

DISCOURSE SEMANTICS



Pieter A. M. Seuren

Discourse Semantics

PIETER A.M. SEUREN

With an appendix by A. Weijters

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The chief habit of thought antagonistic to a regard for special context is, beyond dispute I suppose, that due to the attempt to make Logic Formal, or (worse) symbolic. Whatever value these developments of Logic undoubtedly have is bought at a cost which deserves to be reckoned rather than ignored. But... there is hardly a suspicion in the minds of formal logicians that they have any cost to pay.

A. Sidgwick (*Mind* 1895: 282)

Preface

This book is intended for those readers who feel that the study of language should have as its primary aim an insight into the cognitive machinery which enables humans to use it the way they do. In the eyes of many, the study of language amounts to the construction of a logical language and a system of semantic interpretation in the sense of mathematical model-theory. They will find that this book does not confirm them in their beliefs.

Readers will not find this book easy to read, and I can assure them that it has not been easy to write either, mainly because of the radical departure from the many notions and theories held in the mainstream of current philosophical and linguistic thought. The ways paved by twentieth-century philosophy, formal semantics and, to some extent, also linguistics, proved to be unusable and to lead to wrong destinations, with the inevitable consequence that much of the going has been through rough country. Yet, and perhaps also because of this, writing the book has had its great fascination, and it is hoped that some of the fascination will be felt by those who read it.

It is a pleasure to express my gratitude towards the many people who have, over the years, encouraged me and given me the strength to continue. Thanks are due also to those colleagues and students, mostly in Nijmegen and in Edinburgh, who by their keen criticism and often stubborn resistance to my ideas forced me to look again and better. As regards them, the least I hope is that they will detect some substance and power in the work presented.

No special grant funds have been relied on during or for the writing of the book, with the exception of the second half of chapter 4 which deals with anaphora. This part of the book reflects work done in the context of the project "Descriptive Language", and in particular the subproject "Anaphora", which ran from 1978 until 1982, and was sponsored by the Netherlands Organization for Pure Research ZWO (The Hague), in association with the Max-Planck-Institut für Psycholinguistik at Nijmegen.

P.A.M.S.

List of Abbreviations

AP	Assignment Procedure	PPI	Positive Polarity Item
CA	controlling antecedent	PR	Predicate Raising
CFPS	context-free phrase structure	PSE	Principle of Substitutivity and Existential Entailment
CR	Conjunction Reduction	RR	restoration rules
D	domain	S	Sentence
DD	definite description	SA	Semantic Analysis
DIV	dative intransitive verb	SD	set-denoting
DPC	Discourse Precede Condition	ShS	Shallow Structure
DS	Deep Structure	SOC	Scope Ordering Constraint
FVP	Finite Verb Phrase	SOIV	Subject-Object-Indirect Object-Verb
GS	Generative Semantics	SOV	Subject-Object-Verb
INC	(Object) Incorporation	SR	Subject Raising/Semantic Representation
IT	<i>it</i> -insertion	SS	Surface Structure
NP	Noun Phrase	SSD	Secondary Subject Deletion
NPI	Negative Polarity Item	SVO	Subject-Verb-Object
NPSC	NP-Subject Constraint	TAC	True Alternatives Condition
NR	Negative Raising	V	Verb/verification domain
PET	Principle of the Excluded Third	VC	Verbal Complex
PL	Predicate Lowering	VP	Verb Phrase
PNCC	Precede-and-not-Command Condition	VSO	Verb-Subject-Object
PP	Prepositional Phrase		
PPC	Presuppositional Propositional Calculus		

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Prologue

This book is in large part a report on extensive forays into unknown territory, the territory of discourse-dependent linguistic interpretation. In so far as it treads on more familiar ground, it does so because a base camp and supply stations are needed. The forays have been extensive, but clearly not extensive enough to provide the material for a surveyor's map. Yet some main features of the land, and here and there even a close-up picture of details, have emerged.

The reasons for leaving better known areas and venturing more widely abroad lie in a deeply felt dissatisfaction with some central features of dominant present-day thought about meaning and grammar. One important unsatisfactory feature is the obvious lack of a natural and organic link between theories of meaning and theories of grammar. This is a serious defect in present-day linguistics-cum-semantics, and it seems to be largely the result of an alarming lack of sensitivity with regard to the great natural richness of language. What is all too often found is a single-minded passion for either sweeping grammatical generalizations (meant to be universal), or well-ironed formal semantic systems. Complete formalization as well as all-embracing generality are, of course, ideals to be pursued, but one wonders what the point is of developing highly detailed formal systems or of formulating 'universal' principles if there is insufficient factual support, too much counter-evidence, and hardly any unexpected confirmation. In semantics one all too often has the impression that natural language is treated as a playground for builders of formal systems to try out various new formalisms. The facts of language come in useful as handicaps to make the game more interesting. But the handicaps must not be too heavy, or the game is spoiled. This attitude is particularly obvious in works that are linguistic in name but are produced by logicians whose primary interest lies in the mathematical properties of their systems, and not in the nature of language. Since my primary interest is the unravelling of the nature of human natural language, I am inevitably unhappy with the massive amount of work produced these

days in this 'formalist' vein, especially since this work is usually presented as aiming at an increased insight into the facts and the nature of language - whereas it is, in reality, aimed at an improved insight into the mathematical properties of some formal system.

I am, of course, overstating the point a little (although there is more than a grain of truth to what has been said). There are many who share this feeling of dissatisfaction to some degree, and they have produced a certain body of literature aiming at improving precisely this situation. Yet, in this literature there still is quite a strong allegiance to the systems developed by those who are more sensitive to logical and mathematical beauty than to the beauty of linguistic reality. It is my conviction that a more radical departure from established systems is called for.

The formalists may, and will, defend themselves by saying that it is good methodology to start by setting up formal systems which may be too idealized to begin with, but which can be made more realistic by building in more and more linguistic 'handicaps'. In the end, they will say, some formal system will be felt to capture linguistic reality in so many crucial respects that it can be looked upon as a serious candidate in the competition for the empirical prize. But then the inevitable answer will be that this is good methodology only if no previous overall problem analysis shows that the approach in question stands little chance. And here the formalists lose.

What is needed is some general problem analysis, providing a global view of the problem area and a general strategy to be applied in getting the better of it. However, what is found all too often is a more or less arbitrarily delimited "fragment of the language", whose chances at extrapolation are unknown, and a largely *ad hoc* formal apparatus aimed at some empirically ill-defined account. This state of affairs is highly unsatisfactory, especially since it carries the risk of a massive misdirection of precious energies. It must be feared that large sections of now fashionable work will turn out to miss the point of linguistic reality.

Extensive portions of this book can be regarded as problem analyses of the kind just mentioned. In particular the sections on psychological reality (1.4; 3.1), the section against surface semantics (2.1), the section on three-valuedness (3.2.4), on the discourse-semantic aspects of presupposition (3.3), and the section on background knowledge (3.4) show the characteristic of a general survey of the kind of problems and complications that will be encountered by any theory of grammar and meaning. At the same time, directions are pointed out, partly new and partly rooted in existing work (in particular "generative semantics"), for research with maximum chance of success.

The general 'philosophy' underlying the whole of this work is, first, that language is a product of nature, with all the apparent irregularities and unexpected complications that products of nature tend to bring along. This

work, in other words, is clearly part of the tradition in language studies that started with the ancient anomalists, who were opposed to the analogists where the search for a system took precedence over concern with the complex facts. The ancient opposition is as alive now as ever, and the modern analogists are, at the moment, on the winning side. There is a widespread tendency, in theoretical linguistics as well as in formal semantics, to jump to conclusions of a very general nature although the 'database' is flimsy. It is my feeling that the recent developments in universalist linguistics, where the enormous amount of surface variety in the languages of the world is investigated systematically, are of great help in stemming this tide of premature system building. It is, in a way, an indictment of modern linguistics that the theorists (including the formal semanticists) and the universalists have so little to say to each other. There should, of course, be a lively interaction between theory and data survey, but, for reasons probably to do mainly with entrenchment of positions taken, that interaction is much less lively than it could be.

Although this book is clearly not a contribution to universalist linguistics, it is data-orientated in a different, much more fastidious way. The concern with observational detail which is apparent in many parts in this book does not spring from anything like a collector's passion but from the conviction that it will not be possible to understand natural language unless very careful attention is paid to even minute details when they are relevant, and that no description can claim success unless it covers all the relevant facts.

It is inevitable, in this approach, that there is a tension between full formalization or worldwide generalization on the one hand and the investigation of facts on the other. A well-defined formal system or a valid universal generalization for whatever area of linguistic reality is being investigated remains the ultimate goal, but it can be attained only after painstaking and alert collecting of not always so readily available facts. In the context of linguistic theorizing this has been denied. According to Lightfoot (1982: 84-5), "Instead of listing and describing more phenomena, we should try first to give some account for readily available data. As we improve our accounts, we shall need to seek out certain kinds of less readily available facts relevant to the refinements." Whoever follows this principle presupposes a non-existing link between ready availability of facts on the one hand, and essentially correct theories on the other. The latter need at most "refinements" which are then based on more remotely accessible facts. Such a correlation is, of course, illusory, and a methodology based on it is dangerous in that it will give rise to schools of thought where a reluctance is cultivated with regard to the whole-hearted acceptance of disturbing facts. Such facts will be called "obscure", "remote" or "marginal", and their relevance will be further slighted by usually false statements to the effect that their occurrence is limited to some dialectal or substandard form of a

language, or to geographically remote languages of small speech communities - as though it would matter if that were true (cp. Lightfoot 1982: 84).

It is often wise to hold back a little before presenting a fully formalized account or a theoretically crucial generalization on all of human language. The facts are always more complex than one thinks they are. This attitude is reflected in the present book: the exposé is often 'gradual' in that formalization is not achieved straight away, but prepared through analyses, arguments and observations. The general picture is evoked first, and the formalization follows, if at all. It is to be expected that there are many loose ends and fraying seams left. This is a result of the methodology followed and the complexity of the subject matter. It will not do to say that counter-examples are irrelevant as long as no alternative theory of comparable (presumed) coverage is presented, or that disturbing facts are left out of account because "they are not in the fragment". The view is taken here that unformalized or partially formalized work which does justice to the facts is of greater value than fully formalized work that is in conflict with them, and, analogously, that a less rarified and generalized view of language that gives a better picture of the complexities of linguistic reality is to be valued a great deal more highly than premature and inadequate generalizations.

A second element in the 'philosophy' behind the present work is the idea of *underground calculus* in the human mind and its extensions to sense organs and motor command systems. What is meant by this is that cognitive and behavioural processes involve massive amounts of computing in a multitude of more or less autonomous compartments. This view, which has been described as modern functionalism in psychology, is based on a materialist theory of the mind, together with a weak form of reductionism whereby the object of investigation, the mind, is considered to be material in so far as any implementation is of necessity material, but its functional and organizational principles are considered 'autonomous', i.e. describable within some more or less clearly delimited framework of a special science. The mind is thus a gigantic (and as yet almost totally opaque) information processing plant with some compartments built for general purposes and others especially made for highly specific tasks. It appears that much of the processing takes place 'underground', i.e. beyond the grasp of any general purpose function that may be held responsible for what is called "awareness" and which records all its inputs and outputs in the great memory store called "knowledge". In fact, there may well be a correlation between the specificity of the cognitive function involved and its distance from awareness and the possibility of introspection. The view is taken here that virtually all of grammatical processing is 'underground' in this sense, and that, likewise, virtually all of semantic processing, in particular in so far as it involves discourse structures, is also way beyond any accessibility to awareness and hence any conscious interference. Only lexical knowledge is "declarative", in current

terminology, at least to the extent that speakers are in a position to comment upon lexical meanings.

This computing view of the mind and its extensions to external organs is illustrated vividly by phonological and morphological rule systems as they have been developed in linguistics over the past twenty or so years. One only has to take a cursory look at such rule systems (provided they are of sufficient quality) to be impressed by their richness and complexity together with their great precision (and, often, their beauty). There is no escaping from the conclusion that such rule systems, if adequate, *must* correspond to what actually takes place during the production and perception of speech. This says nothing about the precise place in the human organism where the calculus is implemented, although in some cases an approximate answer can easily be given. Phonetic realization rules, for example, will be located in the peripheral part of the neurological system where motor commands are signalled to the speech organs. (The analytic procedures in perception are probably geared to the motor system.) But where exactly the rules are located that account for grammatical and semantic processing is a question we must leave aside. Such questions will have to be broached in a theory of rule implementation, and such a theory is well beyond both the scope of this book and the competence of its author.

The (underground) calculus point of view brings along a criterion of adequacy, in that the rule systems developed are constrained by considerations of what is usually called "psychological plausibility". This criterion is not as stringent as it might have been, mainly because too little is known about the conditions that must be fulfilled for any system carrying out calculus by rule to qualify as staying within the limits of psychological plausibility. A few general conditions are obvious. Thus, the rule system must be practically implementable and thus not involve, say, functions with infinite domains. (It is for this reason that calculi developed within the framework of classical possible world semantics are unfit to qualify as psychologically plausible in any possible sense.) But the constraints derived from psychological plausibility are, for the most part, based on and drawn from experimental results. These, however, are too often multiply interpretable to be of great practical use in specific instances of analysis and description. Psychological plausibility as a criterion of adequacy is felt less as a practical constraint than as a commitment with respect to serious theorizing in psychology: whatever theory is developed in grammar or semantics must be at least compatible with psychological theory, and preferably a natural part of it.

In certain sections of the linguistic literature, great store has been set recently by the criterion of learnability: if it can be shown that a particular rule system is *per se* not learnable, then it is ruled out as a psychologically plausible system. Why this criterion has been given such a prominent place in

the literature concerned, as opposed to other thinkable and equally valid criteria for psychological plausibility, is not clear. What is clear, however, is that this criterion has virtually no empirical impact. If it could indeed be shown for a given rule system that it is or is not learnable, then, clearly, this criterion would be of great value. But the means required for decisions of this kind are simply not available, the reason being that no clear demarcation can be drawn between what portions of a proposed rule system must be learnt and what portions can be assumed to be 'prewired' into the system as a consequence of genetic make-up. It is, moreover, totally unknown on independent grounds what powers of specialized hypothesis formation human learners have at their disposal for the various specialized learning tasks, such as the acquisition of a linguistic system, which they perform. If a link is to be forged between the study of linguistic (and semantic) rule systems on the one hand and learning theory on the other, then the implications go the other way: it is more realistic to suggest that learning theory should be constrained by what is found in the way of successful rule systems than the other way round. If a rule system is really crucially successful (such as the rule system of Predicate Raising for Dutch and German; see chapter 2), then this has consequences for learning theory which must incorporate hypotheses about genetically fixed learning equipment that are sufficiently rich to account for the acquisition of such rule systems. As a consequence, no use is made in this book of any form of learnability criterion.

This book is called *Discourse Semantics*, but it might just as well have been given the title *The Proposition*, since it is entirely organized around the concept of proposition as defined in section 1.2: a proposition is an ordered pair consisting, first, of the Semantic Analysis of a given sentence *A*, and, second, of a given discourse *D* in which *A* is uttered. The proposition then defines the increment brought about in *D* by the uttering of *A*. This idea is so central that it has dictated the overall structure of the book. After the first chapter, which is largely introductory, there is the lengthy chapter 2 which is devoted to the status and structure of Semantic Analyses and their relation to Surface Structures. It thus deals with the first element of the ordered pair defining a proposition. Chapters 3, 4, and 5 deal with the discourse structures and processes involved. Here, presupposition is the central notion, discussed and elaborated in chapter 3. Chapters 4 and 5 deal with the actual construction of discourse domains (with truth-domains and intensional sub-domains), and with the mechanism of denotation, i.e. the assignment of particular discourse addresses to definite terms, including pronouns. The last chapter considers the proposition in its capacity as truth-value bearer. It deals with questions of truth and reference as properties of the propositional component of an uttered sentence, as well as of the discourse domains generated by successive utterances.