

## DYNAMIC SEMANTICS

Walther Kindt

Universität Bielefeld

*Abstract*

The first proposals for a modelling of the dynamic aspects of interpretations were put forward in, for example, Ballmer 1973 and Kindt 1974. So far, however, such initiatives have scarcely been taken up in linguistic semantics. That the majority of semanticists persist in working with static models does of course have reasons. Chief among these are the persistent influence of common place theories about semantics, insufficient striving towards empiricism, the fact that empirical access to the internal processes of interpretation in participants in communication can only be gained indirectly, and the fact that interactive parameters of interpretations have not been taken into account adequately. Beside giving more precise reasons for this assessment of semantics up to the present I should like in this article to sketch out a general yet also simple framework in which the dynamics of interpretation processes can be dealt with both theoretically and empirically; at the same time the special role of the interactive aspect of meaning constitution will be enlarged upon.

## 1. Why do we need a Dynamic Semantics?

For several years now in the Federal Republic there has been public discussion of a central problem of semantics without linguists or semanticists taking the expected part in it. I refer to the problem of comprehensibility, which plays an important role in social politics, for example in the communication between citizens and government: government forms are frequently so incomprehensible to citizens that relations between the groups concerned are subject to considerable strain.

On the government side attempts are being made to overcome these difficulties; for example books and brochures are published containing recommendations on how to achieve comprehensibility of texts. The remedies proposed in them are, however, based only to a low degree on the more recent findings of linguistic semantics, in the main they stem from dogmas of traditional grammar or the results of psychological research. I attribute this state of affairs paramountly to the lack of interest and involvement of semanticists in practical problems and also their inability to counter the partially deficient formulas of the practitioners with more suitable methods. This inability is connected in turn with the fact that, just as in commonplace theories of language, in linguistics too a static view of language is still largely predominant, and in particular the dynamic character of meaning constitution goes unrecognized. The inadequacy of a static view of semantics can be clearly seen for example in much of the common advice about language, which instead of increasing comprehensibility restricts creative scope in language use in an unacceptable manner.

The efforts referred to above at improving administrative language are not a new development. Thus for example the first edition of the handbook "Fingerzeige für die Gesetzes- und Amtssprache" (Hints on Legal and Official Language) (cf. Daum 1980), a book widely known in the Federal Republic and recommended personally by the Minister for the Interior, dates in fact from the year 1930. This probably also explains why certain normative semantic positions in traditional cultivation of language have continued to have an effect up to the present day. If one ignores for a moment their negative influence on the concrete linguistic behaviour of speakers one can again be amused at certain contradictions between the linguistic recommendations of the guardians of language and their own linguistic behaviour. On the one hand, namely, certain linguistic formulations are sometimes proscribed as being logically inadequate, because there is said to be incompatibility of the interpretations of different parts of the formulation. Thus, for example, in the above-mentioned handbook the phrase "den Stand-

punkt vertreten, daß ..." (support the viewpoint that ...) is criticized on the grounds that: "Einen Punkt kann man strenggenommen weder vertreten noch vorbringen. Auch ist es unlogisch, an ihn einen daß-Satz anzuschließen." (one cannot strictly speaking either support or advance a point. Additionally it is illogical to attach a that-clause to it) (cf. Daum 1980: p. 11). On the other hand the language points themselves constantly employ expressions which could be criticized in a similar manner; thus, for instance, one ought not to say that "Sprache gedankenlos dahin plätschert" (language babbles thoughtlessly along) (cf. Daum 1980: p. 13), for language, as we know, is neither a liquid substance nor is it capable of thought.

Judged as a whole, a large part of the linguistic recommendations in Daum 1980 is unacceptable as they assume a much too inflexible handling of standard interpretations of linguistic expressions. There are, it is true, boundaries, independent of time and group specific, to the tolerance of unaccustomed expressions, the flexibility of the present meaning constitution and the speed with which new interpretations are adapted are, however, much greater than is generally assumed. At the same time it cannot be the job of linguistic recommendations to damn certain expressions of language absolutely as impeding understanding or as stylistically inappropriate; rather it can at most be a question of making it clear that comprehensibility is to be viewed closely connected to the establishment of context and that consequently deviation from the standard is permissible if suitable contextual conditions are provided for. We can see exemplarily from the points mentioned here of flexibility and context-independence of meaning constitution that the real problems of comprehensibility can only be dealt with adequately within the framework of a dynamic conception of semantics.

We should not be surprised that the ordinary views of semantics are largely of a static nature; for it would not be helpful to necessary processes of understanding if the participants in communication were aware of the real extent of the flexibility and complexity of interpretative processes. But why have linguists

not so far freed themselves of such static views and applied themselves to the development of dynamic conceptions of semantics? The chief reason for this seems to lie in the semanticists' inadequate knowledge of empiricism. The procedure chiefly practised so far of discussing examples with recourse to one's own linguistic intuition is quite inadequate for further development and testing of models in semantics, because the contextually regulated profuseness and variability of interpretations cannot be consciously controlled even by the most sensitized semanticist. Bringing it down to a short formula: without stronger empiricism of semantics it will not be possible to develop dynamic models; without dynamic modellings, however, no effective semantic theories applicable to practical problems will be obtained.

## 2. Prerequisites for an Empiricization of Semantics

Independently of the view that the development of a dynamic semantics is necessary, efforts in semantics in my opinion have now reached a point where greater advances are scarcely possible without systematic empirical research (cf. Kindt 1979). If this thesis is correct we must ask under what conditions and in what theoretical framework empirical semantics can be carried on at all. In my judgement, which I cannot substantiate here in detail, the semantic conceptions established so far are little suited as the starting point for an empiricization. There are three aspects I would like to call attention to here.

In semantics it is usual to work with meanings as special abstractions. The exact ontological status of these abstractions, however, remains to a large extent unclear in both a theoretical and an empirical respect. On the one hand it should be asked what kind of objects meanings actually are. On the other hand it should be made explicit on the basis of what empirical relations the abstractions concerned have come into being. This explicitness requirement is not fulfilled at all by the present conceptions of semantics. I am, certainly, of the opinion that some of these

abstractions can be empirically legitimized in principle; as long as such a legitimation is not available in a formulated form, however, I believe we should fall back in the present situation on the position that the only valid objects of analysis in semantics are the 'real' meanings which are actually established by communication participants in particular situations (cf. Kindt 1981). I particularly oppose the frequently practised sub-division into literal and pragmatic meanings; this in turn not because I would deny that the division has a certain core of truth but because I believe it leads to an immunization of semantic research against empirical demands. At the same time I consider this division to be inappropriate for research strategy because real interpretation processes with larger linguistic units do not work in such a way that the literal meaning is ascertained first and subsequently additional, pragmatically determined interpretation processes are joined on.

Requiring that semantics be linked back to the investigation of real meanings remains itself, however, 'grey theory' unless it is coupled with statements as to how we can empirically measure whether a communication participant has assigned a particular meaning to an expression or not. Semanticists have yet to become aware of this measurement problem and accordingly the prevailing measuring procedures, especially from psycholinguistics and conversation analysis must be taken up and systematically developed further.

In accordance with my remarks in section 1. semantics finally needs empirically serviceable theoretical models to replace the present, much too static approaches to meaning constitution. Such models must on the one hand be well-founded sociologically: in this the social restrictedness of meanings is to be related not only to the acquisition of meaning during socialisation and the dependence on socially-defined situational factors, but meaning constitution must itself be regarded as a central social activity, which is, admittedly, dealt with in a very flexible manner but is at the same time kept under constant, interactive control by procedures practised during socialisation. On the

other hand such models must reflect the decision processes, which remain largely implicit in communication, in the choice of reading and the construction of 'new' meanings making full use of the available scope for vagueness (cf. Kindt 1982a,b).

The three aspects emphasized here should make it clear how far we are from the establishment of an empirical semantics. As regards the aspects of model development, however, I would like to give a more exact assessment of the situation in the following.

### 3. Modelling Tasks of Dynamic Semantics

3.1 If one wants to employ the distinction dynamic vs. static semantics as more than just an eye-catching concept for a characterization of semantic models, then the degree of dynamics of a model should, it seems, be measured according to how explicitly the processes of meaning construction are really reflected in it and to what extent the flexibility of meaning constitution is covered over and above the consideration of standard meanings in standard contexts. In this sense the current semantic models are to be termed static for the following reasons. On the one hand they only apply contextual factors in a very global way and do not reconstruct their influence on interpretations explicitly or else they shift the actual job of modelling on to pragmatics. On the other hand they start from far too restricted meaning inventories for linguistic expressions and syntactic constructions, or they scarcely notice the procedures of interpretational modification constantly employed by communication participants. If, by contrast, it is the job of dynamic semantics to describe explicitly the constructional procedures of interpretations and to account for the flexibility of meaning constitution, the first step must be to investigate systematically what interpretational procedures are in fact used by communication participants and what communicational conditions make the flexibility of meaning constitution possible. But on the other hand to be able to explain too how communication participants reach an understanding, i.e.

a common area in meaning constitution, the second step must be to investigate according to what rules the interpretation procedures are put into action and in what way the flexibility assumed can again be restricted. Both investigative steps must, moreover, be differentiated as to the treatment of questions referring on the one hand to the internal level of individual language processing and on the other to the external level of interactive control of interpretation processes. More concretely this means for the first step in the investigation that on the one hand the variety of the fundamentally applicable meaning construction procedures which are available to each and every communication participant is to be wrought out; on the other hand the interactive procedures are to be described which operate above the individual results of understanding and make possible interpretations going beyond them. Similarly too for the second investigate step a distinction must be made between questions concerning the internal and the external level. On the internal level it is asked how similarity of context conditions and of rules for the use of interpretation procedures affects a common area in the meaning constitution of different participants; for the external level it must be made clear according to what interactive procedures initially differing, individual interpretations can be adapted to one another.

3.2 The tasks just described seem to make the development of a very complex interpretation model necessary. Following a strategy often employed by linguists one could set about naming different sub-components of the model, characterizing their status vividly and establishing as many differentiations as possible needed to explain the whole of the underlying phenomena. In my opinion an empirically and theoretically effective strategy aims in precisely the opposite direction: certainly one must keep the differentiatedness of the phenomena in mind, but in general a simple and successful modelling only comes about by idealising and generalising. More precisely it cannot be a question of the development of a

single model satisfying at once all differentiation requirements; rather it is expedient to plan model building as a process of designing models and successively refining them, while retaining the applicability of the coarse models as well and when a case occurs for application selecting the coarsest and simplest model which can supply the information required. To this extent there is no conflict with what was said before if I here first of all press for the formulation of a model conception which is as simple as possible.

That communication participants' assignments of meaning are context-dependent is a triviality. To take this dependency into account long lists of context factors have been made in linguistics and for interpretation functions a corresponding number of arguments have been formally introduced. The purely schematic differentiation of the context parameter into 8 or, if you like, 27 individual factors is, however, of no use for the modelling of interpretation processes: whether the interpretation function provided for here is planned as a function over one or several context variables is of no importance as long as additional data are not given at the same time about the influence of the different variables on the behaviour of the function and thus no interesting properties of this function can be logically deduced. In this sense the formal introduction of several context factors simulates a richness in the semantic model which is not met from an empirical point of view. On a closer look the concept of context proves in any case to be one of the particularly unreflected and non-uniformly employed termini of linguistics. As a basis for an explanation of this term a concept of situation is required. Then contexts can be introduced as abstractions from situations, i.e. formulated set-theoretically as classes of situations (cf. Kindt 1982 a, b). However, it remains unclear which situational conditions should be abstracted from in the transition to contexts and which conditions are to be regarded as interpretationally relevant. For example the lighting conditions under which a text is read certainly represent a situational factor which has a decisive influence on text reception; at the same time, however, one would



not want to admit this factor unconditionally as a context factor. I do not want to go into more detail about this problem of demarcation, as the introduction of an explicit concept of situation is sufficient for the following presentation. In principle model theory together with the concept of structure (cf. Ebbinghaus et al. 1978) provides a suitable approach to this. However, this concept of structure is too weak for the purposes of linguistic semantics for the following reasons. Firstly, in this concept changes in the properties or classification of objects cannot be distinguished from changes in language interpretation; for example it makes an important difference for the semantic analysis of the sentence uttered at a point of time  $t$  "Herr Schmidt ist ein Bauer" (Mr. Schmidt is a peasant) whether Mr. Schmidt changed his job at some point shortly before  $t$  and became a peasant or whether he is called a peasant at the point of time  $t$  because of his indelicate behaviour. Secondly this concept is static because only one interpretation is admitted for each linguistic expression within a structure. In this way, however, treatment is excluded of sentences like e.g. "Kohl ißt und redet gern Kohl" (Kohl likes to eat cabbage and talks nonsense) where "Kohl" is used in three different meanings (Kohl = the leader of the CDU, Kohl = the vegetable, cabbage, Kohl = nonsense). Thirdly the model-theoretical concept of structure does not take into account the central semantic property of natural languages, that the interpretations of different linguistic expressions have a mutual influence on one another. In the sentence "Kohl schmeckt Strauß neuerdings gut" (where "schmeckt gut" = "likes the taste of", "neuerdings" - "recently", "Strauß" - a) the leader of the CSU, b) ostrich) for instance the choice of reading "Kohl = the leader of the CDU" results in either "schmeckt" having to be interpreted metaphorically or "Strauß" as "meat of the bird ostrich" (conversely an analogous form applies if the reading "Strauß = the leader of the CSU" is chosen). For the two sentences "Sie telephoniert" (She is telephoning) and "Er ruft die Kellnerin" (He is calling the waitress) for example a different order of interpretation leads to different results. Fourthly and finally linguistic semantics needs a concept of intension; the model-

theoretical concept of structure in its usual version, however, is oriented exclusively towards extensional meanings and the Montague concept of intension based on it lacks empirical plausibility as it operates over possible worlds. All the four defects mentioned can, however, be resolved in a very simple way, only so far no one has thought of doing it like this. I suggest the following modifications. A *situation S* consists of three components: a *universe X*, a *focussing interval T* and an *interpretation function I*; compared to the familiar concept of structure the only thing that is new here - from a formal viewpoint - is in the first instance the component *T*. As elements of the universe *X* one can imagine any structures whatsoever (this time in the usual mathematical sense, that is without relation to an object language); for an empirical interpretation it is additionally intended that linguistic structures, mental structures and other object constellations of reality occur in *X*. The focussing interval *T* is a totally ordered set; one can imagine it as an interval of time or as a set of points in time. With the help of *X* and *T* *focussing sequences* are formed, these being functions from a finite subset of *T* to *X*. The interpretation function *I* is a ternary function operating over *X*, *T* and the set of focussing sequences. Following the intended empirical interpretation therefore not only linguistic objects can be interpreted in *S* by *I* but also e.g. objects in the perceptual area. The interpretation's dependence on points in time makes it possible to represent language - dependent as well as language - independent changes in categorisation. The planned dependency of the interpretation on focussing sequences makes available a particularly important descriptive instrument: the interpretation of an object takes into account which objects were previously focussed on and - it is implicitly assumed - interpreted. In Kindt(1982 b and 1983) a I have expounded how one can explain the Sorites Paradox and the appearance of so-called hysteresis phenomena in general in a particularly simple way by means of the concept of focussing-dependent interpretation. More generally, however, the focussing dependency is required to deal with interpretations of mutual dependency and the problem of order. Apart from the condition that the interpretation  $I(x, t, f)$  of an object *x* at a

point in time  $t$  relative to the focussing sequence  $f$  is only defined if  $t$  is a point in time later or the same as the last point in the focussing sequence, for the present no further limiting conditions are imposed for the interpretation function. In particular nothing is said about what values  $I$  assumes and where these values lie. For the intended empirical interpretation, however, it can be made concrete that the values of  $I$  can belong to each of the three above-mentioned types of objects or classes of objects of these types or even appropriate combinations thereof. In particular one may imagine for an interpretation of linguistic expressions that it comprises a phonological and syntactic categorisation, the assignment of a mental structure as intension and if necessary the assignment of an extensional meaning. Insofar then as for example the interpretation of expressions like "know", "believe" etc. operates over intensions, i.e. mental structures, the well-known problems of substitution with these (intensional) expressions solve themselves automatically. I cannot, however, enter into a discussion here of these and many other problems which are easily dealt with in the framework now provided (cf. however Kindt 1986). With regard to the topic of "Dynamics", however, I should just like to demonstrate with a few examples how the treatment of meaning flexibility is made possible by the concept of focussing dependency.

3.3 The example sentence already discussed in 3.2 "Kohl ist und redet Kohl" can be represented as a linguistic structure in the form of a sequence:

$$w = \langle 0, \text{Kohl} \rangle, \langle 1, \text{ist} \rangle, \langle 2, \text{und} \rangle, \langle 3, \text{redet} \rangle, \langle 4, \text{Kohl} \rangle$$

If one leaves aside a discussion of the question what principles hold for the employment of focussing strategies one can establish as a possible focussing sequence for  $w$ :

$$f = \langle t_0, w_0 \rangle, \langle t_1, w_1 \rangle, \langle t_2, w_4 \rangle, \langle t_3, w_2 \rangle, \langle t_4, w_3 \rangle, \langle t_5, w_4 \rangle$$

Relative to every section of  $f$  containing  $\langle t_1, w_1 \rangle$ ,  $w_0 = \langle 0, \text{Kohl} \rangle$  can always have the reading "Kohl = the CDU leader",

whereas  $w_4 = \langle 4, \text{Kohl} \rangle$  receives varying interpretations: relative to the sections reaching to  $\langle t_1, w_1 \rangle$  or  $\langle t_2, w_4 \rangle$ ,  $w_4$  has the reading "Kohl = vegetable" for points in times lying before  $t_4$ , but later relative to corresponding sections of  $f$  generally the reading "Kohl = nonsense".

With a sentence like "Kohl ißt Herr Schmidt besonders gerne" (= Mr. Schmidt particularly likes to eat cabbage) use can be made of the instrument of focussing dependency to deal with the possibility that up to the processing of "Kohl ißt" "Kohl" receives the reading "Kohl = the CDU leader", but that a reinterpretation of "Kohl" as "Kohl = vegetable" becomes necessary once "Herr Schmidt" has been interpreted.

The examples discussed so far are all to be found in the field of choice of reading for ambiguities. Another important use of semantic flexibility is given with the phenomenon of the relativity of meanings. In a sentence like e.g. "the mouse Mickey is big and the elephant Jumbo is small" the adjectives "big" and "small" are interpreted relative to the size standards of mice and elephants; thus the simultaneous truth of the sentence "Jumbo is much bigger than Mickey" will produce no contradiction. It should now be easy to see that meaning relativity can be reconstructed as a phenomenon of focussing dependency. Ambiguity and relativity also have in common the fact that they lead - in a mathematically topologically definable sense - to incontinuous changes of reading: even 'small' focussing steps result in large changes in meaning. By contrast the vagueness of linguistic expressions offers the possibility of carrying out continuous processes of meaning changes. Using the concept of focussing-dependent interpretation a state of affairs can be modelled whereby in principle the interpretation of every linguistic expression is minimally modified in retrospect by the effect of subsequent interpretation of other expressions. From experiences with conversation-analytic investigations this modelling aspect seems to me to be not just theoretically desirable but also empirically necessary. In Kindt 1982a I have developed a theore-

tical basis for the variety of meaning changes which are made possible by the vagueness of linguistic expressions; essentially this variety comes about by the meanings of underlying distance measures or uniformities (cf. e.g. Schubert 1964) being modified. From an empirical point of view all those facets of meaning transference belong in this area of meaning change which play a central part in communication and whose importance has in my view been greatly underestimated by semantics so far. The following example may serve to illustrate the type of change based on vagueness. "Wehner is old, Brandt is old, Schmidt is old, even the former leader of the Jusos Schröder - you only have to look at his face - is already old". With the interpretation of "old" changes successively: that is, for a reader knowing the approximate age in years of the politicians named it shifts on the one hand in a direction where younger and younger persons may be called old; on the other hand the meaning aspect "aged appearance, wrinkled face" is introduced into the interpretation implicitly by recalling the appearance of the four politicians and explicitly by the addition of "you only have to look at his face". The games with meaning changes is also impressively demonstrated by the investigations of W. Wildgen (1982) for the example of composition processes.

Apart from the focussing on linguistic objects underlying the above examples interpretation regulation can of course also occur e.g. because of parallel perception of nonverbal actions and events or because of the memory of past states of affairs etc. The differences in the focussing of constellations in the perceptive area and in the activation of knowledge are very often the reason for differences of interpretation between participants in communication.

3.4 The concept of situation put forward here, which can be used equally for the modelling of individual and supra-individual meaning assignments, represents of course only a general theoretical framework and does not remove the necessity of empirically

investigating the dependencies of interpretation particularly of focussings assumed to exist. This again involves both the question what interpretational scope actually exists for a given linguistic object and the question what principles of regulation hold. On investigation of the external, interactive level it turns out - this can already be said - that point for point every linguistic expression can take on almost any meaning at all in as far as communication participants agree interactively on a corresponding meaning. Exploration of the internal level will undoubtedly require much effort yet particularly with the investigation of the principles for the construction of figurative and compositional meanings. To explain the phenomenon of meaning regulation the topological concepts I have described in Kindt 1982a, b should in my view be brought in again on the internal level. I can give only a brief outline here of the justification of this view, as follows. If during the interpretation of an utterance along a focussing the interpretation of an as yet unprocessed expression or the reinterpretation of a previous expression is pending, whereby various meanings may be chosen from, then the meaning selected is always the one with the '*shortest distance*' to the total meaning worked out so far and to the current knowledge; this only applies, however, if coherence is assumed and integration of meaning is being striven for. Appropriate distances can be defined via both the probability of states of affairs (cf. Kindt 1974) or via conversational relevance (cf. Smaby 1979) etc. For a successful modelling of meaning regulation it will hence be necessary to gain information about the empirically underlying distance measures. As regards the proportion of distance values going beyond innate perceptual and cognitive mechanisms and dependent on conventions, one can hope to get important information from the analysis of communication and in particular from language acquisition processes. This remark leads back to consideration of the external level, the task of which is more generally to investigate all socially standardized, explicit interaction procedures of meaning construction and meaning regulation I should like to go into these problems in more detail in the following chapter.

#### 4. Meaning Constitution and Interaction

4.1 Every empirically oriented conception of semantics must take into account the fact that meanings are the results of individual interpretation processes and that accordingly empirical access to them only exists via observation of participant behaviour. At the same time present-day knowledge of the flexibility and diversity of meaning constitution in my view no longer permits one to abstract in a naive manner from reference to the situation and participants and speak, say, of *the* meaning of a linguistic expression. If despite this it is undisputed that understanding is possible between communication participants and in fact is often achieved, then one may not, certainly, assume the identity of the interpretation results of different participants to be the normal case, can however ask how similar the meanings in question are or in what way they are made similar to one another. A provisional, somewhat sophisticated answer to the first part of this question is: in so far as a communication proceeds successfully the similarity was at least so great that this success was possible. With this answer a functional dependency of similarity on the communicative objective is hinted at, but unfortunately nothing concrete said about the extent of the similarity in practice. If for example a communication participant A says to a participant B: "Would you bring me the jar from the kitchen cupboard" and if B complies with this request we are still far from knowing how much the individual meanings of A and B correspond for the word "jar"; taken to the extreme B does not need to know the word "jar" at all and is then only able to determine the correct object of reference for the phrase "the jar" on the basis of his assessment of the situation. One should not, however, let oneself be confused by the discussion of such isolated examples. On the one hand, in view of the automatism and speed of successful understanding it is inconceivable that the members of a speech community constitute very differing meanings for every word and reach a common interpretation only after running through additional interactive assimilation procedures. On the other hand it must be remembered that an essential task of socialisation consists after all in

meaning acquisition: here in varied and time-consuming interaction processes meanings are established and stabilized and the use of meaning construction procedures internalised and automatized. We are thus quite justified in assuming that considerable agreements exist in the meanings constituted and that, at least for elementary linguistic expressions and syntactic patterns as well as for certain meaning constructions, a socially stabilized repertoire of standard meanings exists for each. In this, however, on the one hand the dependency of situations and in particular of focussings must be taken into account systematically. For this point too it is in my view necessary to take a concept of standard situations or focussings as base (cf. Kindt 1981). On the other hand it must be made clear what is to be understood by "standard". Following the reflections above it is neither logically necessary nor empirically plausible to define "standard" in such a way that on each occasion complete agreement of the interpretation of all communication participants is assumed (this point has become particularly clear to me as a result of discussions with H. Rieser on the approach in Kindt 1981). On the contrary use of the word "standard" can only mean that there is a 'common kernel' to the interpretation, i.e. that an agreement exists for the uses of the category concerned in clear, prototypical cases and that varying classifications are possible in 'borderline cases'. Even the agreement postulate for the common kernel is only to be taken as a statistical assertion; not every member of a speech community need for example have an interpretation for every linguistic expression which is in accordance or even merely compatible with the common kernel of the majority of the other members. Such an exactly-defined concept of standard is very closely linked to the phenomenon of vagueness of linguistic expressions (cf. Kindt 1982 a, b).

Variations in the results of interpretation of different communication participants can be due among others to the following reasons:

- Differences in interpretation in the borderline area of standard meanings.



- Differing selection of standard meanings or standard meaning constructions .
- Assignment of situations to differing standards .
- Use of differing non-standard interpretations or differing non-standard interpretation of situations.

Insofar as such differences form a block to a necessary understanding and this is also noticed by the communication participants they will try at least in points to remove or lessen the differences. With this I return to the second part - question above, by what procedures meanings are made similar to one another.

4.2 I consider the investigation of the interactive procedures for meaning assimilation a central task of empirical research, for which it is still necessary to gain acceptance in linguistic semantics however. In the following remarks I should like to outline some results of my own research efforts (cf. also Kallmeyer/Kindt 1979, Kindt/Weingarten 1982).

To begin with one can distinguish among the assimilation procedures occurring 'prophylactically' employed and 'repairing procedures'. With the use of the first type of procedure a communication participant assumes that he or a communication partner will not understand or was as yet unable to understand a certain utterance; he therefore invites prospectively or retrospectively a procedure intended to improve conditions for understanding. The second type of procedure is only used retrospectively and presupposes that a communication participant has 'noticed' a problem of understanding in himself or one of his partners and that treatment of the problem is 'agreed' jointly. Owing to the explicitness of the repairing procedure one can fairly quickly indicate a pattern as to which procedural components generally occur or can occur in which distribution of roles (cf. Kindt/Weingarten 1982). In the area of monologue communication interactivity of the assimilation procedures is of course

only guaranteed in an indirect sense, on the part of the speaker there is only the possibility of prophylactic meaning assimilation and on the part of the listener it is at present still hard to say if the procedures he employs can be traced back to those in dialogue communication. A systematic and comprehensive determination of the prophylactic procedures will require considerable research effort yet. Here too of course there are some particularly striking procedural forms and ones which are in part already known in linguistics; among these is for example the explication of prerequisites for knowledge. Of particular importance also, however, seems to be e.g. a procedure discovered by W. Kallmeyer and myself of 'successive meaning replenishment'. In general one can perhaps assume that all assimilation procedures are oriented to a 'schema of understanding', whose components represent the tasks to be carried out in meaning constitution (cf. Kallmeyer/Kindt 1979). Aiming at an understanding to be reached in the most economical way possible only those tasks with the accompanying, typical procedures are worked on - one can imagine - from the schema of understanding whose treatment, relative to the degree of assimilation desired, is absolutely necessary.

In addition to the research task of determining the interactive assimilation procedures one must also confront the problem of what decision criteria are taken as the basis for the choice of direction of a meaning assimilation. One can for instance establish that for slight differences of meaning there is considerable willingness to tolerate or in points to accept the interpretation of other communication participants. In many cases the direction of the meaning assimilations is decided by consulting certain 'instances'. In this sense for example the argument within the philosophy of language between intentionalists and conventionalists proves to be a spurious problem: reference to a speaker's intention or a convention of language are merely two different examples of the empirically occurring possibilities of getting a meaning accepted by reference to an instance. Another possibility for the choice or introduction of an instance consists e.g. in appealing to an authority. Tolerance and choice

of instance are moreover to a large extent dependent on the particular interaction conditions, which are however in part only established while the interaction is going on.

In all it should become clear from the above considerations that a large part of the dynamics of meaning constitution only becomes explicable when sufficient knowledge is available concerning the interactive procedures for meaning construction and assimilation.