth of their component clause. Other presuppositional triggers are factive noun phrases (*the fact that X*, *the knowledge that X*), cleft constructions (*it was x that y-ed*), counterfactual conditionals (presupposing the falsity of the antecedent), aspectual verbs (*stop* and *continue*), iterative adverbs (*too*, *again*) and many more expressions.[1] Linguistic form, therefore, plays a central role in the identification of the presuppositional status of a proposition. While the importance of linguistic form for presuppositions is widely accepted in the literature, Robert Stalnaker has defined presuppositions without any reference to linguistic form. Stalnaker's definition states that presupposition is all that is assumed to be shared by participants in a conversation (Stalnaker 1974, 1999, 2002).

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1. For an attempt to a list of triggers, see Levinson 1983: Chapter 4 (Presuppositions).

In this article I present a broad overview of theoretical developments regarding the concept of presuppositions. I begin with the historical developments that led to the pragmatic theorists' proposals (e.g., Stalnaker). In this account I will focus on the notions of presupposition projection, informative presuppositions, context and accommodation. Finally, I will briefly outline some recent proposals from dynamic semantic theories of language.

2. From semantic presuppositions to pragmatic presuppositions: Historical backgrounds

Following Frege's first observation of presupposition in language, Strawson (1950) formulated the first clear characterization of presuppositional semantic effects: presuppositions are preconditions for assigning a truth value to a sentence. The well-known example discussed by Strawson (1950) is (1).

(1)   The actual king of France is wise.

Is this sentence true or false? Given that France is a Republic, the presupposition that there is a King of France is false. Given that the presupposition is false, the question concerning the truth or falsity of an assertion of (1), according to Strawson, does not arise. In other words, the proposition presupposed must be true in order for the sentence (or, better, the assertion) to have a truth value (Strawson 1952). The notion of semantic presupposition was born from this observation. Early definitions of semantic presupposition employed the entailment relation. The entailment relation is defined such that a proposition *A* entails a proposition *B* if and only if in every world in which *A* is true, *B* is also true. Semantic presuppositions are propositions entailed both by a sentence and its negation. For example, both *The King of France is bald* and its negation *The King of France is not bald* entail the existence of a King of France.[2] At the time, this semantic definition of presupposition demanded a revision of classical logic: it was evident that the bivalence principle had to be abandoned. Partial, trivalent and two-dimensional semantics were developed in which presuppositions were conceived as constraints on the range of worlds against which we are able to evaluate the truth or falsity of a sentence (see Beaver 1997 for a review of these theories).

Despite the rich contribution made by these theories to the development of semantics, semantic presupposition theories eventually had to be partially abandoned. There were two fundamental properties of presupposition behaviour that

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2.   For the semantic definition of presupposition, survival under negation is a test for classifying an inference as a presupposition.

semantic presupposition theories could not account for: 1) presuppositions are cancellable, i.e., they can be annulled by certain contexts without this giving rise to contradictions; and 2) contrary to Langendoen & Savin's (1971) *cumulative hypothesis*, presuppositions of compound sentences do not always correspond to the sum of the presuppositions of their parts.

Levinson (1983) pointed out the cancellability of presuppositions by showing that in certain belief contexts presuppositions can be annulled when beliefs contrary to the content of the presupposition exist. For example, in (2)

(2)   At least John won't regret to have studied philosophy.

the presupposition triggered by the factive verb *regret* – that John has studied philosophy – is cancelled if the participants in the conversation know John did not study philosophy.

The second problem, known as *the projection problem for presuppositions*, concerns presupposition behaviour in compound sentences. Consider the following examples, borrowed from Karttunen (1973):

(3)   If Jack has children, then *all of Jack's children* are bald.
(4)   If baldness is hereditary, then *all of Jack's children* are bald.

Both sentences contain the expression *all of Jack's children*, which trigger the presupposition that Jack has children. In (3) the presupposition is not inherited by the whole sentence, because the information that Jack has children is conditional. From an utterance of (3), the listener cannot infer with certainty that Jack has children; i.e., the presupposition in some sense is blocked. In example (4), on the contrary, the proposition that Jack has children can be inferred with certainty because it does project from the consequent of the conditional. In other words, (4) presupposes that Jack has children.

This *projection problem for presuppositions* is not confined to conditional sentences. It also appears in conjunctions and disjunctions. When the first clause entails a presupposition *r* triggered in the second clause, the whole sentence does not presuppose *r*. Presupposition theories have faced this problem from the time of Strawson's observation. One of the major challenges to theories of presupposition is to "determine which factors are responsible for the behavior of presuppositions in compound sentences and to specify a recursive procedure to compute the presuppositions of the compound sentences given the presuppositions of its parts" (van der Sandt 1989: 289). Early semantic approaches to presupposition failed to accomplish this because of the way semantic presupposition was defined. The entailment relation, in fact, is a monotonic, stable relation: if *p* semantically presupposes *q*, then *p* always presupposes *q*. Presupposition behaviour, in contrast, is flexible, non-monotonic, and influenced by linguistic and contextual factors such as beliefs and assumptions about the world and the other speakers.

Failure of the semantic account of presupposition behaviour in the early 1970s led to the treatment of presuppositions as pragmatic phenomena. Presuppositions were related to speakers' subjectivity, beliefs and assumptions, and not to the truth-conditional content of the sentences uttered. Inspiration was drawn from Grice's theory of communication (Grice 1967). Grice's theory explains aspects of meaning that require the logico-semantic analysis of sentences in a pragmatic dimension as being connected with goals, interests and intentions of the speaker. It is well-known that Grice distinguished between what a speaker *says* – the propositional content of a sentence – and what he *implicates*. What a speaker implicates in a statement can be inferred, among other things, from assumptions that follow naturally from the cooperative nature of conversational exchanges. Just as the truth value of what is implicated during a conversation does not depend on the truth value of the sentences uttered, the truth value of presuppositions does not influence the truth value of the sentences in which they are triggered. The pragmatic notion of presupposition is rooted in this sharp separation between semantic and pragmatic content.

3. Pragmatic presuppositions

The pragmatic notion of presupposition developed by Stalnaker (1970, 1973, 1974) employed a Gricean-like strategy in order to avoid logico-semantic complications that arose from presupposition falsity. In this pragmatic approach, presuppositions are "something like the background beliefs of the speaker – propositions whose truth he takes for granted, or seems to take for granted in making his statement" (Stalnaker 1974: 472).

Every conversation, according to Stalnaker (1974), takes place against a background of beliefs and assumptions shared, or presumed to be shared, by the participants in the conversation. The existence of these background assumptions – the *common ground* – makes communication possible and effective. The common ground influences and is influenced by what a speaker asserts during a conversation. Speakers will avoid asserting propositions that are already part of the common ground, since this would result in redundant, non-informative statements. Similarly, they will avoid asserting propositions incompatible with the common ground, since this would result in self-defeating statements. Further, once a proposition is made, and accepted by the audience, it becomes part of the common ground. Stalnaker's claim is that in the ideal communicative dimension – one in which the main purpose is to exchange information – speaker's presuppositions coincide with beliefs belonging to the common ground. According to Stalnaker's definition, a speaker pragmatically presupposes a proposition P "in a given context just in case the speaker assumes or believes that P, assumes or believes that his addressee assumes or believes that P, and assumes or

believes that his addressee recognizes that he is making these assumptions, or has these beliefs" (Stalnaker 1974: 473).

This definition makes presuppositions independent of linguistic form. Speakers presuppose everything in the common ground. The presuppositions that constitute the common ground can become evident as utterances of presuppositional triggers in sentences during conversation. However, Stalnaker maintained that a conception of sentence presupposition was not necessary, given the more fundamental nature of speaker presupposition. Other pragmatic approaches (e.g., Karttunen 1974) are less radical, in that linguistic form still plays an essential role. Presuppositions of sentences are seen as conditions that contexts must obey in order for an utterance to be felicitous in that context. But context is defined is terms of speaker's assumptions: it is a set of propositions "that describe the set of background assumptions, that is, whatever the speaker chooses to regard as being shared by him and his intended audience" (Karttunen 1974: 406). If the context entails the presuppositions of a sentence, then it is an appropriate context of use for that sentence.

4. Pragmatic accounts of presupposition projection

In Stalnaker's (1974) proposal to account for the projection problem, context plays a central role. Context changes continuously as conversation develops. Once a proposition has been asserted (and accepted as true), it becomes part of the context for speaker and audience. For compound sentences, such as a conjunction *A and B*, the context changes during the utterance of the sentence. Once *A* is asserted, the information becomes part of the context thereby changing the context before the assertion of *B*. Thus, for such compound sentence constructions, if *B* triggers a presupposition entailed by *A*, the presupposition has already become part of the context after the assertion of *A*. For example, in the statement (5),

(5) Jack has children and all of Jack's children are bald

the assertion that *Jack has children* becomes a presupposition before *all of Jack's children are bald* is uttered. This analysis avoids the logical-semantic complications of compound sentences that cast the semantic approach to presupposition into doubt.

This pragmatic account of presupposition behaviour in compound sentences shares most features with the so-called *Karttunen–Heim* approach to the projection problem. In this approach, the projection problem was restated in terms of contextual updating. In the case of compound sentences, every clause's presupposition must be satisfied in its local context. The local context for the antecedent clause *A* of a conditional sentence *If A, then B*, for example, is the initial context of utterance *c*. The local context for the second clause *B* is *c* plus the information conveyed by *A*. The

presuppositions of A, therefore, must be satisfied in the initial context c, whereas the presuppositions of B must be satisfied in $c + A$. If B presupposes a proposition r, and r is entailed by A, then r is already satisfied in $c + A$.

In two papers from 1983 and 1992, Irene Heim proposed an implementation of Karttunen's idea in a dynamic semantic framework, her *File Change Semantics Theory*. In her formulation, the meaning of a sentence is given by its context change potential (CCP). The CCP of a sentence is determined by how it updates the context in which the sentence is uttered. The CCP of complex sentences is given compositionally on the basis of the CCPs of their constituents. The satisfaction conditions formulated by Karttunen for every propositional connective are reinterpreted by Heim as definiteness conditions for CCP. As in Karttunen's proposal, contextual update is defined if sentence presuppositions are entailed by their local contexts. When presuppositions are not satisfied by the initial context, the context is *repaired* to accommodate them.

5.   Informative presuppositions: Context and accommodation

Pragmatic approaches to presuppositions avoided many of the problems encountered by classical semantic approaches. Nevertheless, they run into theoretical problems concerning a particular presuppositional phenomenon in language use and communication. During the early development of the pragmatic approach, it was noticed that presuppositions can be *new* information for the audience, without this giving rise to inappropriate utterances by the speaker. A speaker, in fact, might choose to utter a sentence carrying a certain presupposition even when it may be unknown to the audience. Consider the following example, discussed in Stalnaker (2002):

(6)   I can't come to the meeting – I have to pick up my sister at the airport.

Sentence (6) can be appropriately uttered even though the information that the speaker has a sister, which is the presupposition triggered by the expression *my sister*, is not *a priori* shared by the audience. Since presuppositions were defined as propositions presumed to be shared, how is it possible to reconcile this definition with the observation that communication works and is effective even though the speaker assumes a common ground different from the one the hearer is aware of? The first solution proposed by Stalnaker involved a notion of transparent pretence:

> [the speaker] may want to communicate a proposition indirectly, and do this by presupposing it in such a way that the auditor will be able to infer that it is presupposed. In such a case, a speaker tells his auditor something in part by pretending that his auditor already knows it. (Stalnaker 1974: 474)

This approach to the problem, however, does not explain why a listener should accept the proposition presupposed by the speaker solely by recognizing that the speaker is

acting as if he does. In his subsequent works, Stalnaker changed his analysis, focusing on the notion of accommodation and its relation to context.

David Lewis (1979) first introduced a rule of accommodation for presupposition as follows: "If at time t something is said that requires the presupposition P to be acceptable, and if P is not presupposed just before t, then – *ceteris paribus* and within certain limits – presupposition P comes into existence at t" (Lewis 1979: 340).

In Stalnaker's framework, accommodation is the process by which participants in a conversation align their presuppositions by virtue of the fact that one party recognizes that the other is assuming a certain common ground. Suppose that a listener has no idea, prior to an utterance of (6), that the speaker has a sister. Suppose also that the common beliefs among the interlocutors before the utterance of (6) include the idea that the speaker is competent and cooperative. Since the use of the expression *my sister* is appropriate only in a context in which the speaker is presupposing that she has a sister, the listener can infer that the speaker is presupposing this information. However, because presuppositions are what is presumed to be common ground, the listener infers that the speaker is presuming that the listener herself presupposes this information. The accommodation of this information into the context guarantees that the listener comes to presuppose that the speaker has a sister. As pointed out by, among others, Soames (1982) and von Fintel (2000), this account implies that the information presupposed must not be controversial for the audience. Nevertheless, this requirement makes it difficult to account for cases where presuppositions convey controversial information. One such example introduced by Karttunen (1974) and discussed by Gauker (1998) is:

(7)   We regret that children cannot accompany their parents to the commencement exercises.

The factive verb *regret* triggers the presupposition that the children cannot accompany their parents to the commencement exercises. This sentence can be appropriately used to let parents know, in an indirect way, that they must leave their children home. However, this presupposition could be genuinely controversial for the audience. As Gauker (1998: 162) pointed out,

> one can well imagine a parental revolt, in which the parents insist that the children must be admitted and bring them into the auditorium whether the authorities permit it or not. In that case, it will be hard to find any sense in which the presupposition [...] is uncontroversial.

In the light of such informative presuppositions, Gauker criticizes the identification of context with the cognitive states of the participants in a conversation. As an alternative, Gauker (1998, 2003) begins with the observation that conversations have goals, and that these goals and the circumstances in which the conversations take place determine the *context of utterance* which is distinct from speakers' attitudes. Context

is defined as a set of propositional elements factually constrained and relevant to the goals of the ongoing interaction. The content of the context, therefore, is mind-transcendent, objective, and independent of what speakers have in mind during their communicative exchanges. It is this objective notion of context that Gauker uses to explain presuppositional phenomena, such as their informative function. Presuppositions reflect participants' takes on the objective context. Speakers may or may not be aware of the content of the context, i.e., about which facts are relevant to the goals of the communication. And they may not be aware of facts their interlocutors take as relevant for the conversation. If the speaker utters a sentence that carries a certain presupposition r, whether or not the listener is aware that the objective context assumed by the speaker contains r, she comes to believe r for the simple reason that presuppositions are conceived as part of the objective context, and not of speaker's mental state. As pointed out by Sbisà (1999), Gauker's contribution involves a normative insight into presuppositional phenomena. According to Sbisà, presuppositions should be considered

> not as shared assumptions, but as assumptions which ought to be shared. [...] if the hearer takes the objective context not to contain the presupposed propositional element, he or she will be bound to consider the speaker not only as being wrong about the facts (as occurs when somebody says something factually false), but also as violating some norm of discourse. Violating norms of discourse may in turn be deemed a kind of uncooperative behaviour: it is in fact a kind of behaviour which makes it difficult to continue conversational cooperation. (Sbisà 1999: 501)

6.   Hybrid presuppositions

A new framework for the study of presuppositional phenomena was introduced with the appearance of *dynamic semantic* theories. In this framework, the meaning of an expression is defined in terms of context change. Two different dynamic approaches to presupposition have been developed during the last decade. The first derives from the pragmatic tradition initiated by Stalnaker, Karttunen, and gave rise to Heim's theory. I will refer to this as the 'cognitive' approach. The second was developed by van der Sandt (1992) and Geurts (1999) within the framework of Kamp's Discourse Representation Theory (DRT) (Kamp & Reyle 1993). I will refer to this as the 'anaphoric' approach.

In the cognitive approach, presuppositions of a sentence are a requirement that the context must satisfy for the sentence to be admitted into that context. Since the context is defined in relation to speakers' cognitive states, the notion of presupposition has a clear cognitive connotation. In the anaphoric model, presuppositions are anaphora (instances of an expression referring to another). In discourse, presuppositions

play the same role as anaphoric expressions such as pronouns, i.e., they are bound to a linguistic antecedent previously mentioned in the discourse. Since DRT defines context as a semantic representation built for the preceding discourse, presuppositions are more directly associated with linguistic structure. Despite their different theoretical implications, the two models are essentially equivalent (see for example Zeevat 1992). Nevertheless, as pointed out by Geurts (1999), they give rise to two different presupposition theories in relation to the projection problem.

For the projection problem, it is widely acknowledged that the anaphoric model is more empirically adequate (see, for example, Krahmer 1998). It correctly predicts presupposition behaviour in a wider range of sentences than competing theories. In fact, the success of Van der Sandt's solution to the projection problem rests on the assumption that presuppositions are just anaphora. They must be bound to a linguistic antecedent to be interpreted, just as anaphoric pronouns need an antecedent to be understood. For instance, in example (3) (*If Jack has children, all of Jack's children are bald*), the presupposition that Jack has children has an antecedent in the antecedent-clause of the conditional. Its semantic content is thus absorbed by (or bound to) the antecedent and we end up with the following interpretation:

(8)   If Jack has children, *they* are bald.

When the presupposition is resolved by such antecedent binding, it does not give rise to a presuppositional reading of the sentence.[3]

Van der Sandt claims that the only difference between presuppositions and other anaphoric expressions is that the former have a richer semantic content. Presuppositions can be accommodated into the global context when the context does not supply a suitable antecedent. The accommodation process gives rise to presuppositional reading of the sentences in which presuppositions are triggered. For example, in sentence (4) (*If baldness is hereditary, then all of Jack's children are bald*), the presupposition that Jack has children has no suitable antecedent to be bound to. Nevertheless, the sentence can be interpreted by accommodating the presuppositional semantic content into the context, thereby creating its proper antecedent. The interpretation obtained is the following one:

(9)   Jack has children and if baldness is hereditary, *they* are bald.

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3.   Van der Sandt (1992) pointed out that the anaphoric properties of definite descriptions (in addition to the presuppositional ones) had already been noted by several authors, such as McCawley (1979), Lewis (1979) and Heim (1983). It was taken for granted, however, that these properties had to be handled by separate mechanisms. Van der Sandt's claim is that *all* paradigmatic cases of presuppositions are anaphoric. Factive and aspectual verbs, cleft constructions, temporal clauses, and iterative adverbs display the same anaphoric behaviour as definite descriptions. According to van der Sandt, "the claim that definites are anaphoric is thus seen as a special case of the more general phenomenon that all presuppositions are anaphoric expressions" (1992: 342).

Accommodation is a process pragmatically constrained and is guided by two fundamental discourse principles, contextual consistency and informativeness: accommodation must produce interpretations that are consistent and informative. By introducing such characteristics, Van der Sandt's theory of presupposition is neither entirely semantic nor entirely pragmatic. Contrary to pragmatic approaches, presuppositions are part of the semantic content of sentences but the process by which speakers give an interpretation to their presuppositional sentences is pragmatically constrained.

Because presuppositions are not defined in terms of shared assumptions, the anaphoric approach does not, in principle, encounter the difficulties of pragmatic approaches when accounting for informative uses of presupposition. However, given the way in which contexts are conceived in DRT, there is no way to distinguish between information that is new for the listener and information that has not previously been mentioned during the discourse. Kamp & Reyle (1993), however, claim that their conception of context is broader, and includes all the information available to the speaker when interpreting a discourse. For the sake of simplicity they maintain that the initial context of interpretation should be represented as an empty discourse structure.

Recently, a number of supporters of the cognitive approach (for example Beaver 1999) have raised doubts about the empirical adequacy of van der Sandt's theory. They focus on cases where the theory does not correctly predict their intuitive interpretations.

Among the counterexamples to van der Sandt's theory that have been discussed are indicative conditional sentences in which a non-entailed presupposition is triggered in the consequent clause. For example, in the sentence

(10)   If Jane takes a bath, Bill will be annoyed that there is no more hot water.

the consequent of the conditional triggers the presupposition that there is no more hot water in light of the factive construction *to be annoyed that*. Since this presupposition has no antecedent to be bound to, the anaphoric model predicts a presuppositional reading of the sentence, one in which it is presupposed that there is no more hot water. This presupposition, as Beaver (1999) pointed out, is too strong. Intuitively this sentence presupposes not that there is no more hot water, but only that there will be no more hot water if Jane takes a bath. The cognitive approach to presupposition predicts precisely this interpretation. In fact, the rules for the contextual update for conditional sentences of the form $p \rightarrow q(r)$, where r is a non-entailed presupposition, assure that for this sentence to be admitted in the context c, it is sufficient that the c entails the conditionalized proposition $(p \rightarrow r)$.

The reason Van der Sandt's theory cannot predict this interpretation rests on the lack of a mechanism to treat and represent extra-linguistic knowledge. The preferred interpretation of (10), in fact, arises from our knowledge about water heating technology. In view of this problem, modified versions of van der Sandt's theory have been proposed. In these modified views, it is possible to represent lexical knowledge

(Bos et al. 1995), world knowledge, and rhetorical relations (such as *Explanation, Background, Narration,* etc.) that connect the subparts of a discourse in a coherent representation (Asher & Lascarides 1998a; Asher & Lascarides 1998b).

The advocates of the cognitive approach, on the other hand, have to face the problem of producing correct interpretations for sentences such as (4). The cognitive approach predicts that the sentence presupposes that if baldness is hereditary, Jack has children. This is, evidently, a counterintuitive result. Beaver (1999) developed a personal account of how to obtain the correct interpretation while maintaining the original Heimean framework. Beaver's proposal is to consider the listener's point of view. The listener does not know the context, or common ground, assumed by the speaker. But to understand the ongoing discourse, the listener must reconstruct the speaker's assumptions. Beaver pointed out that this reconstruction process involves taking into consideration not only what has been said so far, "but also what assumption the author is *likely* to have made as to the initial common ground." (Beaver 1999: 14) Common sense knowledge of the world will be used to determine *plausibility ordering* over the set of contexts the listener has identified as possible initial common ground candidates. As the discourse proceeds, the listener will rule out contexts that do not satisfy the presuppositions of the sentences uttered. Beaver identifies this selection process as accommodation. Sometimes it seems more plausible that the speaker assumes a context containing a conditionalized presupposition (as in (10) above), at other times a stronger presupposition (as in (4)). What is peculiar in Beaver's proposal is that what is actually accommodated might not coincide with the propositions triggered by the presuppositional expressions uttered, as in van der Sandt's model. It depends on extra-linguistic factors such as world knowledge, common sense reasoning, and plausibility considerations.

The current debate originated by the anaphoric approach to presuppositions seems to lead to the conclusion that an empirically adequate theory of presupposition should take extra-linguistic information into consideration. To accomplish this, future research on presuppositions should take advantage of interdisciplinary approaches in which linguists, philosophers and cognitive scientists cooperate to provide integrated models of discourse understanding.

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Primate communication

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1. Introduction

Linguistic symbols are conventionalized behavioral expressions that human beings use to manipulate one another's attention, including everything from words to complex syntactic constructions to narrative genres. Conventionalization is only a distillation of past uses, of course, and so it is of limited help when language users face novel communicative exigencies — which they do on a regular basis since, at some level of detail, each and every communicative event is unique. An essential component of human linguistic competence, therefore, is a speaker's ability to use her conventionalized linguistic inventory in flexible ways depending on a number of parameters of the communicative context. Perhaps of special importance in this process is the speaker's assessment of the knowledge and expectations of the listener at the current moment, including a characterization of the nature and degree of their 'common ground' (Clark 1996). Effective communication requires that the speaker make an accurate assessment of this common ground and then make appropriate linguistic choices in light of this assessment.

Classically, the field of pragmatics is not about people's conventionalized linguistic inventories but rather about how they use this inventory, the strategic choices they make, in particular acts of communication (Verschueren 2000). Since other animal species are often characterized as having inventories of communicative signals, and since they use them to communicate on particular occasions, we should be able to discern in animal communication a kind of pragmatics as well. But this is not so simple. For starters, virtually none of the classic topics of pragmatic investigation seems to exist in animal communication. For example, in one modern textbook of pragmatics (Yule 1996), the substantive chapter headings are: deixis, reference and inference, presupposition and entailment, cooperation and implicature, speech acts, politeness, conversation and preference structure, and discourse. In reviews of animal communication (e.g., Hauser 1996), these are not central topics, to say the least. Although there is some talk about whether nonhuman animal species make reference to external entities and whether they have something analogous to different speech act goals, in general none of these central pragmatic topics is readily applicable to the communication of nonhuman species.

There are good reasons why animal communication does not seem to display all of the interesting pragmatic dimensions that characterize human linguistic communication.

The most fundamental reason is that nonhuman animal communication does not consist of conventional symbols or attention directing; that is why we say that animals operate with signals and not symbols (Tomasello 1998). Indeed, for the most part nonhuman animal communication does not really take place on the mental or intersubjective plane at all. It is directed at the behavior and emotional states of others, not at their attentional or mental states, and so there is probably nothing like an assessment of any common communicative ground on the basis of which individuals make choices about how to use their inventories of signals on particular occasions of use.

But human linguistic communication emerged evolutionarily from animal communication, specifically primate communication, and so there must be some commonalities. And indeed in primate communication we can see some of the seeds of human linguistic communication, including some of its pragmatic dimensions. Some of these, such as reference, are most clearly apparent in primate vocal communication, whereas others, such as making adjustments for listeners, are more clearly apparent in primate gestural communication. In this brief review I first relate some basic facts about primate communication and then attempt to identify both commonalities and differences with the human case. The focus is of course on pragmatics, which means that there is a special emphasis on those aspects of primate communication that show some flexibility of use — as there can be no question of pragmatics if the individual is innately programmed to behave in a particular way in a particular circumstance with no choice of when, where, and how to use a communicative signal.

2.   Primate vocal communication

Primates vocalize to one another most often in the context of evolutionarily urgent events such as avoiding predators, defending against aggressors, traveling as a group, and discovering food. The most well-known case is the alarm calls of vervet monkeys. The basic facts are these (see Cheney & Seyfarth 1990a for more details). In their natural habitats in east Africa vervet monkeys use three different types of alarm calls to indicate the presence of three different types of predator: leopards, eagles, and snakes. A loud, barking call is given to leopards and other cat species, a short cough-like call is given to two species of eagle, and a 'chutter' call is given to a variety of dangerous snake species. Each call elicits a different escape response on the part of vervets who hear the call: to a leopard alarm they run for the trees; to an eagle alarm they look up in the air and sometimes run into the bushes; and to a snake alarm they look down at the ground, sometimes from a bipedal stance. These responses are the same when researchers play back previously-recorded alarm calls over a loudspeaker, indicating that the vervets' responses are not dependent on seeing the predator but rather on information contained in the call itself.

On the surface, these alarm calls would seem to be very similar to human linguistic symbols. It seems as if the caller is directing the attention of others to something they do not perceive or something they do not know is present; that is, they would seem to be symbolic (referential). But several additional facts argue against this interpretation. First, there is basically no sign that vervet monkeys attempt to manipulate the attentional or mental states of conspecifics in any other domain of their lives. Thus, vervets also have a number of different 'grunts' that they use in various social situations, but these show no signs of being symbolic or referential in the sense of being intended to direct the attention of others to outside entities; they mainly serve to regulate dyadic social interactions not involving outside entities such as grooming, playing, fighting, sex, travel, and so forth. Second, predator-specific alarm calls turn out to be fairly widespread in the animal kingdom. They are used by a number of species — from ground squirrels to domestic chickens — who must deal with multiple predators requiring different types of escape responses (Owings & Morton 1998); but no one considers these to be symbolic or referential in a human-like way. An extremely important evolutionary fact in all of this is that no species of ape has such specific alarm calls or any other vocalizations that appear to be referential (Cheney & Wrangham 1987). Since human beings are most closely related to the great apes, this means that it is not possible that vervet monkey alarm calls could be the direct precursor of human language unless at some point apes used them also — and there is no evidence of this.

Primate vocalizations are used with only a very limited flexibility. For the most part, all of the individuals of a given species use the same vocal signals, and no new vocal signals are invented or learned by individuals. Infants reared in social isolation still produce most of their species-typical call types from soon after birth (see Snowdon et al. 1997 for a review), and rearing individuals within the social context of another primate species produces no significant changes in the vocal repertoire (Owren et al. 1992). In the normal case, vocal calls are used in adult-like contexts from early in ontogeny (Seyfarth & Cheney 1997). In general, primate calls seem to be closely bound up with their emotional states, so much so that Goodall states that "the production of a sound in the *absence* of the appropriate emotional state seems to be an almost impossible task for a chimpanzee" (1986: 125).

An especially important type of flexibility from the point of view of pragmatics is audience effects, in which an individual uses its vocal signals differently depending on the social-communicative situation. Audience effects suggest that individuals are strategically modifying their use of a signal based on their momentary assessment of who is present or, potentially at least, the mental states of those present. For example, some monkeys produce food calls when discovering food, but rates depend on whether or not other group mates are present (Caine et al. 1995); male chimpanzees pant hoot more frequently in travelling contexts when their alliance partners are nearby (Mitani & Nishida 1993); and vervet monkey females adjust the rate of alarm

calling depending on whether their own offspring is present, while males call more in the presence of females than males (Cheney & Seyfarth 1985). On the other hand, macaque females who watched a predator approaching their unsuspecting offspring did not attempt to alert the youngster at all (perhaps because they were not threatened themselves) — nor did they attempted to direct the youngster to hidden food whose location they alone knew (Cheney & Seyfarth 1990b). These latter findings suggest that audience effects in primate vocal communication mainly concern simple presence-absence of others and are not the result of callers assessing the knowledge states of recipients. In addition, other non-primate species, such as domestic chickens, also show some audience effects in the sense that they produce their calls differentially depending on whether and which groupmates are present (see Owings & Morton 1998 for a review).

Overall, primate vocalizations seem to be under significant genetic control in their morphology and usage, with individuals having only a fairly limited degree of flexibility. In all, it does not seem that senders are attempting to manipulate the attention of others or that they make significant adjustments based on particular communicative circumstances beyond the presence-absence of others.

3.   Primate gestural communication

Primates communicate using manual and bodily gestures mainly in social contexts such as play, grooming, nursing, and during sexual and agonistic encounters. These are in general less evolutionarily urgent functions than those signaled by acts of vocal communication, and perhaps as a result primates — especially the great apes, whose gestures have been most intensively studied — use their gestures more flexibly than their vocalizations. Thus, unlike the case of vocal signals, there is good evidence that individuals of some ape species may invent new gestural signals as needed (Goodall 1986; Tomasello et al. 1985). However, like vocal communication, the gestural communication of nonhuman primates shows no signs of referentiality or symbolicity. Most strikingly, nonhuman primates do not point or gesture to outside objects or events for others, they do not hold up objects to show them to others, and they do not even hold out objects to offer them to others (Tomasello & Call 1997).

Apes learn their gestural signals via a process of ontogenetic ritualization (Tomasello 1996). In ontogenetic ritualization two organisms essentially shape one another's behavior in repeated instances of a social interaction. The general form of this type of learning is:

–   Individual A performs behavior X;
–   Individual B reacts consistently with behavior Y;

- Subsequently B anticipates A's performance of X, on the basis of its initial step, by performing Y; and
- Subsequently, A anticipates B's anticipation and produces the initial step in a ritualized form (waiting for a response) *in order to* elicit Y.

The main point is that a behavior that was not at first a communicative signal becomes one by virtue of the anticipations of the interactants over time. There is no evidence that any primate species acquires gestural signals by means of imitative learning (Tomasello & Call 1997), which is normally required for the forming of a true communicative convention.

With regard to flexibility of use, Tomasello et al. (1994, 1997) found that many chimpanzee gestures were used in multiple contexts, sometimes across widely divergent behavioral domains. Also, sometimes different gestures were used in the same context interchangeably toward the same end — and individuals sometimes performed these in rapid succession in the same context (e.g., initiating play first with a 'poke-at' followed by an 'arm-raise'). In some instances both monkeys and apes have been observed to use some gestures in a way that suggests 'tactical deception', which — regardless of the appropriateness of this appellation — at least indicates that the human observer observed the use of a gesture outside its ordinary context of use (Whiten & Byrne 1988). Interestingly, Tanner & Byrne (1996) described a number of gorilla gestures that they interpret as iconic. That is, an adult male gorilla often seemed to indicate to a female playmate iconically, using his arms or whole body, the direction in which he wanted her to move, the location he wanted her to go to, or the action he wanted her to perform. However, these might simply be normal ritualized gestures with the iconicity being in the eyes of the human only; in fact, a role for iconicity in gorillas' and other apes' comprehension of gestures has not at this point been demonstrated (Tomasello & Call 1997).

In terms of audience effects, Tomasello et al. (1994, 1997) found that chimpanzee juveniles only give a visual signal to solicit play (e.g., 'arm-raise') when the recipient is already oriented appropriately, but they use their most insistent attention-getter, a physical 'poke-at', most often when the recipient is socially engaged with others. Tanner & Byrne (1993) reported that a female gorilla repeatedly used her hands to hide her playface from a potential partner, indicating some flexible control of the otherwise involuntary grimace — as well as a possible understanding of the role of visual attention in the process of gestural communication. In an experimental setting, Call & Tomasello (1994) found that at least some orangutans also were sensitive to the gaze direction of their communicative partner, choosing not to communicate when the partner was not looking. Kummer (1968) reported that before they set off foraging, male hamadryas baboons engage in 'notifying behavior' in which they approach another individual and look directly into their face, presumably to make

sure that the other is looking before the trek begins. Overall, audience effects are very clear in the case of primate gestural communication, perhaps especially that of the great apes. But these all concern whether others can or cannot see the gesture — i.e., are bodily oriented toward the gesturer — not the knowledge states of others.

Of special interest for pragmatics, chimpanzees (and perhaps other apes) employ basically two types of intentional gesture. First, 'attractors' (or attention-getters) are imperative gestures that are aimed at getting others to look at the self. For example, a well-known behavior from the wild is the 'leaf-clipping' of adult males, which serves to make a noise that attracts the attention of females to their sexual arousal (Nishida 1980). Similarly, when youngsters want to initiate play they often attract the attention of a partner to themselves by slapping the ground in front of, poking at, or throwing things at the desired partner (Tomasello, Gust & Frost 1989). Because their function is limited to attracting the attention of others, attractors most often attain their specific communicative goal from their combination with involuntary displays. That is, the specific desire to play or mate is communicated by the 'play-face' or penile erection, with the attractor serving only to gain attention to it.

The second type of intentional gestures are 'incipient actions' that have become ritualized into gestures (see Tinbergen 1951 on 'intention-movements'). These gestures are also imperatives, but they communicate more directly than do attractors what specifically is desired. For example, play hitting is an important part of the rough-and-tumble play of chimpanzees, and so many individuals come to use a stylized 'arm-raise' to indicate that they are about to hit the other and thus initiate play (Goodall 1986). Many youngsters also ritualize signals for asking their mother to lower her back so they can climb on, for example, a brief touch on the top of the rear end, ritualized from occasions on which they pushed her rear end down mechanically. Infants often do something similar, such as a light touch on the arm (ritualized from actually pulling the arm), to ask their mothers to move it so as to allow nursing.

On the surface, attractors would seem to bear some relation to deictics that simply point out things in the environment, and incipient actions would seem at least somewhat similar to lexical symbols that have relatively context-independent semantic content. But the primate versions are obviously different from the human versions, most especially because the primate versions are dyadic and not referential, attractors are thus really most similar not to deictics, which are referential, but to human attention-getters like 'Hey!' that simply serve to make sure that a communicative channel is open. Incipient actions are most similar to certain kinds of ritualized performatives — for example, greetings and some imperatives — that serve to regulate social interactions, not refer to or comment upon anything external. It is also interesting that systematic observations of chimpanzee gesture combinations reveal no evidence of a strategy in which they first use an attractor to make sure the other is looking followed by an incipient action containing specific semantic content (vaguely analogous

to topic-comment structure; Call, Liebal & Tomasello 2002). One would think that if chimpanzees understood the different communicative functions of these two types of gesture, this kind of combination would be relatively frequent.

In sum, primate gestural communication shows more flexibility than primate vocal communication, perhaps because it concerns less evolutionarily urgent activities than those associated with vocalizations. Apes in particular create new gestures routinely, and in general use many of their gestures quite flexibly. Audience effects are also integral to ape gestural communication and concern more than simple presence-absence of others — but only in the sense of whether others are in a position to see the gesture. Basically no primate gestures are used referentially.

4.   Where is the pragmatics?

The pragmatics of primate communication would thus seem to be rather meager. In the domain of vocal communication basically no primate vocal signals are learned, and they are under only a small amount of voluntary control. The audience effects that exist are based on whether others are present or not in the immediate context, not on what those others think or know. In contrast, many of primates' gestural signals are learned and used more flexibly. Individuals sometimes choose a particular type of gesture based on whether potential recipients are oriented towards them bodily or are otherwise engaged. But again, even for gestures there is no evidence that primates take account of others' intentional or mental states in order to adjust their communicative formulations.

It is difficult to believe that if primates knew about the intentional and mental states of others they would not use this knowledge in communicating. A reasonable conclusion, therefore, is that they simply do not know that others have intentional and mental states (Tomasello & Call 1997). Their communicative signals, whether vocal or gestural, serve not to direct attention triadically to outside entities but rather to regulate dyadic social interactions directly. This means that primates only use ritualized communicative signals — not imitatively learned conventionalized symbols — and that they do not build their communication around, or in any way make reference to, the common communicative ground present in the current social interaction.

All of this serves to underscore in a particularly striking way the uniqueness of human communication, and the ways in which human social cognition and pragmatics help to constitute this uniqueness. Human beings create communicative conventions, establish common communicative ground with their interlocutors, and invite others to attend to external entities or perhaps even to construe them in a certain way or from a certain perspective relative to the common ground. Because nothing like this happens in the communicative signaling of our nearest primate relatives, it would seem that this is a relatively recent development in human evolution.

To conclude, we may note that it is possible that human-raised apes learning something resembling human linguistic symbols are able to master some aspects of human linguistic pragmatics (e.g., Greenfield & Savage-Rumbaugh 1990; Savage-Rumbaugh et al. 1993). But basically no studies have been directed to this question, except for the description of one gorilla learning ASL and his use of manual signs for different speech act functions (e.g., labelling, protesting, answering, greeting, calling; Patterson, Tanner & Mayer 1988). It is therefore a very interesting question whether, when raised in a human-like communicative environment, some apes can master some aspects of human linguistic pragmatics.

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Semiotics

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1. Introduction

Semiotics is the study of *signs*. Thus, semiotics investigates the structure and function of all processes in which signs are involved: the processing of information in machines, the stimulus and response processes in plants and animals, the metabolism in organisms, the interactions of primates, communication between humans, the relations between social institutions. It also deals with the special processes of interpretation that take place in the comprehension of the complex sign structure in legal matters, literature, music and art.

Semiotics is thus an object- and a meta-discipline. As an *object-discipline*, it studies similarities and differences between sign processes. As a *meta-discipline*, it analyses the methods and theories of all disciplines, including the natural sciences, and thereby significantly contributes to the philosophy of science. Since semiotics assumes that the sign character is an important aspect of scientific approaches — in the human, social as well as natural sciences — it is an *interdisciplinary approach*:

> It is doubtful if signs have ever before been so vigorously studied by so many persons and from so many points of view. The army of investigators includes linguists, logicians, philosophers, psychologists, biologists, anthropologists, psychopathologists, aestheticians, and sociologists. (Morris 1938: 1)

The field of research is constantly growing, both in theoretical and applied semiotics, which also makes the research area difficult to overlook and keep in focus.

Historically, semiotics has been adapted to solving everyday practical problems since antiquity. Medical semiotics in Greece helped physicians to recognize illnesses on the basis of their signs (symptoms). The art of divination practiced by the Greeks and the Romans aimed at the prediction of future events through the interpretation of oracle or omens. Medieval heraldry regulated the design of coats of arms to enable knights to recognize each other. The Enlightenment investigated ways of presentation that could be expected to achieve desired effects in the various genres of the Arts. The crypto-analysis of the Baroque period made great efforts to decipher texts written in unknown characters and languages. Romantic philology ascribed historical documents to particular authors end epochs, and tried to distinguish originals from copies. Craft and industry have endeavored for the standardization and the legal protection of guild signs, corporate symbols and trademarks.

2.   Basic concepts of semiotics

Semiotics studies all kinds of sign processes. A sign process is generally called *semiosis*, and a semiosis takes place if the following basic components are involved. There must be a *sender* (or a group of senders), who sends a *message* to an *addressee* (or a group of addressees). Before conveying the message the sender chooses a *medium* that connects him/her with the addressee and an appropriate *code*. From the code the sender selects a meaning, *the signified*, that includes the intended message. The signified is correlated through the code with a corresponding *signifier*. Then we can say that the sender produces a *sign* that is a token of this signifier. The addressee receives the sign through the medium and perceives it as a token of the signifier, which refers him/her to the signified on the basis of the code. The message is then reconstructed by the addressee with the help of the *context* in the given situation.

Sign processes or semioses with all these components can be verbal utterances (de Saussure 1916), as well as the conveying of a message through emblematic gestures (Ekman & Friesen 1969) or the operation and observation of traffic lights (Prieto 1966) etc.

According to the presence or absence of different components of the semiosis we can define the following three different types of sign processes:

1.   If, in a semiosis, a sender produces a sign intentionally in order to make an addressee receive a message, the resulting sign is a communicative sign. When the addressee receives the message we can call this resulting process *communication* (Buyssens 1943). Communication cannot occur without senders and addressees, signs and messages, media and contexts. Some semioticians accept in a wider definition that communication can take place without signifiers and signifieds (an example is given in Posner 1989: 246). Communication — especially the study of the way the components of semiosis influence each other and the sign process as a whole — is a key concept of semiotics.

2.   If, in a semiosis, a code is involved (a conventional connection between a signifier and a signified), the sign is called a signifying sign and the resulting sign process is a *signification*. Signification can take place without senders and addressees — an example would be the red spots on the skin taken by a doctor as a sign of measles.

3.   If no code is involved in a semiosis, we call the sign an indicating sign and the resulting process an *indication*. Indication can take place without signifiers and signified and without a sender and addressee, but not without signs and messages, recipients, media and contexts. An example of senderless sign processes without a code and the addressee as a simple recipient is, when a scratching noise in a conference room is taken by the audience as a sign of the microphone being in operation.

Indication is the simplest and basic type of semiosis in humans and primates, because it can be realized with a minimal number of components. Indicating and signifying signs also play a role together with communicative signs in most complex sign processes, such as oral and written verbal interaction.

Sign processes can be primarily (but rarely exclusively) related either to cognition or to interaction. When a sign user produces or interprets something as a communicative sign, s/he is primarily interested in interaction. Indicating signs seem more to serve the purposes of cognition, while signifying signs can serve both interaction and cognition. However, we must take into account that cognition and interaction are generally hard to separate in communication, the most complex sign process.

Depending on which components we intend to analyze in different sign processes, we can divide semiotics into three branches. Morris (1938) distinguished pragmatics, semantics, and syntactics as follows in terms of different relationships between the components of semiosis:

1. *Pragmatics* is that semiotic branch which systematically studies the relations between signs and sign-users (sender, addressee, recipient).
2. *Semantics* is that semiotic branch which studies the coded relations between signifiers and signifieds (meanings).
3. *Syntactics* is that semiotic branch which studies signifiers, their constituents, and the relations of signifiers to other signifiers.

3.   Basic sign theories

Charles S. Peirce (1839–1914) is recognized as the founder of the modern theory of signs or theoretical semiotics. In the beginning of the 20th century, semioticians tended to believe that they could provide a system of universal terms describing all types of signs and semioses. This belief underlies the rise of four traditions that contributed to modern semiotics: semantics and the philosophy of language, modern logic, rhetoric, and hermeneutics. Thus, semiotics became a meta-science in competition with established disciplines such as biology, psychology and medicine on the one hand, and literary criticism, history of art and music on the other.

Below is a brief review of the most important aspects of semiotics. The overview shows the two principal directions of development within the discipline: (a) a concentration on approaches not previously dealt with, leading to developments of sub-branches of semiotics like film and theatre semiotics, and a semiotic theory of nonverbal communication; or (b) testing and comparing the system of semiotic terms on different scientific objects such as a number of types of semioses in nature and culture (semiotics of multimedia communication, anthropology, psychosemiotics, etc.). There

are five basic approaches to signs: the logical, the structuralist, the phenomenological, the pragmatic, and the cultural approaches. Each will be briefly characterized.

3.1   Logical approaches

The logical strand in theoretical semiotics is strongly connected with Gottlob Frege (1848–1925), the founder of modern logic. He developed a formalized language modelled on arithmetic, and described various aspects of sign systems (Frege 1892). Morris's idea to create semiotics as the unified science was designed on the plan for a scientific language in Carnap's (1928) early work *Der logische Aufbau der Welt*. Carnap was not so interested in setting up a theory, but rather wanted to create a universal, exact language to be used for scientific purposes. His goal was to supply an exact ana‑lysis of assertions and concepts in any scientific area, including philosophy. The objects behind a specific term belonging to a certain field of knowledge should be defined step by step and referred to as parts of a genealogical tree, a *Konstitutionssystem*. If it were possible to create such a 'constitutional system' in which every term were to have its own specific place and which would make it possible to derive all conceptions through a few basic, universal ideas, then these conceptions could be found in each new culture, in each new civilization, and it would be possible then to construct a text in a code which would always be understood. Semiotics has not, however, become that unified science.

3.2   Structuralist approaches

The structuralist trends extend over the field of linguistics (as a central discipline in the structuralist tradition), anthropology, the social sciences, history, philosophy, literary criticism, mathematics, biology, psychology and psychoanalysis. It has its methodologi‑cal roots in Saussure's semiology, Russian formalism (Tynjanov, Propp and others) and the Prague Linguistic Circle (Trubetzkoy, Mathesius, Jakobson and others). Jakobson's structuralist theory of language (see Jakobson 1966–1988) had a strong influence on the French anthropologist Lévi‑Strauss and his studies of myth, which were to become a significant contribution to text semiotics.

Louis Hjelmslev (1899–1965) was another important semiotician who worked within the structuralist frame; he is the successor to Saussure's semiology, and to some extent he completed Saussure's work. To distinguish his Copenhagen school from other structuralist trends, he called his theory 'glossematics' (Hjelmslev 1943, 1947). It is a very formal and abstract theory, which had some influence on a number of Italian and French semioticians (among others Barthes, Greimas, Eco).

The central object of investigation in structuralism is the text; textual studies have changed from text structuralism in the beginning, to text semiotics today. Structuralist text analysis is seen as a text‑semiotic discipline, which investigates signs in a text in

relation to each other. Narrative signs are obvious carriers of information. Furthermore, it also seems natural to work on a definition of texts in which non-verbal signs can be included. A definition of the concept of text from a cultural-semiotic perspective would consider a combination of communicative signs as a text when the following three conditions are fulfilled: (i) the text must be an artifact; (ii) it must be an instrument, i.e., there must be a culture which has a convention that gives it (at least) one function; and (iii) the text must be coded, i.e., there must be a culture where a code is valid which determines its meaning(s).

One semiotic approach to text would build on the notion that everything that man produces, including texts, is an artifact and a product of intentional behavior, and that artifacts are used in order to pursue a certain goal. The establishment of the theoretical connection between, on the one hand, the components of semioses such as addressees, codes, signs, media, and messages, and on the other hand anthropological units such as institutions, artifacts, and cultural mechanisms, seems to be a fruitful development in text semiotics. The French semiotician A.J. Greimas headed in this direction with *Sémantique structurale* (1966), in which he concentrates on the text and its narrativity. Unlike Peirce, Greimas does not define semiotics as a theory of signs, but as a theory of meaning (signification). In his discourse analysis, Greimas wants to study those minimal semantic units, which are not signs but merely their components, and he ultimately investigates the semantics of the text, which is more than a single sign. Step by step, Greimas introduces a semiotic grammar, consisting of a syntactic and a semantic component with a surface and a deep structure. In addition, Greimas distinguishes a semio-narrative and a discursive component (see Culler 1975 for an overview).

In addition to structuralism, Greimasian semiotics is strongly based on narratology. One basic claim is that any manifestation of meaning (in societies as well as in nature) can be analyzed as a story. This is why the semiotic model contains a 'narrative grammar' as its basis. Narrative grammar can be applied to myths, folktales, and literary texts, but also to all other meaningful structures (musical symphonies, paintings, sculptures, the history of a city, etc.) have a narrative grammar. They all display programs developing states of being which allow us to describe them as simple or complex 'stories'. The concept of narrative structures has received great interdisciplinary interest. Text linguistics and interdisciplinary text theory have developed their own concepts of narratology (cf. Ihwe 1972). Greimas also introduced the notion of isotopy: the repetition of one or more semantic components in a text. Isotopy can be described as a special case of repetition (recurrence), which is an important means of textual cohesion (Greimas 1972).

3.3   Phenomenological approaches

In the phenomenological approach, the directedness of consciousness (intentionality) on phenomena (what is immediately given for consciousness) is taken as a starting

point for developing scientific metaphysics. The phenomenologist Edmund Husserl (1859–1938) argued in his major work *Zur Logik der Zeichen* that mathematics and logic are not concerned with the operations of making judgments and inferences, but rather with the products of these operations: concepts, propositions, and conclusions (e.g., Husserl 1890). In addition, he developed an *a priori* grammar for all possible languages, because he held that a universal logical grammar largely determined the grammar of all languages. Husserl had some influence on Prague School structuralism, and later also on Jacobson's search for linguistic universals and distinctive features in phonology. Heidegger's hermeneutical phenomenology of the human being is a further development of Husserl's descriptive phenomenology, but it is at the same time in sharp contrast to the latter. Heidegger operates with the hermeneutical circle, which is the ontological structure of all human existential understanding and interpretation.

3.4   Pragmatic approaches

The pragmatic aspect of theoretical semiotics was developed by the pragmatist founder of semiotics, the philosopher Charles S. Peirce, and further explored by Charles Morris (1901–1979). They defined the theory of signs as the study of signs of any kind. Peirce (1982) wanted to define semiotics basically as a science of man, while Morris included sign processes by organisms in general. Morris's (1938) pragmatics, defined as the study of the relation of signs to their interpreters, the branch of semiotics which studies the origin, the uses and the effects of signs, has inspired a major trend in linguistics. Morris himself paraphrased the subject matter of pragmatics with the formula "the relations of signs to their users" (Morris 1938: 29). These relations between sign vehicles and their interpreters have been given various explanations in the semiotic research of the last half century. Needless to say that there is still confusion and vagueness surrounding the concept of pragmatics today. Anthropologists, linguists, philosophers, psychologists and sociologists have seen pragmatics as the study which connects meaning and the signifying process with use in all kinds of contexts, with *reasoning*, and with *understanding* (cf. Parret 1983: 89ff). One can say that four different but related lines of pragmatic research have developed since Morris. It is possible to focus either on pragmatic processes, pragmatic signs, pragmatic information, or pragmatic messages to investigate the principles that guide pragmatic inferencing processes (cf. Posner 1991).

1.   Situation-dependent inferencing is nowadays called 'pragmatic', in order to contrast it with semantic and syntactic decoding and encoding processes. A *pragmatic process* in the narrow sense takes place when senders and addressees interpret activities within a semiosis. But pragmatic processes are not the same for sign producers and for sign recipients. Pragmatic investigations, which concentrate on the principles that govern different situation-dependent inferences,

include, e.g., the various approaches to Austin's and Searle's speech act conditions, Grice's conversational maxims, or Sperber & Wilson's relevance principle.

2. We must keep in mind that process-oriented pragmatic research does not investigate which signs are involved, since such underlying principles are supposed to function independently of special kinds of signs. Codes such as natural languages, constructed languages, and even codes in arts and music, require complex pragmatic processes for their interpretation. Studying these kinds of complex *pragmatic signs* is of special interest especially to linguists. In order to understand the complexity of pragmatic signs, let us suppose a typical communication situation in second language acquisition. A student presents a book review to his/her fellow students, starting his/her paper in the following way: "I've read this big book and now I want to talk about it". An accidental listener could decode the meaning of this sentence without any problem, but s/he would not really know what book the student is going to talk about. This communicative situation is often accompanied by additional indicators, which are not restricted to language. The student holds the book in one hand, points at it with the index finger of his/her other hand, and looks at it. Next, s/he uses the space between the index finger and the thumb to indicate how 'big' the book is. We only know that 'I' refers to the sender, but we do not know who the sender is; 'here' and 'this' refer to the book, but we know neither the title and the author, nor the size of the book. It is therefore obvious that personal and demonstrative pronouns, and adverbs of place and time require additional indicators to enable us to interpret a communicative situation.

3. The additional knowledge the addressee must take into account when s/he wants to infer the message intended by the sender may be called *pragmatic information*. This type of information can refer to anything in the world, and any delimitation of information, which is of potential pragmatic relevance, is impossible. In natural languages, pragmatic information depends on everything that is relevant for the culture in question. Especially important are social relationships between sender, addressee, and the persons talked about. Pragmatic information can sometimes be even more important than the message itself for the results of the pragmatic process.

Imagine a situation where a woman has her first date with a man who forgot to take off his wedding ring. Before drawing conclusions, she also has to take into account, e.g., on which hand he wears the ring, and she must be able to relate this to the culture of a specific community. Therefore information-oriented pragmatics can only be studied in an interdisciplinary manner, combining ethnography, sociolinguistics, psychology of language, and anthropology.

4. As was indicated above, the sender selects a meaning (the signified), which includes the intended message. Meaning (the signified) is generally studied by semantics. For that reason, there have been many attempts to distinguish between meaning as 'designatum', 'core meaning', 'truth-functional meaning', and 'emotive',

'expressive', 'interactive', 'actual', 'instrumental', or 'social meaning'. From this point of view, pragmatics is often characterized as a direction of research that studies the relation between the signified and the intended message. Imagine the following situation. Max is a cat living with a family. One day the father says: "Max is not here". For the members of the family, this statement can signify at least the following:

1. Max is not in the house |situation: Max spends much time outside|.
2. Max is staying elsewhere |situation: a member of the family has a studio some-where, where he or she works as an artist|.
3. Max is gone |situation: Max has been killed in an accident; the parents are trying to tell this to the daughter|.

All these are *pragmatic messages* expressed by the speaker in uttering the sentence "Max is not here". Pragmatic messages are thus part of the process of interpretation, which connects the signified of a given sign with the message assumed to have been intended in its production.

3.5   Cultural approaches

The cultural aspect developed mainly in the early 1970s in the Soviet Union, and addressed the nature of culture. One may speak of two research centers of cultural semiotics: the Moscow and the Tartu school. It is typical for these schools that they pursued applied semiotics. The majority of Russian semioticians work on specific problems in different sciences without formulating a general theory. The main focus has been on issues related to linguistics: the reconstruction of Indo-European (Ivanov & Gamkrelidze 1984), the languages and myths of different peoples (Toporov & Ivanov 1967), neurolinguistics (Ivanov 1978), and non-verbal communication (Nikolaeva 1969). In addition, text theory, literary theory and history are central topics of investigation. Within the field of history, the works of Boris Uspenskij (e.g., on medieval icon paintings; see Uspenskij 1976) are relevant. In his work, Uspenskij (1991) studied the 'language of history', by which he understands a system of ideas consisting of perceptions of different historical events. These historical events are organized in a kind of causal chain. The 'language of history' determines the language user's reactions to present events, i.e., the mechanism of developing events (which Uspenskij calls the historical process).

The central figure in the Tartu school was the literary historian and theoretician Jurij Lotman (1922–1994), who worked on semiotic discourse analysis. Lotman's central idea is the *concept of text* as a part of any particular culture. Text consists of distinguishing features, which show that they are a part of a special culture. In a culture, texts do not only function as text individuals, they are at the same time members of a type, which can be interpreted as a *semiotic text type* and translated to other cultures. The number of text types varies in different cultures. Lotman (1981, 1982) says that a culture produces more and more types of text in the course of its development. In every culture,

individuals can explain the world by using different text types. One and the same object or fact (language, state, love, cats, morning star, etc.) can be described from the physical, sociological, aesthetic, etc. point of view. Lotman therefore defines culture as the totality of its texts (Lotman 1981: 35).

Another cultural approach had already been founded in the 1920s in Germany. We have talked about *semiotics of culture* since Ernst Cassirer (1923–1929) proposed to describe particular sign systems as *symbolic forms*. He assumed that the symbolic forms of a society (e.g., myth, symbols, language) build its culture. According to Cassirer the Semiotics of culture has two tasks: a) to investigate the different sign systems in a culture, and b) to investigate cultures as sign systems. Within this frame, archeologists, anthropologists and semioticians who work on human culture are generally interested in two main questions:

1. How do society, civilization and mentality relate to sign systems?
2. Can objects like institutions (groups of individuals who are related to each other through different sign processes), artifacts (objects which are produced by human beings) and mentefacts (ideas and values, conventions) be explicated by terms like 'sign', 'message', 'interpret', 'code', and 'medium' (Posner 2003: 48)?

Whenever cultures are described as sign systems, classifying the different domains by *social culture* (society), *material culture* (civilization), and *mental culture* (mentality) is widely accepted. In the social culture, the object of investigation is the sign user, i.e., the individuals of a society and their institutions; whereas the material culture or civilization consists of artifacts, instruments and texts. In the semiotics of culture, *the texts of a specific culture* are defined as artifacts that not only have a function in this culture but are also signs of this culture with a coded message (Posner 2003: 51). The mentality of a society, i.e., its mental culture, consists of a number of ideas, values and conventions. The mental culture is nothing but a system of sign conventions (conventional codes) that the individuals of a society have in common.

The explication of social, material and mental culture has become a central part of semiotic studies at many European universities, where semiotic studies of culture often have a special relation to the semiotic approach of media studies. As a basic part of semiosis (se section 2 above) the medium is one of its key terms. We say for instance that two sign processes take place in the same medium when the senders use the same modality of sense (such as the ear), when they use the same physical canal (such as the air), when they use the same technical canal (such as telephone, computer, internet etc.), when they appear in the same institution of a society (such as school, university, TV-station etc.), or when they use the same code (for instance the English language). That means we can distinguish different kinds of medium as for example the biological, physical, technical, or sociological medium.

For that reason the research on sign processes in material culture has developed a strong connection to empirical approaches in media studies like picture, photography, film, TV, computer and hypertextuality, archive and museum. Unfortunately semiotics does not provide an integrated approach to the theory of media. This is one reason why the relevance of semiotics for media studies has been judged differently internationally (cf. Nöth 1997).

4.   Interdisciplinary extensions

Historically, semioticians have learnt much from linguists about linguistic terms and methods of analysis. Now, after a long process of discussion that has been going on since de Saussure, we can say that semiotics has emancipated from the linguistic one-sidedness. One example of this is Lotmans term *text* (se section 3.5 above), which has been used in the semiotics of culture for all cultural sign phenomena but has lost its specifically linguistic features (Posner 1989). Thus, the field of research in theoretical and applied semiotics has become an important approach when researchers investigate different objects in many scientific disciplines. The semiotic field includes text theory (e.g., narratology, hermeneutics), language and arts (e.g., literature, music, architecture), non-verbal communication, media and multimedia communication (e.g., picture, photography and film), anthropology (e.g., myth, magic, ethnology), logic, psychoanalysis, history and economics, law, computer science and artificial intelligence, psychology, and medicine, to mention only the largest and most interesting fields of semiotic investigation. It is also obvious that the interdisciplinary research activities in semiotics are essentially heterogeneous. In the 1990s the semiotic approach expanded and established itself in different scientific disciplines; an interdisciplinary approach is pictorial semiotics (Sachs-Hombach 2003; Warell 2001), which entails understanding pictures in a wider meaning not only as objects of arts but also as artifacts of every day life (e.g., traffic signs, pictograms, placards, technical drawings, and picture technologies in several professions and sciences). Important and still growing fields of investigation are the semiotics of law (cf. Kevelson 1994) and the semiotics of mathematics and computer science. Just the semiotics of computer and artificial intelligence is a rapidly growing field of applied semiotics. The most important fields are the theory of sign processes in computers, and the interaction of humans and the computer (cf. Andersen 1997). At the end of the 1990s, the semiotic approach (the study of different sign processes in medicine) experienced an upswing in medical diagnosis and therapy (Schönbächler Ed. 2004), and in social psychiatry (Debus et al. 2005).

Basic readings are, e.g., Krampen et al. (1987); Boussiac (1998); Nöth (2000); and Posner, Robering & Sebeok (1997–2004).

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Speech act theory

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1. Where does speech act theory come from?

Many problems that we now consider as proper to speech act theory have already been formulated or at least hinted at on other occasions during the history of Western philosophy and linguistics. Philosophers have been concerned with the relation between the meaning of words, the expression of a proposition, and the act of assertion. Aristotle distinguished between the meaning of words and the assertiveness of declarative sentences (*Perí Hermeneias* 16b 26–30). Philosophers of language, rhetoricians and linguists have been aware of the variety of uses or functions of language. The Greek sophist Protagoras was probably the first to classify modes of discourse which roughly corresponded to kinds of speech acts; the theory of language of the Stoics, which was to become very influential for the development of grammatical studies, distinguished judgements, which alone are true or false, from wh-questions, polar questions, imperatives and expressions of wish, correlating their function with their grammatical form.

In the 20th century, the interest for the functions of language has developed into a broad range of semiotic, linguistic and sociolinguistic writings. The speaker's active role, too, has been taken into consideration by some proposals partly converging with those of speech act theory, such as the theory of language of the German psychologist and linguist Karl Bühler (who even used the term *Sprechakt*, and affirmed that speech is action; see Bühler 1934), and the theory of *énonciation* (uttering) of the French linguist Émile Benveniste (who explored the relation between language as a system and its use by a human subject; see Benveniste 1966).

The trend in the philosophy of language and in pragmatic research which is commonly called speech act theory, is characterized by two main ideas. One is that a distinction has to be drawn between the meaning expressed by an utterance and the way in which the utterance is used (i.e., its 'force') and the other is that utterances of every kind (assertions included) can be considered as acts. Speech act theory did not derive from the above-mentioned analogous conceptions, but has developed within analytical philosophy, and its background is to be found in the work of philosophers such as Frege, Wittgenstein, J.L. Austin and H.P. Grice.

1.1 Frege and the assertion sign

In his *Begriffschrift* (an attempt at formulating a new symbolic language for the representation of concepts), the German logician and philosopher of mathematics

Gottlob Frege proposed two separate symbols for the proposition and for the judgement that the proposition is true, i.e., the assertive force assigned to the proposition (Frege 1897). He maintained that the mere consideration of a proposition is different from its assertion: a thought can be conceived without a truth value being assigned to it, as happens, e.g., in questions (Frege 1918).

1.2   Wittgenstein and the uses of language

The Fregean distinction between proposition and assertion was not meant to challenge the tendency of philosophers to limit their consideration of language to assertive language. In the 1920s and the 1930s, neo-empiricism confirmed and even emphasized this tendency.

As a reaction to the view of language proposed by neo-empiricism, and by himself in the *Tractatus* (Wittgenstein 1922), the Austrian philosopher Ludwig Wittgenstein, teaching at Cambridge in the 1930s, developed a perspective on language very attentive to its various heterogeneous and rule-governed uses. He no longer conceded a central role to the assertive use of language but emphasized instead the link between language games and socio-cultural practices or 'forms of life' (Wittgenstein 1953, 1958, 1969).

1.3   Austin and the performative utterance

In the 1940s, John L. Austin, an Oxford philosopher engaged in the analysis of ordinary language, noticed a particular kind of utterance that he called the 'performative utterance'. Such utterances take the form of declarative sentences and, when issued under appropriate circumstances, are not reports or descriptions, but performances of an act (Austin 1946). Examples of performative utterances are:

(1)   I name this ship 'Queen Elizabeth'.
(2)   I promise that I'll come tomorrow.

Performative utterances are characterized by a use of the 1st person present indicative active, which is asymmetrical with respect to other persons and tenses of the indicative mood of the same verb, since these would constitute mere descriptions or reports. Verbs that can be used performatively are called performative verbs.

Austin was familiar with Frege's thought and was acquainted with the main outlines of Wittgenstein's later philosophy. He himself had a polemical attitude both towards the traditional fetishism of assertive language, and towards the recent Wittgensteinian tendency to dissolve meaning into innumerable uses. Against this background, between 1950 and 1955 he developed his conception of the performative utterance into a first formulation of speech act theory. In the new framework (Austin 1962), it is pointed out that the linguistic form characteristic of performative utterances can be used for the explicit performance of assertive speech acts ('I state that...'); moreover, it is argued

that both performative utterances and the descriptions or reports (so-called constative utterances) they were formerly contrasted with, are affected by parallel phenomena related to sincerity, commitment, and presupposition, thus showing their common underlying structure.

1.4   Grice and speaker meaning

The ordinary language philosopher Paul Grice greatly contributed to the subsequent development of speech act theory by introducing with his conception of speaker meaning (1957), an attempt to define meaning with reference to the intentions of the speaker in the making of an utterance. According to Grice, speaker meaning is prior to sentence meaning and it consists in the intention of the speaker to produce an effect in the hearer by means of the hearer's recognition of the intention to produce that effect. This account of speaker meaning has been held to apply, with modifications, also to the force of speech acts.

Later on, Grice formulated the notion of conversational implicature (1975), used in speech act theory in order to explain the understanding of speech acts by hearers not on the basis of semantic conventions, but of inferences.

2.   Utterances as acts

Speech act theory is tenable in so far as it is possible, and sensible, to view utterances as acts. An utterance is the production (oral or in writing) of a token of a linguistic structure which may or may not correspond to a complete sentence. An act, generally speaking, is something that we 'do': a piece of active (vs. passive) behavior by an agent.

In speech act theory, by viewing utterances as acts, we consider the production of words or of sentences as the performance of speech acts, and we posit the speech act as the unit of linguistic communication.

It is a task of speech act theory to explain in which senses and under which conditions uttering something can be doing something, thus providing a conceptual framework for describing and understanding the various kinds of linguistic action.

We shall briefly consider here the main concepts involved in J.L. Austin's first formulation of speech act theory, and in the subsequent influential version of speech act theory proposed by the American philosopher of language, John R. Searle.

2.1   Austin's distinction of locutionary, illocutionary, and perlocutionary acts

J.L. Austin affirmed that the real object which the theory of language has to elucidate is "the total speech act in the total speech situation" (Austin 1962: 148). As part of such

an elucidation, he proposed to draw distinctions between different facets of a speech act: different senses in which to say something is to do something.

2.1.1   *The complexities of saying*

Firstly, we can describe a speech act as a locutionary act, i.e., an act of saying. But the locutionary act has itself various facets. According to Austin (1962: 92–98), saying something is:

- to perform a phonetic act, i.e., the act of uttering certain sounds;
- to perform a phatic act, i.e., the act of uttering sounds of certain types, conforming to and as conforming to certain rules (certain words, in a certain construction, with a certain intonation);
- to perform a rhetic act: the act of using the words uttered with a certain meaning.

When we report someone's locutionary act, we either focus on the phatic act and just quote the uttered words (the so-called 'direct speech'), or we focus on the rhetic act and use the so-called 'indirect speech' (which reports meaning but does not quote the uttered words in the form in which they were uttered).

2.1.2   *The three kinds of effects of the illocutionary act*

Secondly, we can describe or report someone's speech act by using verbs such as 'order', 'advise', 'promise', 'state', 'ask', 'thank', 'protest'. Thus, we focus on the way in which the speaker has used his/her utterance, or more precisely, on the act s/he has performed in saying what s/he said, i.e., the illocutionary act. The fact that a speaker, in issuing a certain utterance, performs a certain illocutionary act involves what Austin calls the illocutionary force of the utterance, as opposed to its locutionary meaning (1962: 98–100).

How can the speaker, in performing a locutionary act, perform also and at the same time an illocutionary act? Illocutionary acts are performed according to conventions and therefore have to satisfy a number of conventional felicity conditions: there has to be an accepted conventional procedure for performing the act, the participants and the circumstances have to be appropriate for the invocation of the procedure, the procedure has to be carried out correctly and completely, participants are expected to have appropriate inner states and attitudes, and to behave subsequently in an appropriate way (Austin 1962: 14–15, 138–139). The procedure for performing the act is in some cases wholly linguistic (e.g., stating, requesting, advising, promising), while in other cases it can include extralinguistic behavior (as in protesting, swearing, voting, naming, appointing).

Austin (1962: 116–117) distinguished three kinds of effects of the illocutionary act:

1. the securing of uptake: this effect amounts to bringing about the understanding of the meaning and of the force of the locution and unless it is achieved, the illocutionary act is not actually carried out;

2. the production of a conventional effect: the act brings about a state of affairs in a way different from bringing about a change in the natural course of events (e.g., the act of naming a ship 'Queen Elizabeth' makes it the case that this is the ship's name, and that referring to it by any other name will be out of order, but these are not changes in the natural course of events);

3. the inviting of a response or sequel: the act invites a certain kind of subsequent behavior; if the invitation is accepted, a certain further act by some of the participants will follow.

Verbs or verbal expressions designing illocutionary acts can be used performatively in the 1st person singular present indicative active, in order to perform the corresponding illocutionary act in an explicit way.

2.1.3 *The distinction between illocution and perlocution*

Thirdly, saying something has consequences on the feelings, thoughts, or actions of the participants. These consequences can be considered as something that has been brought about by the speaker, and we may then say that the speaker, by saying what s/he said, has performed a further kind of act, the perlocutionary act (e.g., convincing, persuading, alerting, getting someone to do something) (Austin 1962: 101).

The performance of a perlocutionary act does not depend on the satisfaction of conventional conditions, but on the actual achievement of a certain goal or (since a perlocutionary act can also be performed unintentionally) on the speech act's having actually caused certain extralinguistic consequences (Austin 1962: 107). For this very reason, verbs designing perlocutionary acts cannot be used performatively.

The distinction between illocutionary and perlocutionary acts is not always easy. There are verbs that seem to designate acts which are performed in speaking (e.g., 'insult'), but that are not used performatively (at least in contemporary English-speaking Western cultures). There are also uses of language such as eliciting, showing emotion or insinuating that do not fit comfortably either of the kinds of acts distinguished by Austin.

2.2 Searle's notion of the speech act as illocutionary act

J.R. Searle strongly affirmed a view of speaking as a rule-governed form of behavior, the basic unit of which, the speech act, consists in the production of a sentence token under certain conditions. In this view, widely adopted by other philosophers and linguists, the illocutionary act coincides with the complete speech act (Searle 1969: 23), and its characteristic linguistic form is the complete sentence.

The illocutionary act has an illocutionary point or purpose (Searle 1979: 2–3), corresponding to the speaker's intention that the utterance is to count as a certain kind of act, i.e., a representation of something, an attempt to get the hearer to do something, and so on. The illocutionary point is the most central feature of illocutionary force, but does not coincide with it, since forces having the same illocutionary point can differ in other features.

The illocutionary act has an effect on the hearer, the illocutionary effect, which consists in the hearer understanding the utterance of the speaker (Searle 1969: 47). This effect corresponds to the first of the three kinds of effects of the illocutionary act distinguished by Austin, the securing of uptake (cf. also Strawson 1964).

It should also be noted that while Austin wanted to distinguish force from meaning, Searle deals with force as an aspect of meaning.

2.2.1   Illocutionary force and propositional content

In uttering a sentence and in thereby performing an illocutionary act, a speaker also performs two other distinct kinds of acts:

- an utterance act, i.e., the uttering of words;
- a propositional act, i.e., expressing a proposition.

The propositional act consists, like the illocutionary act, in the uttering of words in sentences in certain contexts, under certain conditions and with certain intentions (Searle 1969: 25); however, it cannot occur alone, but only in performing some illocutionary act. Just as a complete sentence contains referring and predicating expressions, an illocutionary act contains the expression of a proposition. Thus, the illocutionary act has both a force and a propositional content.

The distinction of illocutionary force and propositional content within the illocutionary act (or complete speech act) is represented by Searle (1969: 31) by means of the formula $F(p)$.

2.2.2   Felicity conditions as rules

The felicity conditions on illocutionary acts are formulated by Searle (1969: 54–71) as necessary and sufficient conditions for their performance. They include: essential conditions, which say what kind of illocutionary act the utterance is to count as; propositional content conditions, which specify what kind of propositional content the speech act is to have; preparatory conditions, which specify contextual requirements (especially regarding the speaker's and the hearer's epistemic and volitional states), and sincerity conditions, specifying which psychological state of the speaker will be expressed by the speech act.

From the felicity conditions on illocutionary acts, a set of semantic rules for the use of illocutionary force-indicating devices can be extracted. Such devices will be

appropriately used only if the felicity conditions of the illocutionary act, the force of which they indicate, are satisfied.

The satisfaction of felicity conditions and the speaker's use of the linguistic devices that indicate the related illocutionary force, under normal communication conditions, enable the speaker to achieve the illocutionary effect, i.e., to communicate the force of the utterance to the hearer.

2.2.3   *Intention and perlocution*

Searle accepted the Austinian notion of the perlocutionary act (1969: 25). Perlocution, however, is not considered by him as an aspect of the complete speech act, but as an additional element. The intention of achieving a perlocutionary effect is not essential to the illocutionary act. Even where there generally is a correlated perlocutionary effect, the speaker may say something and mean it without in fact intending to produce that effect (1969: 46), e.g., when making a statement without caring whether the audience believes it or not. Moreover, while some illocutionary acts are definable just with reference to their intended perlocutionary effects (e.g., requests), others are not (1969: 71).

3.   Main problems in speech act theory

A number of further problems have arisen in the conceptual framework created by the notions briefly described above, partly concerning the internal organization of the theory, partly regarding how the theory itself can contribute to certain preexistent problems of language and language use.

3.1   Illocutionary force-indicating devices

Illocutionary acts have to be understood by hearers. Therefore, there must be ways in which speakers make explicit, or at least indicate, the illocutionary force of their speech acts.

It has been generally maintained by speech act theorists that illocutionary force is made fully explicit when an explicit performative formula (i.e., a performative verb in the 1st person present indicative active) is used. On the basis of this accepted conviction (cf. Austin 1962: 61, 71), three main questions have become relevant:

- how do performative utterances really work?
- how is the illocutionary force of speech acts indicated, when no explicit performative formula is used?
- how are explicit and inexplicit ways of performing the same illocutionary act related to each other?

Answers to the first question have been proposed in the literature, mostly philosophical, that discusses the performative utterance, whether it has a truth-value or not, and the relation between successfulness and truth (cf. Warnock 1973; Bach & Harnish 1979: 203–208; Recanati 1981; Leech 1983: 174–197; Searle 1989).

As to the second question, various kinds of illocutionary indicators were already noticed by Austin (1962: 73–76). His list included mood and modal verbs, intonation, adverbs, connectives, and extra-linguistic gestures or contextual features accompanying the utterance. Searle emphasized the role of linguistic illocutionary indicators and the possibility to substitute explicit forms for implicit ones (cf. 1969: 68). Though it is often taken for granted that the main illocutionary indicator is mood (or sentence type) (cf. Lyons 1977: 745–748), the development of empirical linguistic research about the ways in which the various illocutionary acts are performed in different languages has begun to throw some light on a wider range of illocutionary indicators. While it is usually assumed that in each sentence there is one and only one illocutionary indicator, and that such indicators do not have a semantic content of their own, it has been argued that also expressions having semantic content can act as illocutionary indicators (Green 2000) and that indication of force may draw on combinations of features (Sbisà 2001).

As to the third question, the most famous answer to it has been the so-called 'performative hypothesis', claiming that in the deep structure of any sentence there is a higher explicit performative (Ross 1970). This hypothesis, defended in the framework of generative semantics, raised a great deal of criticism and was abandoned (cf. Gazdar 1979: 15–35). Recent research is concerned with scales from most direct to most indirect ways for performing illocutionary acts (e.g., see Blum-Kulka, House & Kasper 1989: 18), in which the performative formula is not assigned primacy.

3.2   The classification of illocutionary acts

When we speak of the classification of illocutionary acts we consider illocutionary acts as types (as opposed to tokens): we are looking for kinds, or groups, of types. In principle, a classification of illocutionary acts (act types) does not necessarily correspond to a classification of sentences. However, the kinds of sentences used for performing the various kinds of illocutionary acts, as well as the kinds of verbs used for performing illocutionary acts explicitly, were often taken into consideration as relevant to the classification of the latter.

According to Austin, there are at least as many illocutionary acts (act types) as there are verbs that can be used performatively. Thus, Austin based his classification of illocutionary acts on a list of verbs that he took to be performatives. His classes are fuzzy sets allowing for overlaps, and are characterized by the intuitive descriptions of some salient features of the procedures in which their prototypical members consist (1962: 151–163).

Searle aimed at a neater subdivision of illocutionary acts into classes. As criteria of classification, he selected three dimensions of the illocutionary act:

- the point or purpose of the act, expressed in its essential condition;
- the direction of fit, i.e., whether the words (or more precisely, the details of their truth-conditional meaning or expressed propositional content) have to match the world, or the world has to match the words;
- the expressed psychological states, i.e., the speaker's psychological attitudes with respect to the propositional content, which satisfy the sincerity condition of the illocutionary act (1979: 2–5).

He also linked each of his classes to a standard deep structure of the sentences used (1979: 20–27).

Other attempts at classification can be considered as reformulations or refinements either of Austin's classification or of Searle's (Vendler 1972; Wunderlich 1976; Bach & Harnish 1979; Sbisà 1984). Some proposals are attentive to linguistic facts such as speech act verbs (Ballmer & Brennenstuhl 1981), sentence types (Croft 1994), modal verbs (Zaefferer 2001). Weigand has elaborated a classification in terms of dialogic action games (see Weigand 1994). Searle's classification of illocutionary acts has been by far the most influential one and has often been taken as a basis for the further investigation of particular areas. Recently, some attention has been paid to Austinian categories, such as that of exercitives, in connection with socially relevant issues (see e.g., McGowan 2003, Sbisà 2006). (For a critique of classification attempts in general, see Verschueren 1983 and 1985.)

3.3   Modes of understanding

Are illocutionary forces understood by virtue of the semantics of their linguistic indicators or by means of pragmatically invited inferences?

Illocutionary force occupies an ambiguous position between semantics and pragmatics. It could be considered as a purely semantic phenomenon, wholly dependent on the codified meaning of words, only if it were possible to assign illocutionary forces to speech acts on the sole basis of the linguistic indicating device (or set of indicating devices). But this is not the case. The presence of clear-cut indicators in the uttered sentence does not by itself determine the actual, serious and felicitous performance of the speech act (cf. Davidson 1979). Is then illocutionary force wholly pragmatic? This solution would involve a minimization of the contribution of linguistic illocutionary indicators to the understanding of illocutionary force.

However, the proposal has also been made to admit of different modes of understanding for the so-called 'direct' and respectively 'indirect' speech acts. While direct

speech acts display appropriate illocutionary indicators, indirect speech acts are performed in uttering sentences which do not contain indicators of their intended force, so that the hearer has to understand such force by inference (Searle 1975). Strategies for performing and understanding indirect speech acts have been related to politeness phenomena (Brown & Levinson 1987) and to different socio-cultural environments (Blum-Kulka, House & Kasper Eds. 1989).

It should be noted that the notion of an indirect speech act relies on Grice's theory of implicature and is therefore liable to be rejected by those who do not accept that theory. Indirect speech acts may then be traced back again to some kind of convention, script or schema.

3.4   Speech acts and truth

There is a tendency in philosophy to draw a distinction between assertive or descriptive language on the one hand, and all the uses of language that are not true or false on the other. There is another tendency, in philosophy and in particular in logic, to consider sentences as having truth values quite apart from their actually being uttered in a context.

Speech act theory proposes a different perspective, according to which assertions are speech acts just as well as orders, promises, apologies, appointments, and no sentence as such can be said to be either true or false. The issue of truth or falsity can arise only when a sentence is used in performing an assertive speech act. However, this perspective is not without problems.

First of all, is speech act felicity a precondition for the truth/falsity assessment (as Austin 1962 and Strawson 1950 put it) or is it a mere matter of appropriateness, while the truth/falsity assessment independently relies on truth-conditions (as Grice 1975 would say)? Secondly, what exactly is it that we are calling true/false: the whole assertive speech act, or a locutionary or propositional component of it? Although the debate about these topics in philosophy cannot be considered as settled once and for all, one widely shared view is that what is deemed true or false is the propositional content of an assertive speech act (Searle 1968; Strawson 1973). Contextualist developments of this view have stressed that the proposition to be evaluated is not determined by the sentence uttered alone, but depends on many types of information provided by the situational or the cognitive context (see e.g., Travis 2000; for criticism, Cappelen & Lepore 2005).

A further, related problem is whether there are assessments of non-assertive speech acts related to the correspondence to facts and thus parallel to the truth/falsity assessment. According to Austin, there are ways in which we relate non-assertive speech acts to facts in an "objective assessment of the accomplished utterance"; e.g., a piece of advice can be good or bad (Austin 1962: 141–42). Searle (1976) tackled the issue in a

different way by distinguishing the two main "directions of fit", from world to words and from words to world: in the case (for example) of an order, what corresponds to the truth of an assertive is obedience.

3.5   Universality vs. the linguistic and cultural relativity of speech acts

In Austin's perspective, illocutionary acts are made possible by the existence of socially accepted conventional procedures. They should therefore be considered as subject to historical and cultural variation. In Searle's perspective, there is a small number of basic illocutionary types (1969: 64, 1979: 29), that can be considered as "natural kinds of uses of language" (Searle & Vanderveken 1985: 179). There is, therefore, a claim to universality at least with respect to illocutionary points, while the ways for expressing these in language may vary. Some linguistic anthropologists have challenged even the idea that the Searlean conception of the speech act, based on speaker intentions, may be applied to non-Western cultures in a general way (Rosaldo 1982; Duranti 1988). Brown & Levinson (1978) made the issue shift from kinds of speech acts to kinds of strategies for performing them, proposing to explain the cross-cultural similarities of these by reference to an universal abstract model of polite usage.

The development of cross-linguistic and cross-cultural pragmatics will throw new light on these issues on the basis of empirical data. As Verschueren (1989: 8) has proposed with regard to his research on basic linguistic action verbs (considered as lexicalized reflections of the conceptualization of linguistic action), nothing should be considered a universal until conclusive evidence stemming from wide-ranging comparative research has been obtained. A different position, highly sensitive to cultural differences, but trying to describe them by means of intuitively chosen semantic universals, is that of Wierzbicka (1991).

4.   Trends of development in speech act theory

The debate about the above-mentioned issues, if considered in its historical development, shows two main, partly converging trends. Their consideration will illustrate how, notwithstanding the overall stability of the employed terminology, aims and background conceptions have considerably shifted between the 1970s and the 1990s.

4.1   From the conventionality of performatives to the naturality of inferences

Austin maintained that illocutionary acts, as well as the performative utterances that perform them explicitly, are conventional. Under the influence of Grice's analysis of speaker's meaning in terms of intentions (1957), speaker intention began to take the foreground in leading analyses of the illocutionary act (Searle 1964, 1969: 42–50;

Strawson 1964). At the same time, the conventionality of illocutionary acts, apart from clearly ritual performatives, was linked to the linguistic conventionality of illocutionary force indicating devices (Strawson 1964).

But not all speech acts depend on linguistic conventions regarding their illocutionary force, and as soon as this fact was noticed, the need arose to modify the theory in order to account for it. Searle did not change his core account of speech acts, but supplemented it with a theory of indirect speech acts (Searle 1975), according to which, when the force suggested by the illocutionary indicators is inappropriate or irrelevant, the real force of the utterance is inferred by the hearer, with a procedure drawing on the notion of conversational implicature (Grice 1975), on the basis of the felicity conditions of illocutionary acts and of shared knowledge about the context.

The inferential model proved very powerful: it became soon apparent that there were no clear boundaries to the realm of inferences, and more and more aspects of the hearer's understanding of the speech act were assigned to it. Further steps along this way are made by Bach & Harnish (1979), and by Sperber & Wilson (1986), where the illocutionary force of a speech act is one among the various inferences hearers draw from the speaker's utterance.

In the inferential model of the speech act, attention focuses not on the acts performed by the speaker according to certain conventions or rules, but on the hearer's cognitive activity, aimed at reconstructing the speaker's intentions (including the speech act's illocutionary point), and on the speaker's cognitive activity of planning his/her own linguistic behavior. Cognitive inferential activity is viewed not as a matter of social norms, but as belonging naturally to the human mind.

4.2   From interpersonal action to the intentionality of the speaker's mind

The social and relational features of illocutionary acts were prominent in Austin's description of illocutionary acts and have retained some importance also in Searle's theory. However, Searle (1976) does not use social variables such as the speaker's degree or kind of authority in his classification of illocutionary acts. This choice stems from a tendency to consider social and relational features as marginal with respect to the speech act's core structure.

The speaker's intention in performing the speech act or 'illocutionary point' has become the speech act's central feature and the speech act's illocutionary effect has been equated with the communication to the hearer of a certain complex intention of the speaker. This makes the very notion of an effect of the illocutionary act fade away: what is studied are no longer kinds of effects such as obliging the hearer or committing the speaker, but the kinds of intention that a speaker may have and communicate. Since intention is only one element of action, though an important one,

this amounts to a shift of focus from action (and social interaction) to the mind. It is not a coincidence that Searle himself has turned from the philosophy of language to the philosophy of mind. In his book on *Intentionality* (1983), he not only elaborates upon the analogy between speech act types and attitude types, but also tackles intentionality as a general feature of the mind. It is interest in intentionality in this sense, i.e., aboutness, that has led speech act theorists to pay more and more attention to the contentfulness of speech acts (see e.g., Alston 2000). On the other hand, many scholars interested in the analysis of the social and relational features of speech acts have found it convenient to resort to approaches different from speech act theory, such as ethnomethodology or conversation analysis.

An early attempt towards regaining a conception of the speech act as action, as such producing a result, was made by Gazdar (1981), who proposed to redefine the illocutionary effect in terms of context change. His proposal did not prove sufficiently influential to compete with the trend just described. However, the gradual development of approaches to discourse semantics relying on context change or involving a 'scorekeeping' model of conversation has made it possible to study speech acts not so much in terms of intentions and other attitudes, as within a dynamic semantic framework (see Geis 1995; Green 2000; Asher & Lascarides 2001).

4.3 Some collateral endeavors

Throughout its history, speech act theory has inspired research or debates within frameworks somewhat different from its own.

Thus, speech act theory has been used in the theory of argumentation (see van Eemeren & Grootendorst 2004). Speech act notions have been applied in Artificial Intelligence research on natural language (see e.g., Cohen, Morgan & Pollack Eds. 1990). As to research on social interaction, notwithstanding hesitations as regards the viability of a speech act analysis of actual conversation (see e.g., Levinson 1983: 278–83), some proposals have been put forward in which reinterpretations of the speech act theoretical framework are adapted to this task (e.g., Geis 1995, Sbisà 2002). Conversational 'mitigation', i.e., the adaptation and fine-tuning of speech acts for various relational aims, originally studied in the framework of research on politeness, has been investigated in terms of degrees of intensity of the speech act or of features of its illocutionary force (Holmes 1984, Katriel and Dascal 1989, Caffi 1999, Sbisà 2001).

Some aspects of speech act theory have been discussed in the framework of philosophical conceptions of rationality and social life by the German philosophers K.O. Apel and J. Habermas (cf. Habermas 1981; Apel 1991). In particular, Habermas's characterization of communicative actions as having 'universal validity claims' is partly inspired by the idea of the speech act as having felicity conditions, proposed by speech act theory.

5.   Open issues and possibilities of further development

Some of the original problems of speech act theory are still open to discussion, together with the new issues that have stemmed from them. We have no generally accepted account of the way in which illocutionary indicators function and of their relation to other pragmatic markers. We have an influential classification of illocutionary points, which is still not a valid tool by itself for describing the complexities of actual verbal interaction. We have inferential accounts of speech act understanding that have become more and more influential, but seem to miss the action (or actions) performed in issuing the utterance. The context-bound nature of speech acts (including assertions) is widely acknowledged, but challenges to the role of truth conditions with respect to content are refrained from. The discussion of such issues and their ramifications is, however, still relevant to the interdisciplinary study of human interaction in its social, cultural and linguistic dimensions.

For all those who find it interesting to consider speech as action, and at the same time are willing to make a distinction between meaning and force, there is still much work to be done both in the direction of theory and in that of application to research about particular languages or to the analysis of actual discourse and interaction. It is to be stressed that attempts to put speech act theory to use are of great importance for its development, since they test theoretical conceptions and methodological categories by putting them to work, and force the theory to evolve by confronting it with unforeseen phenomena.

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