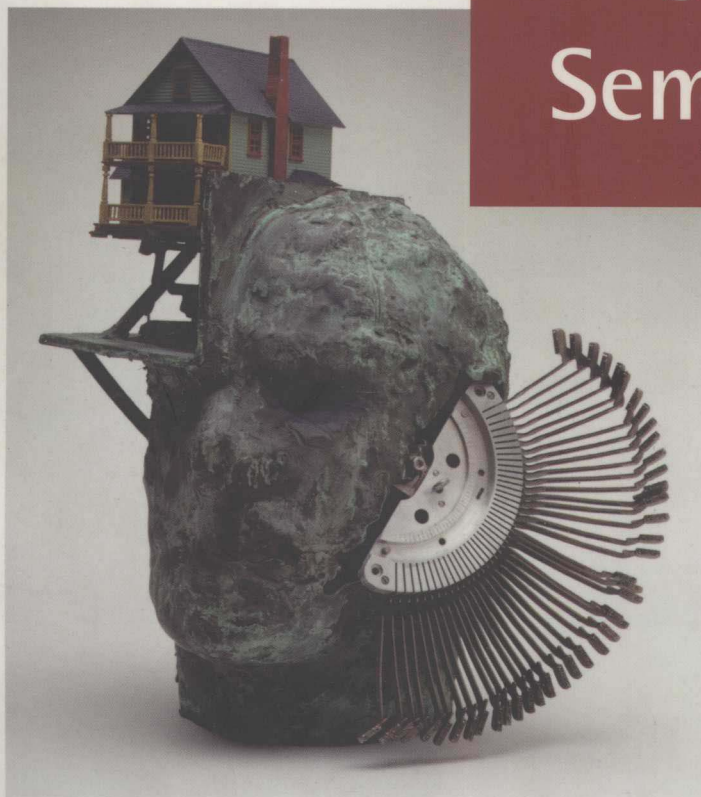


Leonard Talmy

Toward a  
Cognitive  
Semantics



Volume I

Concept Structuring Systems

**TOWARD A COGNITIVE SEMANTICS**  

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**VOLUME I: CONCEPT STRUCTURING SYSTEMS**

Leonard Talmy

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**For Theodore Kompanetz**

# Contents

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Introduction 1

## **PART 1**

---

**FOUNDATIONS OF CONCEPTUAL STRUCTURING IN  
LANGUAGE 19**

### **Chapter 1**

**The Relation of Grammar to Cognition 21**

## **PART 2**

---

**CONFIGURATIONAL STRUCTURE 97**

### **Chapter 2**

**Fictive Motion in Language and “Ception” 99**

### **Chapter 3**

**How Language Structures Space 177**

## **PART 3**

---

**ATTENTION 255**

### **Chapter 4**

**The Windowing of Attention in Language 257**

### **Chapter 5**

**Figure and Ground in Language 311**

### **Chapter 6**

**Structures That Relate Events 345**

**PART 4**

---

**FORCE AND CAUSATION 407****Chapter 7****Force Dynamics in Language and Cognition 409****Chapter 8****The Semantics of Causation 471**

## References 551

## Index 561



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## Introduction

The linguistic representation of conceptual structure is the central concern of this volume and of its companion volume. While such conceptual organization in language had once been insufficiently addressed, attention to it has been increasing over the last two to three decades. The growing research in this relatively recent linguistic domain—which has generally come to be known as cognitive linguistics—has developed into an alternative approach to the study of language that now complements other approaches. The work gathered in the present pair of volumes has been a part of this growth of research and has helped to foster it. Under the common title *Toward a Cognitive Semantics*, these volumes include most of my published material up to the present. Further, this material has been wholly revised, extended, augmented by unpublished material, and thematically organized. Under its individual title *Concept Structuring Systems*, the present volume, volume I, highlights the material that demonstrates the fundamental systems by which language shapes concepts. And under the individual title *Typology and Process in Concept Structuring*, volume II highlights the material on typologies according to which concepts are structured and processes by which they are structured.

The nature and necessity of cognitive linguistics are perhaps best characterized at the outset. To this end, I consider cognitive linguistics within a larger framework of approaches to the analysis of language. For a heuristic comparison, one can select three such approaches that address the content-related portion of language (here setting phonology aside). With simple labels, these three approaches can be designated as the formal, the psychological, and the conceptual. Particular research traditions have largely based themselves within one of these approaches, while aiming—with greater or lesser success—to address the concerns of the other two approaches. These relationships suggest the following sketch.

The formal approach basically addresses the structural patterns exhibited by the overt aspect of linguistic forms, largely abstracted away from or regarded as autonomous from any associated meaning. This approach thus includes the study of morphological, syntactic, and lexical structure. For one prominent example, the tradition of generative grammar over the past four decades has, of course, centered itself within this formal approach. But its relations to the other two approaches have remained limited. It has all along referred to the importance of relating its grammatical component to a semantic component, and there has indeed been much good work on aspects of meaning, but this enterprise has generally not addressed the overall conceptual organization of language. The formal semantics that has been adopted within the generative tradition has generally included only enough about meaning to correlate with the formal categories and operations that the main body of the tradition has focused on. And the reach of generative linguistics to psychology has largely considered only the kinds of cognitive structure and processing that might be needed to account for its formal categories and operations.

The second approach, the psychological, looks at language from the perspective of relatively general cognitive systems. Thus, the field of psychology has a long tradition of examining language from the perspective of perception, memory, attention, and reasoning. Further, it has in part addressed the concerns of the two other approaches of the present heuristic comparison. Thus, it has probed language both for its formal properties and for its conceptual properties. The latter kind of investigation has included analyses of semantic memory, the associativity of concepts, the structure of categories, inference generation, and contextual knowledge. But these studies have largely remained within certain circumscribed areas. Thus, the psychological tradition has insufficiently considered the kinds of structural categories that are central to the conceptual approach, as these are characterized next. And it has insufficiently considered the global integrated system of schematic structures with which language organizes conceptual content that it expresses—itsself perhaps the main target of the conceptual approach.

The third approach to language considered here, the conceptual approach, is concerned with the patterns in which and the processes by which conceptual content is organized in language. Since the term “structure” will be used to refer both to patterns and to processes, the conceptual approach can more simply be said to address how language structures conceptual content. The relatively recent tradition of cognitive

linguistics has centered itself within this approach. It has thus addressed the structuring within language of such basic conceptual categories as those of space and time, scenes and events, entities and processes, motion and location, and force and causation. It has also addressed the linguistic structuring of basic ideational and affective categories attributed to cognitive agents, such as attention and perspective, volition and intention, and expectation and affect. It addresses the semantic structure of morphological and lexical forms, as well as of syntactic patterns. And it addresses the interrelationships of conceptual structures, such as those in metaphoric mapping, those within a semantic frame, those between text and context, and those in the grouping of conceptual categories into large structuring systems. Overall, and perhaps above all, cognitive linguistics seeks to ascertain the global integrated system of conceptual structuring in language.

Cognitive linguistics, further, addresses the concerns of the other two approaches to language. First, it examines the formal properties of language from its conceptual perspective. Thus, it seeks to account for grammatical structure in terms of the functions this serves in the representation of conceptual structure.

Second, as one of its most distinguishing characteristics, cognitive linguistics aims to relate its findings to the cognitive structures that concern the psychological approach. It seeks both to help account for the behavior of conceptual phenomena within language in terms of those psychological structures, and at the same time, to help work out some of the properties of those structures themselves on the basis of its detailed understanding of how language realizes them. Thus, the tradition of cognitive linguistics is working to determine the more general cognitive structures pertaining to conceptual content that will encompass both the cognitive structures known from psychology and those known from linguistics. It is this trajectory toward unification with the psychological that motivates the term “cognitive” within the name of this linguistic tradition. The word “toward” in the title of this volume and of its companion in fact refers to the long-range form of this trajectory that I see for our research tradition: to integrate the linguistic and the psychological perspectives on cognitive organization in a unified understanding of human conceptual structure.

The appeal that cognitive linguistics makes to psychological structure is also what distinguishes it from the tradition of semantics in general. Like cognitive linguistics, the tradition of semantics, after all, has as its subject the patterns in which conceptual content is structured in language. But

unlike cognitive linguistics, it has not systematically sought to relate its findings to more general cognitive categories and processes.

In terms of this sketch, then, cognitive linguistics can be seen as complementary to other linguistic approaches. Because it has directly engaged a domain of linguistic phenomena that the other approaches had addressed either insufficiently or indirectly, its growth can be regarded as a necessary development for our understanding of language.

Although the term “cognitive linguistics” is by now well established as the name for the research tradition just described, I will refer at least to my own body of work as “cognitive semantics.” The word “semantics” in the new term has the advantage of indicating the particular approach, the conceptual, within which this research is based and from which it considers the concerns of other approaches to language. The word provides this indication because, as noted earlier, semantics is specifically concerned with the conceptual organization of language.<sup>1</sup>

This usage calls for further comment on my view of semantics. Semantics simply pertains to conceptual content as it is organized in language. Hence, the word “semantic” simply refers to the specifically linguistic form of the more generic notion “conceptual.” Thus, general conception—that is, thought—includes linguistic meaning within its greater compass. And while linguistic meaning—whether that expressible by an individual language or by language in general—apparently involves a selection from or constraints on general conception, it is qualitatively of a piece with it. Thus, research on cognitive semantics is research on conceptual content and its organization in language and, hence, on the nature of conceptual content and organization in general. In this formulation, conceptual content is understood to encompass not just ideational content but any experiential content, including affect and perception.

The issue of methodology is raised by the fact that cognitive semantics centers its research on conceptual organization, hence, on content experienced in consciousness. That is, for cognitive semantics, the main object of study itself is qualitative mental phenomena as they exist in awareness. Cognitive semantics is thus a branch of phenomenology, specifically, the phenomenology of conceptual content and its structure in language. What methodology, then, can address such a research target? As matters stand, the only instrumentality that can access the phenomenological content and structure of consciousness is that of introspection.

As is the case with any cognitive system, different aspects of the semantic system differ in their degree of accessibility to consciousness. For

example, one might be strongly aware of any particular meaning of a word one has heard, while having only slight or no awareness of, say, the extent of that word's range of polysemy or homonymy. Thus, these two different semantic aspects of a word—its current particular meaning and its range of meaning—differ in their access to consciousness. In general, those aspects of the semantic system that are more accessible to consciousness are more amenable to direct assessment by the method of introspection. In a complementary fashion, those aspects that are less accessible to consciousness can to that degree be ascertained only through the conventional nondirect methods of analysis, such as comparison and abstraction. Even in this latter case, though, an investigator must still start with the original conceptual content that itself can be accessed only through introspection. For one must begin by comparing such conscious contents in order to abstract from their patterns less conscious aspects of structure.

Like any method in a scientific endeavor, introspection must be employed with rigor. For example, it must include such procedures as the controlled manipulation of the linguistic material whose meanings are being assessed. Further, the findings resulting from introspection must be correlated with those resulting from other methodologies. Such other methodologies include the analysis of introspective reports by others, the analysis of discourse and corpora, crosslinguistic and diachronic analysis, the assessment of context and of cultural structure, the observational and experimental techniques of psycholinguistics, the impairment studies of neuropsychology, and the instrumental probes of neuroscience. With respect to this last methodology, perhaps in the long run, the neuroscientific understanding of brain function will account for the findings of introspection. Even then, though, introspection will still be needed to ensure that the neuroscientific description of the brain is, in its account, in fact addressing what is otherwise known to be subjectively present in the mind. Thus, introspection will continue to be the method needed to probe the subjective contents of consciousness.

The method of introspection can be justified in much the same way as the methods settled on by any science. In any science, a researcher must go to where the relevant data under study are to be found. For example, if one's area of scientific study is geology, one must go examine the earth. Here, "going to where the data are" entails physical travel to terrestrial sites. In the same way, if one's area of scientific study is linguistic meaning, one must go to where meaning is located. And meaning is located in

conscious experience. In the case of such subjective data, “going” to their location consists of introspection.

But while the use of introspection may call for specific justification in cognitive semantics, it is already a necessary component in most of linguistics, even apart from semantics. Thus, the formal linguistic study of syntax ultimately depends on a tissue of judgments made by individuals as to the grammaticality or the logical-inferential properties of sentences. Such judgments are purely the product of introspection.

More generally, in fact, much of human psychological theory rests on a presumption of some form of consciousness or the efficacy of introspection, whether so articulated or not. The typical psychological subject is assumed to understand the instructions for an experiment and to willingly try to perform in accordance with that understanding. Such understanding and endeavor are consciousness-related phenomena.

Consciousness is thus often a necessary concomitant at the subject end within the cognitive sciences. But in addition, one can argue, it is also necessary at the researcher end in *any* scientific endeavor, however much this endeavor is regarded as objective. Thus, even in the most technical scientific experiments, after all the displays have appeared on monitor screens, all the printouts have emerged, and all the gauges have shown particular values, some researcher will still have to assess such registrations and apprehend their import in her consciousness. Dennett (1991) has attempted to put phenomenology itself on a scientifically objective basis with his idea of heterophenomenology. This involves individuals putting their putative experiences in a written form, which can then be treated like any other object in the world. But, from the present perspective, this move omits one crucial point: someone with his own phenomenology still must then read the transcripts to apprehend their import in turn, or else they will remain just a pattern of marks on paper (or of states in a computer).

All in all, then, the use of introspection must be recognized as an appropriate and arguably necessary methodology in cognitive science, together with the other generally accepted methodologies.

Turning to the structure and content of the present volume and its companion, these volumes include most of my work on cognitive semantics and related areas of cognitive science, spanning the last two decades or so. Further, all the papers in the volumes have been revised and updated. Almost all the papers have been expanded, with their analyses extended. For most of the papers, these changes have been extensive, with several papers having been wholly rewritten. In addition, previously unpublished work has been added to the published. Due to these revi-

sions, expansions, and additions, a high proportion of the material in the two volumes is new.<sup>2</sup>

The changes in and the arrangement of the material have yielded a more integrated pair of volumes. Thus, the revised papers more clearly present their ideas as cohering within a single theoretical framework, and they now share a uniform terminology. And the papers, now chapters, have been sequenced not in chronological order, but rather in accordance with their subject matter.

Thus, in volume I, the chapter in part 1 establishes the theoretical orientation of both volumes in terms of conceptual structure, and it introduces the notion of extensive and integrated “schematic systems.” The remaining three parts of volume I include chapters on three such schematic systems. In volume II, the chapters in part 1 examine the typological patterns that certain conceptual structures map onto. The work here mostly addresses event structure, and so it in part expands the examined scope of semantic structure from aspects of events to whole events. Next, while the preceding chapters had treated both static and dynamic cognitive processes, the chapters in part 2 step beyond that to focus on online interactive processing of multiple factors. The chapters in part 3 extend the conceptually and cognitively oriented analyses that had been applied to language in the preceding chapters to other cognitive systems, namely, to the cognitive systems that underlie culture and narrative. In fact, the last section of the final chapter on narrative structure presents in a more general form the same kind of conceptual structures that were introduced in chapter 1 of volume I. It can thus be seen that the arrangement of the chapters through the two volumes generally follows a trajectory from the more core aspects of conceptual structure in language to conceptual structure in nonlinguistic cognitive systems.

Each volume of the pair superimposes its own thematic organization on this overall sequence. Volume I sets forth the pattern of concept-structuring systems in language and examines several such schematic systems in detail. In particular, the schematic system of “configurational structure” is treated in chapters 2 and 3, that of the “distribution of attention” is treated in chapters 4 to 6, and that of “force and causation” is treated in chapters 7 and 8. Together, all such schematic systems constitute the fundamental conceptual structuring system of language, and the organizing aegis of volume I is the outlining of this fundamental system.

Volume II furthers the analysis of concept structuring in language by examining its relation to typology and process. It sets forth typologies according to which concepts are structured and processes by which they



are structured. Cognitive process can be heuristically understood to operate over three time scales. The short-term scale is that of current online processing. The mid-term scale occurs developmentally over some period of an individual's lifetime. The long-term scale occurs across the succession of an individual's momentary judgments that cumulatively—and in interaction with those of others—realize the maintenance or gradual change of various aspects of language and culture. In chapters 1 to 4, typological patterns are understood to involve this third long-term scale of process. These chapters thus treat a language's selection and maintenance of one typological category out of a small universally available set as well as the diachronic shift from one such category to another. At this time scale, chapter 4 also treats the process of hybridization that a language can manifest in a diachronic shift between two language types. Chapter 7 treats the mid-term scale of process in positing a cognitive system that governs a child's acquisition of cultural patterns. The short-term scale of process is treated in chapters 5 and 6, which, respectively, describe online resolutions to semantic conflicts and to the co-constraints of a current set of communicative goals and means. The short-term scale is further treated in chapter 8, which outlines the cognitive factors by which a producer or a recipient of a narrative structures and integrates the whole of that narrative.

It may be useful to present an outline of the themes that characterize my work and of the development they went through—as well as of where these themes first appeared and where they appear in the two volumes. Overall, this body of work from its outset has centered on semantic/conceptual structure, examining the form and processes of this structure. All the particular concerns that were listed earlier as objects of study for cognitive linguistics have in fact been central themes throughout my own work. Some specifics follow. References to previously published papers will be marked with “T-”, and references to chapters in volumes I and II will be marked with “I-” and “II-”.

One theme that has continued from my dissertation on is the examination of event structure. One type of event structure to which I have given much attention pertains to motion. In my analysis, the general form of such a structure consists of a basic “Motion event”—that is, an event of motion or location—together with a “Co-event” that relates to it as its Manner or Cause, all within a larger “Motion situation.” Such an analysis first appeared in my dissertation, T-1972, and was developed further in T-1985b—which appears now in chapters II-1 and II-2 in a much expanded form.



As a concomitant to this study of Motion events, much research was done on the general schematic structuring of space and of time, as well as of the objects and processes that occur therein. In its most direct treatment, the analysis of spatial structure first appeared in T-1972/1975b and was further developed in T-1983—a revision of which now appears in chapter I-3. And direct analysis of temporal structure first appeared in T-1977/1978c and was developed in T-1988b—now revised as chapter I-1. It should be noted that some aspects of the way language conceptually structures Motion events in space and time appear in virtually every chapter. For example, fictive conceptualizations of Motion are described in chapter I-2, while selected windows of attention upon different phases of a Motion event are described in chapter I-4.

The Motion situation and the event complex that it comprises were subsequently generalized. This generalization involved the notion of a “framing event” to which the co-event relates, now within a larger “macro-event.” This macro-event now encompasses not only a Motion situation but also situations of “temporal contouring,” state change, “action correlating,” and “realization.” This generalization was first described in T-1991, which in expanded form now appears as chapter II-3. Further, while it was earlier seen that a co-event could relate to a Motion event as its Manner or Cause, the number of distinct relations that a co-event can bear to a framing event—what I term “support relations”—is now understood to be much greater, as shown in both chapters II-1 and II-3.

Another type of event structure that has been much analyzed in my work pertains to causation. In particular, this analysis is based on the notion of a causing event relating to a caused event within a larger causative situation. But the analysis has further aimed to identify the conceptual primitives that underlie such causative situations, both over a range of types and from the most basic to the very elaborate. Among such variants, a causative situation can include “agency,” a cognitive category that then criterially depends on the distinct concepts of “intention” and “volition.” This analysis of causation again first appeared in T-1972, and it was developed further in T-1976b, which now appears in a much revised form as chapter I-8. Further perspectives on linguistic causation appeared in T-1985b (chapter II-1) and in T-1996b (chapter I-4). The former of these two works describes the lexicalization patterns that represent the interaction of different causative types with different aspect types, as well as discussing how grammatical devices permit conversions between these types. The latter work describes the linguistic windowing of attention over