Chapter 3

A Typology of Event Integration

1 INTRODUCTION

Three basic findings converge in this study.[1] The first finding is that, in the underlying conceptual organization of language, there is a certain type of event complex, what we term the "macro-event," that is fundamental and pervasive. On the one hand, the macro-event can be conceptualized as composed of two simpler events and the relation between them. But the macro-event is—perhaps universally—also amenable to conceptualization as a single fused event and, accordingly, to expression by a single clause. Substantively, a macro-event consists of a pair of cross-related Figure-Ground events, as this was described in chapter I-6. Talmy (1972, 1985b) had further described such an event complex and its "conflation" into a single clause in the expression of Motion. But it is now possible to demonstrate the existence of a generic category of such event complexes that extends well beyond the case of Motion alone. And it is possible to characterize the general structure of this event complex in rather precise terms.

The second finding, just alluded to, is that the macro-event pertains not just to Motion, but to as many as five otherwise quite distinct types of event. Talmy (1985b) had already seen that "change of state," as an event type, bears a linguistic parallel to Motion. But it is now evident that there are three further types of event with parallel semantic and syntactic properties. These are events of "temporal contouring," "action correlating," and "realization." Of these further types, action correlating is newly introduced here. Temporal contouring and realization have been discussed previously but not as types of events or even as events per se.

The third finding is that languages fall into two typological categories on the basis of where they characteristically express the schematic core of the event complex—in the verb or in a satellite to the verb. This typology

formed part of the typology for Motion set forth in Talmy 1985b. But it is now apparent that it extends as well to all five types of events that the macro-event pertains to and, indeed, constitutes the main evidence for grouping the five event types together.

For an immediate idea of the kind of phenomenon to be treated, the English sentences in (1) illustrate macro-events with each of their five types of events in turn. And they illustrate the typological category in which the schematic core of the event type is expressed by a satellite.

(1) *The satellite (in italics) expresses*
   a. *the path in an event of motion*
      The ball rolled *in*.
   b. *the aspect in an event of temporal contouring*
      They talked *on*.
   c. *the changed property in an event of state change*
      The candle blew *out*.
   d. *the correlation in an event of action correlating*
      She sang *along*.
   e. *the fulfillment or confirmation in an event of realization*
      The police hunted the fugitive *down*.

Thus, in (1a), the satellite *in* indicates that the ball entered something while rolling. The *on* in (1b) indicates that "they" continued in their process of talking. The *out* in (1c) indicates that the candle became extinguished as a result of something blowing on it. The *along* in (1d) indicates that "she" joined or accompanied another person, where her singing duplicated or complemented that person's own musical activity. And the *down* in (1e) indicates that the police fulfilled their intention of capturing the fugitive, which was the goal of their engaging in the hunting activity.

Further display of concrete examples such as these is delayed until section 2, since the task of section 1 is to set forth the theoretical framework and parameters that the remainder of this study's analysis will depend on.

2 THE MACRO-EVENT

We begin the formal analysis with a characterization of the macro-event.

2.1 An Event in General

We first address the nature of an event in general, as a basis for characterizing the macro-event.

2.1.1 Conceptualization of an Event By the operation of very general cognitive processes that can be termed **conceptual partitioning** and the **ascription of entityhood**, the human mind in perception or conception can extend a boundary around a portion of what would otherwise be a continuum, whether of space, time, or other qualitative domain, and ascribe to the excerpted contents within the boundary the property of being a single unit entity. Among various alternatives, one category of such an entity is perceived or conceptualized as an **event**. This is a type of entity that includes within its boundary a continuous correlation between at least some portion of its identifying qualitative domain and some portion of the so-conceived temporal continuum—that is, of the progression of time. Such a correlation may rest on a primitive phenomenological experience that can be characterized as **dynamism**—a fundamental property or principle of activeness in the world. This experience is probably both foundational and universal in human cognition.

2.1.2 Event Complexes An entity that can be cognized as an event can also be conceptualized as having a particular type of internal structure and degree of structural complexity. Such structural properties can be reflected by properties of the syntactic forms that can represent the event. At one end of the range of such properties, a **unitary event** is one that can be represented by a single syntactic clause and that, under a current conceptualization, consists of components that are considered not to constitute events in their own right. For the phenomenon treated here, we need to consider only one type of event higher on the scale. This event can in many languages be syntactically represented by—to use the traditional terminology—a complex sentence consisting of a main clause and a subordinate clause that has a subordinating conjunction. We can adapt this syntactic terminology to characterize the conceptualization of an event represented by a formal structure of this sort. Thus, such an event can be called a **complex event**. It is in turn partitioned into a **main event** and a **subordinate event**—themselves conceptualized as unitary events in the simplest case—together with the relation that the subordinate event bears to the main event (see chapter I-6).

2.1.3 Conceptual Integration of Events A general cognitive process appears to be at work in language whereby an event that under a more analytic conceptualization would be understood as complex and represented by a multiclause syntactic structure can be alternatively concep-

tualized as unitary and represented by a single clause. This process of reconceptualization involves the conceptual integration or conflation of events and will here be termed **event integration**. This chapter mainly addresses event integration with respect to the macro-event. But event integration—or, at least, its syntactic counterpart—has been well addressed in the literature with respect to concepts like "clause union," especially in relation to agentive causation. We briefly sketch the semantics of agentive event integration here for two reasons. First, it can serve as a more familiar model for the subsequent treatment of macro-event integration. Second, Agent-initiated causal events leading up to a macro-event are themselves frequently included within macro-event integration, and so play a role in the full description of the latter (as discussed later).

One seemingly universal instantiation of event integration pertains to agentive causation. Conceived more analytically, such causation consists of a causal chain in which an agent's action initiates a succession of events that lead to the final event under consideration. The Agent has volitionally performed the initiating action and has a scope of intention that extends over the whole sequence. Such a complex of distinct events can be syntactically represented by a complex of distinct clauses. But the same body of content can also be conceptually integrated so as to be experienced as a unitary event and, correspondingly, to be represented syntactically by a single clause. Thus, a particular agentive referent can be conceptualized as a causal sequence of separate events and be so represented syntactically, as in (2a), or it can be reconceived as a neounitary event expressed monoclausally as in (2b).

(2) a. The aerial toppled because I did something to it [e.g., because I threw a rock at it].
b. I toppled the aerial.

2.2 Composition of the Macro-Event

Though the macro-event has already been referred to and illustrated, we here begin a more formal characterization of it.

2.2.1 The Macro-Event as a Conceptual Integration of a Complex Event

A crosslinguistic comparison strongly suggests that there is a fundamental and recurrent category of complex event that is prone to conceptual integration and representation by a single clause, a type here termed a **macro-event**. Thus, on the one hand, the macro-event is expressed by a single clause and is regularly conceptualized as a unitary event. On the other

hand, a closer syntactic and semantic analysis of such single clauses shows that their conceptual structure and content closely resemble that of a complex event of a certain class and, indeed, they can often be alternatively expressed by complex sentences.

The difference in conceptualization can be illustrated for a case of nonagentive causation. The complex sentence in (3a) represents part for part the main event, subordinating relation, and subordinate event of a complex event. This can be contrasted with the single-clause sentence in (3b), which expresses virtually the same contents with the same structuring and interrelation of components but which presents this complex as a unitary event—that is, as a macro-event.

(3) a. The candle went out because something blew on it.
    b. The candle blew out.

The category of complex event amenable to conceptual integration as a macro-event is greatly constrained. In the appropriate complex event, the main and subordinate events must be of certain distinct classes, and these events must bear certain relations to the whole complex and to each other. These properties are addressed at length in this chapter. More generally, one of the major concerns is the cognitive issue of event cohesion or fusion. This concern, with respect to conceptual content, pertains to the amount of it, the kinds of it, and the relations among different portions of it that can or must be present together in consciousness to permit the experiencing of that content as a single coherent unit of eventhood. As will be seen below, languages differ as to the maximum amount of conceptual content of a particular kind and organization that can be packaged colloquially within a single clause and hence readily experienced as a single macro-event. Much of this broader concern, though, must await further treatment.

2.2.2 The Framing Event Within the macro-event, we first examine the properties of the main event as a unitary event considered by itself. This main event will later be termed a "framing event" for the properties it has in relation to the remainder of the macro-event, but we will use this term here as well. The framing event constitutes a particular event schema, one that can be applied to several different conceptual domains. At present, the framing event can be seen to schematize five different domains—a finding based on their comparable semantic and syntactic treatment across languages. These five types include an event of Motion or location

in space, an event of contouring in time (aspect), an event of change or constancy among states, an event of correlation among actions, and an event of fulfillment or confirmation in the domain of realization.

We now examine the internal structure of the framing event. The framing event consists of four components. The first component is a **figural entity**. The figural entity is generally the component on which attention or concern is currently most centered. Its condition is conceptualized as a variable the particular value of which is the relevant issue. The second component is a **ground entity**. This component is conceptualized as a reference entity, with respect to which the condition of the figural entity is characterized. The third component is a process by which the figural entity either makes a transition or stays fixed with respect to the ground entity. This will be called the **activating process**, because it is the component conceived as contributing the factor of dynamism to the event. The activating process generally has only two values: **transition** and **fixity**. Thus, for example, in the domain of "Motion," these two values are realized as 'motion' and 'stationariness,' while in the domain of "state change," they are realized as 'change' and 'stasis'. Finally, the fourth component is an **association function** that sets the figural entity into a particular relationship with the ground entity.

The four components that make up a framing event generally differ in their distinctiveness in the referential context. It can be observed that the figural entity is generally set by context, and that the activating process generally has either of only two values. Accordingly, it is another portion of the event that most determines its particular character and that distinguishes it from other framing events. This portion is the particular association with a particular ground entity that the figural entity has entered into. Thus, either the association function alone or the association function together with the ground entity can be considered the schematic core of the framing event. This will be called the **core schema**. It will be seen to figure crucially in the syntactic mappings described below.

To help clarify it, this general characterization can be particularized for an event of motion in space. Here, both the figural entity and the ground entity are each a physical *object*. The activating process, here of the transition type, constitutes *motion*. And the association function that relates the figural entity to the ground entity constitutes the *path*. The core schema here will then be either the path alone or the path together with the ground object.

In addition to its autonomous properties, the main event has certain properties with respect to the rest of the macro-event. Relative to the whole, the main event provides or determines certain overarching patterns. Thus, the main event can be said to perform a *framing* function in relation to the macro-event. Hence, our term for it is the **framing event**.

In this way, the framing event provides for the whole macro-event the overarching conceptual framework or reference frame within which the other included activities are conceived of as taking place. The framing event thus determines at least the overall temporal framework and thereby determines the aspect of the sentence that expresses the macro-event. It also generally determines the overall spatial framework where a physical setting is involved—or some analogous reference frame where another conceptual domain is involved. Further, the framing event determines all or most of the argument structure and semantic character of the arguments overall within the macro-event, as well as determining all or most of the syntactic complement structure in the sentence that expresses the macro-event. In addition, the framing event constitutes the central import or main point—or what will here be termed the **upshot**—relative to the whole macro-event. That is to say, it is the framing event that is asserted in a positive declarative sentence, that is denied under negation, that is demanded in an imperative, and that is asked about in an interrogative.

Within the macro-event, the main event can also manifest certain framing functions relative to the subordinate event. First, the framing event can anchor the subordinate event within, or link that event to, the overarching conceptual framework that it determines. Second, the framing event can bear to the subordinate event the relation of "structurer" in a cognitive process of conceptual structuring. In particular here, the framing event can act as an abstract structure conceptually imposed on the subordinate event acting as a "substrate."

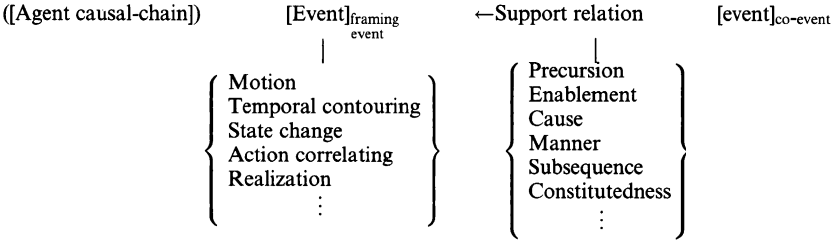
Generally in this relationship, the semantic character of the framing event is more that of an abstract schema, while that of the subordinate event tends to be more substantive or perceptually palpable. For this reason, the content of the subordinate event is often more vivid than that of the framing event and thus might draw much or at times even more attention to itself; in this respect it might seem semantically more primary than the framing event. Nevertheless, it is the framing event that frames, shapes, provides the upshot, and is determinative of the further factors outlined above.

2.2.3 The Co-Event As to its intrinsic properties, the kind of event that constitutes the subordinate event within a macro-event is probably most frequently and perhaps prototypically an aspectually unbounded activity. But other event types do occur. For that reason, no single semantic characterization can yet be given for the subordinate event considered autonomously. But for its relative roles, the subordinate event can be held to constitute an event of **circumstance** in relation to the macro-event as a whole and to perform functions of **support** in relation to the framing event. In these supporting functions, the subordinate event can be seen to fill in, elaborate, add to, or motivate the framing event. The degree of its parity with the framing event can vary. This can range from an ancillary status, as in its lesser capacity to determine the conceptual structure of the whole macro-event. And it can range up to a peer status, as in its contribution to informational content. To highlight this functional range, we will term it a **co-event**, since "co-" ranges from subordinateness, as in "co-pilot," to coequality, as in "co-author." The term "Co-event" was already introduced in chapter II-1, but since it was more specialized there—considered only in relation to a Motion event—it was capitalized. Here, the lowercase "co-event" relates generally to any type of framing event.

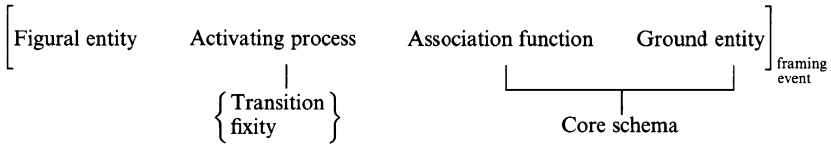
Generically, the co-event bears a support relation to the framing event. In any given usage, however, this general support relation is particularized as one out of a certain set of specific relations. These include Precursion, Enablement, Cause, Manner, Concomitance, Purpose, and Constitutiveness. The most frequent among these are Cause and Manner.

There is of course a correspondence between the particular function that the framing event performs with respect to the co-event, and the particular support relation that the co-event bears to the framing event. Thus, when the framing event acts as a substrate shaper with respect to the co-event, the latter will generally bear a Constitutive relation to the former. And when the framing event serves to anchor the co-event within its framework, the co-event usually has a Manner or Concomitance relation to the framing event.

2.2.4 Summarizing the Components of the Macro-Event In sum, the macro-event is a complex event that can be conceptually integrated into a unitary event expressable in some languages by a single clause. It is composed of a co-event, a framing event, and the support relation that the co-event bears to the framing event. The framing event serves to sche-



Conceptual structure of the macro-event



Conceptual structure of the framing event

matize a conceptual domain. It is composed of four components: a figural entity, an activating process, an association function, and a ground entity. The activating process can constitute either a transition or fixity. Either the association function alone or that together with the ground entity constitutes the core schema. In addition, the macro-event may include an Agent-initiated causal chain of events that in turn causes either or both of the framing event and the co-event. The two accompanying figures diagram these components and their relations. They also show the known conceptual domains that the framing event can schematize, as well as some particular forms of the support relation.

2.3 Mappings of the Macro-Event onto Syntactic Structures

With the macro-event now characterized semantically, we examine its syntactic realizations.

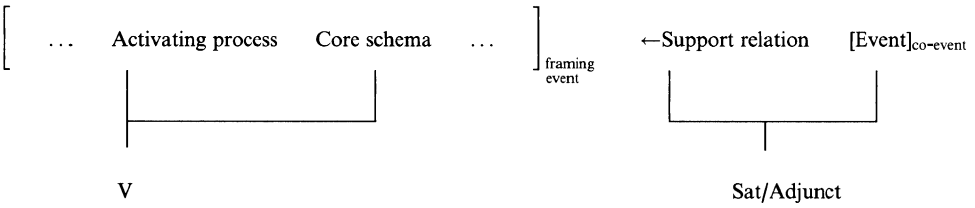
2.3.1 The Typology of Verb-Framed and Satellite-Framed Languages

The existence of the macro-event as a cognitive unit and its specific conceptual structuring may be universals of linguistic organization. But the world's languages generally seem to divide into a two-category typology on the basis of the characteristic pattern in which the conceptual structure of the macro-event is mapped onto syntactic structure. To characterize it initially in broad strokes, the typology consists of whether the core schema is expressed by the main verb or by the satellite.

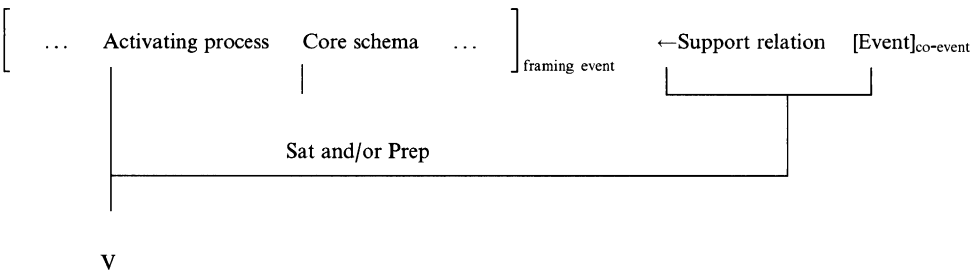
As treated in chapter II-1, the **satellite to the verb**—or simply, the **satellite**, abbreviated **Sat**—is the grammatical category of any constituent other than a nominal or prepositional-phrase complement that is in a sister relation to the verb root. The satellite, which can be either a bound affix or a free word, is thus intended to encompass all of the following grammatical forms: English verb particles, German separable and inseparable verb prefixes, Latin or Russian verb prefixes, Chinese verb complements, Lahu nonhead "versatile verbs," Caddo incorporated nouns, and Atsugewi polysynthetic affixes around the verb root. The rationale for recognizing the satellite as a grammatical category is that it captures an observable commonality, both syntactic and semantic, across all these forms. For example, it is the characteristic site for the expression of the core schema across one typological category of languages.

Languages that characteristically map the core schema into the verb will be said to have a **framing verb** and to be **verb-framed** languages. Included among such languages are Romance, Semitic, Japanese, Tamil, Polynesian, Bantu, some branches of Mayan, Nez Perce, and Caddo. On the other hand, languages that characteristically map the core schema onto the satellite will be said to have a **framing satellite** and to be **satellite-framed** languages. Included among them are most Indo-European minus Romance, Finno-Ugric, Chinese, Ojibwa, and Warlpiri. Although the core schema in satellite-framed languages is largely expressed by the satellite alone, it is also often expressed by the combination of a satellite plus a presposition, or sometimes by a preposition alone. Such a "preposition" itself can consist not only of a free adposition, but also of a nominal inflection, or sometimes of a construction containing a "locative noun." Note that the core schema generally appears alone in the satellite (or associated constituent) in satellite-framed languages, but appears conflated together with the activating process in the verb of verb-framed languages.

With the schematic core of the framing event located either in the verb or in the satellite, one must observe where in each case the co-event appears. Languages with a framing satellite regularly map the co-event into the main verb, which can thus be called a **co-event verb**. On the other hand, languages with a framing verb map the co-event either onto a satellite or into an adjunct, typically an adpositional phrase or a gerundive-type constituent. Such forms are accordingly called a **co-event satellite**, a **co-event gerundive**, and so on. The accompanying figures diagram these relationships.



Syntactic mapping of macro-event in verb-framed languages



Syntactic mapping of macro-event in satellite-framed languages

2.3.2 Introductory Illustration For an introductory illustration of these relationships, we contrast English, a basically satellite-framed language, though not the most thoroughgoing example of the type, and Spanish, a verb-framed language. Consider first a nonagentive sentence with a motion-type framing event. In the English *The bottle floated out*, the satellite *out* expresses the core schema—here, the path—while the verb *float* expresses the co-event, which here bears the support relation of Manner to the framing event. By contrast, in the closest Spanish counterpart, *La botella salió flotando* 'The bottle exited floating', the verb *salir* 'to exit' expresses the core schema—again, the path—while the gerundive form *flotando* 'floating' expresses the co-event of Manner.

Comparably for an agentive sentence with a state-change type of framing event, in the English *I blew out the candle*, the satellite *out* expresses the core schema of the framing event—transition to a new state, that of being extinguished—while the verb *blow* expresses the co-event, one with the relation of Cause to the framing event. But in the closest Spanish counterparts, *Apagué la vela de un soplido/soplándola*, 'I extinguished the candle with a blow/blowing-it', the main verb expresses the

transition to a new state while the adjunct, either the prepositional phrase or the gerundive, expresses the co-event of Cause.

2.3.3 The Co-Event Constituent in Verb-Framed Languages In verb-framed languages, the constituent that expresses the co-event exhibits a certain characteristic. The degree of its syntactic integration into the main clause of the sentence can range over a gradient. The least integrated end of the gradient is represented, for example, in Spanish and Japanese. Thus, certain end-of-sentence gerundives in Spanish and certain *-te* constructions in Japanese—in both cases, expressing a co-event—may be interpreted syntactically as adverbial subordinate clauses. They do not function as satellites. By this interpretation, the overall construction is a complex sentence composed of two clauses and could therefore not represent a macro-event. A Spanish example is given in (4a).

But both languages also have constructions in which a verb (sometimes with additional constituents) referring to the co-event is in direct construction with the main verb—that is, with the framing verb (see Aske 1989, Matsumoto 1991). With this syntactic pattern, the whole sentence now can be interpreted as a single clause, and hence as representing a macro-event. A Spanish example appears in (4b). The gerundive verb here may nevertheless be considered to represent only a midway integration into the framing clause because its gerundive grammatical form still points to a separate-clause origin.

(4) a. La botella salió de la cueva flotando.
'The bottle exited from the cave, floating.'
b. La botella salió flotando de la cueva.
'The bottle exited floating from the cave.'

Nez Perce (see chapter II-1) is at the most integrated end of the gradient. In this language, the constituent that expresses the co-event is a monomorpheme prefixed to the co-event verb. That is, it is an unmistakable satellite, and the whole sentence is now also unmistakably a single clause. This type of satellite can be termed a **co-event satellite**.

2.4 The Complementarity of Two Typological Perspectives

The basis for the typology presented in this chapter is complementary to the basis for the typology developed in chapter II-1. As was noted in the introduction to that chapter, one can fruitfully trace the relations between

elements of meaning and elements of expression in either of two ways. One can fix one's attention on a particular constituent type and observe which semantic component comes to be expressed in it in different languages. Or one can attend to a particular semantic component and observe which constituent type it comes to be expressed in in different languages. Thus, chapter II-1 held constant a particular element of expression—the verb root—and observed which different types of semantic elements were characteristically represented there in different languages. To simplify matters, the basic finding was that languages mainly fall into three categories on the basis of whether they characteristically place the Co-event, the Path, or the Figure in the verb root.

The complementary procedure is adopted in the present chapter. Here, we hold constant a particular semantic element—the Path, or, more generally, the core schema—and observe the different formal elements in which it is expressed in different languages. The basic finding is that the Path, or core schema, characteristically appears either in the verb root or in the satellite.

To help correlate these two ways of mapping meaning to form, we can look at some of the same languages treated both in chapter II-1 and here. A language like Spanish immediately fits both perspectives. On the one hand, from the present chapter's perspective, Spanish places its Path component (or core schema) in the verb, not in the satellite. On the other hand, from the perspective of chapter II-1, the verb receives the Path component rather than the Co-event or the Figure.

With respect to other language types, from this chapter's perspective, both English and Atsugewi are alike—and differ typologically from Spanish—in that they place their Path component, or core schema, in the satellite, rather than in the verb. But now chapter II-1's perspective asks: With the Path component tucked away in the satellite, which other semantic component comes to reside in the verb? With respect to that question, the two languages are typologically different. In English, the verb houses the Co-event. In Atsugewi, the verb houses the Figure. And of course, both languages are typologically different from Spanish, whose verb houses the path.

2.5 Aims of This Chapter

The first aim of this chapter is to extend the typology presented in chapter II-1, which dealt only with Motion and some change of state. The present

chapter now further demonstrates that, in any language, the syntactic site—verb or satellite—where Path is characteristically expressed is also to a great extent where aspect, state change, action correlation, and realization are characteristically expressed. This typological finding is then prima facie evidence that languages treat these five types of domain schematization—which might otherwise seem to bear little relation to each other—as a single conceptual entity. This entity is the framing event, which this study then further aims to establish as a recognized component of cognitive-linguistic organization. Further observation finds that the framing event is characteristically expressed within a single clause that systematically includes certain additional kinds of content: the co-event and its relation to the framing event. Such single clauses are seen to correspond crosslinguistically in expressing the same type of event complex, namely, a complex event conceptualized as a single event by a process of conceptual integration—here termed the macro-event, which this study then further aims to establish as an additional recognized component of cognitive-linguistic organization.

In this initial brief version, the present study does not treat a number of further important issues. Among such issues are the relations between what serves for language as a single integrated event and the single events of perception or of general cognition; the precise requisite factors that permit conceptual integration of an event complex for linguistic expression; the particular differences between languages as to which types of complex events are amenable to such conceptual fusion; the differences between languages as to which relations the co-event can bear to the framing event; and the competing claims for the presence or absence of consistency in the conceptual organization within any single language, claims that the comparable treatment of the five types of framing event might bear on.

3 A MOTION EVENT AS THE FRAMING EVENT

The first type of framing event we consider—possibly its conceptual prototype—is an event of physical motion or stationariness. We designate this range of motive states with the capitalized term **Motion**.

The general framing event structure that was characterized earlier can be particularized for the Motion event. The figural entity is a physical

object whose path or site requires characterization and which has the role of **Figure** in relation to the whole event. The ground entity is a second physical *object* functioning as a reference point with respect to which the Figure's path or site is characterized and which bears the role of **Ground** in relation to the whole event. The activating process, when it consists of a transition by the Figure with respect to the Ground, is what is normally understood as translational *motion*. When it consists of the Figure's staying fixed with respect to the Ground, it is *stationariness*. The association function comes out as the (capitalized) **Path**—that is, the *path* followed or the *site* occupied by the Figure with respect to the Ground.

The core schema of the Motion event is generally the Path alone in some languages, such as English. But it is generally the combination of Path + Ground in other languages, such as Atsugewi (see Talmy 1972 and chapter II-1). In accordance with the general mapping typology, the core schema is characteristically expressed by the main verb in verb-framed languages and by the satellite in satellite-framed languages.

For illustration, (5) represents the conceptual structure of four Motion-type macro-events. These vary with respect to the absence or presence of an agentive causal chain and with respect to whether the support relation is Manner or Cause. The concept of motion is represented by the form MOVE or—when this results from an agentive chain—by the form $_{A}$MOVE. Each macro-event is seen to map in accordance with the two typologically contrasting patterns onto a sentence of Spanish, representing verb-framed languages, and onto a sentence of English, representing satellite-framed languages.

(5) a. *Nonagentive*

i. *Support relation: Manner*

[the bottle MOVED in to the cave] WITH-THE-MANNER-OF [it floated]

English: The bottle floated into the cave.

Spanish: La botella entró flotando a la cueva.
the bottle entered (MOVED-in) floating to the cave

ii. *Support relation: Cause*

[the bone MOVED out from its socket] WITH-THE-CAUSE-OF [(something) pulled on it]

English: The bone pulled out of its socket.

Spanish: El hueso se salió de su sitio de un tirón.
the bone exited (MOVED-out) from its location from a pull

b. *Agentive*

i. *Support relation: Manner*

[I $_{A}$MOVED the keg out of the storeroom] WITH-THE-MANNER-OF [I rolled it]

English: I rolled the keg out of the storeroom.

Spanish: Saqué el barril de la bodega rodándolo.
I extruded ($_{A}$MOVED-out) the keg from the storeroom, rolling it

ii. *Support relation: Cause*

[I $_{A}$MOVED the ball in to the box] WITH-THE-CAUSE-OF [I kicked it]

English: I kicked the ball into the box.

Spanish: Metí la pelota a la caja de una patada.
I inserted ($_{A}$MOVED-in) the ball to the box from (by) a kick

As the preceding translations show, English often has Path verbs that can directly gloss the Spanish Path verbs, but their use is generally less colloquial and they are largely borrowed from Romance languages, where they are the characteristic type. This is the case, for example, with all the following intransitive Path verbs: *enter, exit, ascend, descend, pass, cross, traverse, circle, return, arrive, advance, join, separate.*

The current examples showcase one of the reasons for considering the main event of a macro-event to be a "framing" event. The main event here represents an event of translational motion—that is, motion in which the Figure object changes its average position in space. Such a translational motion event co-defines a (typically rectilinear) framework in space, within which the activity of a co-event of Manner can come to be anchored. To see this, first note that a class of aspectually unbounded activities that I have called events of "self-contained Motion" is readily able to serve as a Manner-type co-event. Self-contained motion is the Motion of elements that, at a certain larger scope of granularity, do not change their average position in space. This class includes rotation, oscillation, local wander, dilation (expansion/contraction), wiggle, and rest. Such self-contained motion events can be referred to in isolation—for example, in *The ball rolled over and over in the magnetic field* (rotation), or *The ball bounced up and down on one spot* (oscillation). On the other hand, in macro-event sentences like *The ball rolled/bounced down the hall*, we see the self-contained motion occurring concurrently with and as a modifying Manner for an event of translational motion, here, the ball's moving down the hall. Thus, the activity of the self-contained motion has come to be anchored in the framework of translational motion represented by the

main event. Hence, this is one justification for calling the main event a "framing" event.

As noted earlier for English, the core schema for a Motion event is usually just the Path alone, but we should present some cases where it is the combination of the Path plus the Ground. This will serve both to illustrate the majority pattern for Motion in languages like Atsugewi, as well as to model the majority pattern for the other framing event types in most languages including English.

Thus, in English, the whole of the Path + Ground concept 'to the home of $entity_1$/$entity_2$' maps onto the satellite *home*. This is seen in *He drove her home*, where it can mean either 'to his home' or 'to her home'.

A comparable case with a more abstract Ground—the Path + Ground combination 'to a position across an opening'—follows our typology. In satellite-framed English, the concept can map onto the satellite *shut*. But in verb-framed Spanish, it must map into the verb together with the 'motion' notion, as in *cerrar* 'to close'. This is shown in (6). Since this example can be interpreted as either motion or change of state or as something in between, it illustrates a relatedness or gradience across these two different framing-event types.

(6) [I $_A$MOVED the door TO POSITION-ACROSS-OPENING]
WITH-THE-CAUSE-OF [I kicked it]

English: I kicked the door shut.
Spanish: Cerré la puerta de una patada.
I closed the door from (by) a kick.

The introductory section raised the issue of how an agentive causal chain that precedes a macro-event might relate to the content of that macro-event. This issue matters especially since the macro-event can include a co-event that bears the relation of "Cause" to the framing event. A treatment of this issue is given here for the domain of Motion, but it applies to all the domains, in particular that of state change, as discussed below.

Consider first a co-event that bears the relation of Cause to the framing event within a macro-event proper—that is, one without any Agent. Such a co-event includes an entity that acts on the figural entity of the framing event, causing it to perform its action. Prototypically, the co-event is immediately prior to the framing event (onset causation), but it can also maintain its causal effect coextensively with it (extended causation). Exemplifying this semantic pattern is a complex event that can be repre-

sented by the complex sentence *The pen moved across the table from the wind blowing on it*, but that can also be conceptualized as an integrated macro-event and represented monoclausally as *The pen blew across the table from the wind.*

By contrast, a co-event that bears the relation of Manner to the framing event is prototypically a so-conceived additional activity that the figural entity performs concurrently with its framing-event activity. A complex form and an integrated form that exemplify this pattern are *The pen moved across the table, rolling as it went*, and *The pen rolled across the table.*

Now let us add an Agent who initiates a causal chain (which need not be more than one link in length) that affects the macro-event proper. In the case where the co-event bears a Cause relation to the framing event, the Agent's causal chain must indeed lead up to and cause the co-event, which in turn causes the framing event. There is thus here an unbroken causal chain from the Agent through the framing event. Complex and integrated examples of this pattern are *I blew on the pen and made it move across the table*, and *I blew the pen across the table.* This latter monoclausal form thus represents an Agent-amplified macro-event.

But in the case where the co-event bears a Manner relation to the framing event, the Agent's causal chain must be interpreted as leading to and causing the framing event itself. The co-event is merely a concurrent activity that the figural entity performs while it is being caused to perform the action of the framing event. A complex form of this pattern (stilted in English) is *I acted on the pen and made it move across the table, rolling as it went.* An integrated form is *I rolled the pen across the table.*

In representing this last semantic pattern, some verb-framed languages, like Spanish, use a morphologically agentive form to represent not only the framing verb but also any co-event gerundive that expresses the Manner. This was evident, for example, in (5bi). That example was glossed as "I extruded the keg from the storeroom, *rolling* (trans.) it." But such a grammatical pattern for the co-event verb of Manner does not accurately reflect the semantics, since the figural entity still manifests its ancillary activity on its own.

4 TEMPORAL CONTOURING (ASPECT) AS THE FRAMING EVENT

The second type of framing event we consider is an event of **temporal contouring**. Temporal contouring is linguistic aspect, where such aspect is

conceptualized as an event in its own right. The general structure of a framing event can apply to a temporal contouring in either of two ways. In the first way, the figural entity is the **degree of manifestation** of an event. This property refers to whether an event is fully manifested, is not manifested, or has some degree of partial manifestation, as well as to the situation in which this condition changes. Such degrees of manifestation are set into a fixed association with particular points or periods of time that thus function as the ground entity. Thus, if drawn on a graph with time progressing toward the right and degree of manifestation increasing upward, an iterated accomplishment would have the temporal contour of a series of flattened inverted U-shaped curves. Common examples of this degree-of-manifestation type of temporal contouring are 'starting', 'stopping', 'continuing', 'remaining unmanifested', 'iterating', 'intensifying', and 'tapering off'.

There is a second way the structure of a framing event can apply to a temporal contouring. It is where a process affects progressively more of some particular finite quantity, doing so with a certain contour through time. Here, the figural entity is the affected object itself. The activating process is this object's progression through time—represented below as "MOVE," where the quotation marks are to suggest that temporal progression can be conceptualized as an analogue or metaphoric extension of motion through space. The association function indicates the direction of the relationship that the affected object has with the temporal contour (e.g., taking it on or letting it go). And the ground entity is the temporal contour itself. The core schema then consists of these last two components together. The commonest example of this type of temporal contouring is 'finishing'.

This analysis is based on evidence that the organization of conceptualization for linguistic expression sets temporal contouring into analogy with Motion. It does so as part of a broader cognitive analogy by which temporal structuring is conceptualized as paralleling spatial structuring. This conceptual analogy motivates a syntactic and lexical analogy: to a great extent in a language, aspect is expressed in the same constituent type as Path (+Ground), and often by homophonous forms. Thus, in accordance with the general typology, the core schema of an event of temporal contouring appears in the main verb in verb-framed languages, while it appears in the satellite in satellite-framed languages. This is exemplified below respectively by Spanish and by German.

The event of temporal contouring lives up to its name as framing event relative to the whole macro-event in that it determines the overall temporal framework within which the whole has occurrence. The event of temporal contouring also performs a framing function with respect to the co-event in the sense, described earlier, of acting as a shaping structure imposed on a substrate. And, as with the earlier generalization, it has a more abstract character by contrast with the more tangible character of the co-event. Correlatively, the support relation that the co-event bears to the event of temporal contouring is a **constitutive** relation, in effect "filling in" the conceptual region outlined by the temporal contour.

Now, why should the temporal contour of an activity—that is, its sheer envelope of manifestation—be itself treated in conception and in linguistic expression as a separate event or process? That it is so treated is evidenced by the crosslinguistically frequent occurrence, as main verbs, of lexical verb forms comparable to English *begin, end, continue, repeat, finish*. The main cognitive basis may involve force dynamics (see chapter I-7)—that is, the general and language-based conceptual system pertaining to force exertion, opposition, resistance, and overcoming. The particular application of force dynamics here may be that the temporal contouring event, as Antagonist, overcomes the so-conceived intrinsic temporal character of the substrate activity, as Agonist. By this interpretation, for example, a substrate activity conceptualized as having a basic tendency to continue on in a steady state can, by a process of temporal imposition, be overcome so as to yield a cessation or completion of that activity. Or some activity's basic tendency toward termination can be overcome to yield a continuation of the activity. Or an activity's basic tendency to occur once and then cease can be overcome to yield an iteration. Such an imposition to overcome an activity's natural temporal tendency can thus then be conceptualized as a distinct process, separable from an idealized version of the activity itself, and so be amenable to representation by a main verb.

A further cognitive basis for the agentive form of such impositional processes might be an individual's own developmental experience of the exercise of agency. In particular, this could involve one's experience of marshaling one's efforts to effect a desired pattern in an activity, as by speeding up, slowing down, initiating, persevering, or quitting.

But whatever the validity of event status for aspect or of any cognitive bases for such a status, the linguistic facts are that aspect is frequently expressed as the main lexical verb, and often characteristically so in verb-framed languages.

4.1 Spanish/German Aspect Mapping Contrasts

Presented in (7) are a number of different concepts of temporal contouring and of examples showing the mapping of each such concept. They show that the concept is mapped into the main verb in Spanish[2] but in German onto a satellite—a satellite either in the narrower sense or in the broader sense that includes particles and adverbials in construction with the verb. While both these languages, and possibly all languages, express aspectual notions both with the lexical verb and with constituents adjoined to the verb, one or the other of these loci usually tends, as here, to predominate in degree of usage and in colloquiality.

English itself, while perhaps leaning toward the satellite side, does have a fair number of colloquial aspectual verbs—for example, from the set of examples below, *finish, continue, use(d to), wind up, be (-ing)*. But it should be noted that, of these, the first three are borrowings from Romance, where they are the native type, and that this pattern may parallel the borrowing of Path verbs also from Romance, as discussed earlier. Thus, insofar as English presents a mixed typological picture, it does so comparably in both the domains of Motion and temporal contouring.

Representing the temporal contour type in (7a) is a suggested conceptual structure for the macro-event. Here, the core schema consists of a positive direction of association, represented by the form TO, together with a 'terminative' temporal contour, represented by the form COMPLETION. The English construction *to completion*, as in *I wrote the letter to completion*, may be taken to directly reflect the two components making up the core schema, the association function and the ground entity, and so to exhibit syntactically a parallelism between a temporal contour and a Path + Ground. Otherwise, in accordance with the expected typological pattern, German expresses the whole core schema in a framing satellite and the co-event in a verb, while Spanish expresses the whole core schema in a framing verb and the co-event in a verbal complement.[3]

The inclusion of the progressive aspect forms in (7j) is meant to suggest that in Spanish and German the progressive is syntactically treated not as a special form but in accordance with the same pattern as the other forms of temporal contouring. This interpretation is buttressed by the fact that in both languages, unlike English, such progressive forms are optional in the present and exist beside simple present forms: *Escribe una carta*, and *Sie schreibt einen Brief*.

(7) a. 'to finish Ving' / 'to V to a finish/to completion'

Spanish: terminar de V-INF
German: fertig-V

[I "$_{A}$MOVED" the letter TO COMPLETION]
CONSTITUTED-BY [I was writing it]

Terminé de escribir la carta.
Ich habe den Brief fertiggeschrieben.
"I finished writing the letter." / "I wrote the letter to completion."

b. 'to V again/re-V'

Spanish: volver a V-INF
German: wieder-V/noch mal V

Volví a comer. / Lo volví a ver.
Ich habe noch mal gegessen. / Ich habe ihn wiedergesehen.
"I ate again." / "I saw him again."

c. 'to have just Ved'

Spanish: acabar de V-INF (acabar: imperfective forms)
German: gerade V (perfect forms)

Acabo de comer. / Acababa de comer cuando llegó.
Ich habe gerade gegessen. / Ich hatte gerade gegessen, als er kam.
"I just ate." / "I had just eaten when he arrived."

d. 'to continue to V'/'to still V'

Spanish: seguir V-GER
German: (immer) noch V

Sigue durmiendo. / Seguía durmiendo cuando miré.
Er schläft noch. / Er hat noch geschlafen, als ich nachschaute.
"He's still sleeping." / "He was still sleeping when I looked in."

e. 'to customarily V'

Spanish: soler V-INF
German: normalerweise V (present)/[früher/...] immer V (past)

Suele comer carne. / Solía comer carne.
Normalerweise isst er Fleisch. / Früher hat er immer Fleisch gegessen.
"He eats meat." / "He used to eat meat."

f. 'to V (NP) one after another cumulatively'

Spanish: ir V-GER (NP)
German: (NP) nacheinander/eins nach dem anderen V

i. Las vacas se fueron muriendo aquel año.
Die Kühe sind in dem Jahr (kurz) nacheinander gestorben.
'One after another of the cows died that year [Spanish: not necessarily all].'
Contrast: Las vacas se estaban muriendo aquel año.
"The cows were (all sick and concurrently) dying that year."

ii. Juan fue aprendiendo las lecciones.
Johann hat die Lektionen eine nach der anderen gelernt.
"John learned one after another of the lessons."

g. 'to finally V' (positive)/'to not quite V' (negative)

Spanish: llegar a V-INF 'to finally V after all'
no llegar a V-INF 'to not quite get so far as to V'
German: schliesslich/dann doch V
nicht ganz/dann doch nicht V

i. El tiempo llegó a mejorar.
Das Wetter ist schliesslich/dann doch besser geworden.
"The weather finally did improve after all."

ii. La botella no llegó a caer.
"The bottle never did quite go so far as to actually fall [though teetering]."
Die Flasche wackelte, aber fiel dann doch nicht um.
"The bottle teetered, but didn't quite fall."

h. 'to end up Ving'

Spanish: acabar V-GER [perf] 'to end/wind up Ving after all'
German: am Schluss ... dann doch V

Acabamos yendo a la fiesta.
Am Schluss sind wir dann doch zur Party gegangen.
"We wound up going to the party after all (after wavering/deciding not to go)."

i. 'to have been Ving (since/for ...)'

Spanish: llevar V-GER 'to have been Ving'
German: schon V

Lleva estudiando 8 horas. / Llevaba estudiando 8 horas cuando llegué.
Er studiert schon 8 Stunden lang. / Als ich kam, hatte er schon 8 Stunden studiert.
"He's been studying for 8 hours." / "He had been studying for 8 hours when I arrived."

j. 'to be Ving'

Spanish: estar V-GER
German: gerade V (nonperfect forms)

Está escribiendo una carta. / Estaba escribiendo una carta.
Sie schreibt gerade einen Brief. / Sie schrieb gerade einen Brief.
"She is writing a letter." / "She was writing a letter."

4.2 Treatment of Aspect as Distinct from Other Verbal Categories

While the German examples in (3) are clear evidence that that language uses satellites to express aspect, still, for this to be a distinctive pattern, it must be determined that the satellite is not simply used for nearly any semantic category. On inspection, it can indeed be observed that out of some six verbal categories, aspect is the sole category that receives extensive expression in satellite form, while the other categories are mainly expressed by the main finite-inflected verb. This pattern is even more pronounced in modern spoken German, where earlier inflections, which can be regarded as a type of satellite to the verb stem, have progressively given way to the use of main-verb forms.

Thus, tense is regularly expressed by *haben* 'past' and *werden* 'future' (the present and a residue of past usage are inflectional). Nonactive voice types are indicated by *werden* and *kriegen*. Conditionality is largely expressed by *würden* (though a residue is expressed by subjunctive inflections). Modality is mainly expressed by such modal verbs as *können* 'can', *sollen* 'should', and *müssen* 'must' (though subjunctive inflections can express some modality). And evidentiality, or at least the distinction between deontic and epistemic senses, is largely indicated by the pattern of auxiliary forms, including the main finite-inflected one, as between *Er hat es machen müssen*, 'He had to do it', and *Er muss es gemacht haben*, 'He must have done it' (again, subjunctive inflections can indicate some evidentiality). However, though also expressed by some main-verb forms, aspect is the only one of these verbal categories to receive preponderant

expression by satellites, and thus to be placed syntactically in a single class with the expression of Path.

Something of the contrary picture occurs in Spanish. Although in Spanish the distinctness of aspect from the other verbal categories is less pronounced, it can still be noted that, while aspect is extensively expressed by the main verb stem and therein is in the same class with Path, several of the other verbal categories are mostly expressed by non-V-stem constituents, namely, by inflections and clitics to the main V stem. Fitting this description are tense (except for one of the two future forms, "*ir a* V-INF"), conditionality, and passive voice as rendered by the reflexive pronouns.

The explanation for such differential treatment of aspect may lie in the conceptual analogy (cited earlier) that aspect is the temporal structuring of events relative to the ongoing time line and is therefore allied with Path, as the spatial structuring of a progressing line of motion. On the other hand, a comparable conceptual analogy is not readily established for the other verbal categories.

5 STATE CHANGE AS THE FRAMING EVENT

The third type of framing event we consider is an event of **state change**. In the case where it is conceived that a certain property is associated with a particular object or situation, such a framing event consists of a change in, or the unchanging continuation of, that property.

The domain of state change can be structured foundationally in accordance with several different conceptualizations that are prior to the selection of one of these for representation by a framing event. For example, an event involving an association between a property and an object or situation could be conceived and expressed directly in terms of change or stasis in the property itself. A conceptualization of this sort may be reflected by occasional constructions in various languages. And in any case it can be represented by constructed formulations like *Her (state of) health changed from well to ill* (representing change) or *Her (state of) health is illness* (representing stasis).

Alternatively, the property could be conceptualized as a figural entity with respect to the object or situation as a ground entity, as if the property comes to or occurs in the object or situation. This conceptualization is suggested by formulations like *Illness came to him* or *Illness is in him.*

Compare such actually existing expressions as *Death came to him* and *Madness is upon him*).

Or, conversely, the object or situation could be conceptualized as a figural entity with respect to the property as a ground entity, as if coming to or occurring in the property. This conceptualization is suggested by formulations like *She entered (a state of) ill health | She became ill | She sickened* (cf. *She went to sleep*), or *She is in ill health | She is ill | She is ailing*.

While all three of these types of conceptualization, and perhaps still others, may occur in a language or in nonlinguistic cognition, and while no immediately evident factor accounts for any superiority of one type over the others, nevertheless the third type is, with seeming universality, the most basic and preponderant in any language. The framing-event representation for state change should reflect this preferential conceptualization.

Accordingly, in the preferred framing-event representation, the figural entity is the object or situation associated with a property, while the ground entity is the property. The activating process is either the transition of the object or situation with respect to the property (i.e., what is normally understood as **change**), or it is the object or situation's remaining fixed with respect to the property (i.e., **stasis**). And the association function is the direction of the relationship that the object or situation has with respect to the property—what will be termed the **transition type**. The transition type usually involves acquiring the association, represented below as TO, but other possibilities do occur. A property that, as here, is conceptualized as a ground entity can now be called a **state**. In fact, we reserve the term "state" solely for this conceptualization of a property as a Ground entity, and we do not use this term for the alternative conceptualizations of a property outlined above. The core schema of the state change event is generally the combination of the transition type together with the state, and hence is the analog of the Path + Ground of a Motion event.

Thus, we find that the organization of conceptualization for linguistic expression sets state change into analogy with Motion. In particular, change or stasis with respect to states parallels motion or stationariness with respect to objects. And state transition type parallels Path type. This conceptual analogy motivates a syntactic and lexical analogy: to a great extent in a language, state change is expressed in the same constituent type as Path (+ Ground), and often by homophonous forms. Thus, in

accordance with the general typology, the core schema of an event of state change appears in the main verb in verb-framed languages but in the satellite in satellite-framed languages, as exemplified below respectively by Spanish and by English or German.

In accordance with the customary properties of a framing event relative to a co-event, an event of state change, as a type of framing event, is largely more abstract in character, often involving change purely in an individual's cognitive state. For instance, state changes from the examples below include 'to become awake/aware/familiar/in possession/existent/nonexistent/dead'. On the other hand, the co-event is largely concrete and physical, for instance, again from the examples below: 'to battle/play/run/shake/jerk/rot/boil'.

In the reverse direction, the support relation of a co-event to a framing event of state change can apparently exhibit much the same range of types as in the case of Motion. As with Motion, Manner and Cause are again here the most prevalent types. This can be illustrated for English, first with nonagentive examples. The co-event verbs bear a Manner relation to the framing satellites in *The door swung/creaked/slammed shut* and *He jerked/started awake*. And it bears a Cause relation in *The door blew shut*.

Likewise in agentive constructions, the verb-to-satellite support relation can be one of Manner, as in *I swung/slammed the door shut* and *I eased him awake gently*. Or it can be one of Cause, as in *I kicked the door shut* and *I shook him awake*.

As already discussed for the domain of Motion, in the agentive Manner examples just preceding, the Agent initiates a causal chain of events that culminates in the state-change event and, to this extent, that event is marked as being caused. However, the verb itself names an action that is not one of the chained causal events but rather a process accompanying the state change and qualifying it as Manner. Thus, in *I eased him awake gently*, the process that the verb *ease* refers to is not a link in the causal chain that leads to the awakening but is rather the manner in which one such causal link, or the state change itself, was carried out.

Because the support relation for a state change can consist not only of Cause, but also of Manner, as well as of a range of further types, the traditional terms "result" and "resultative" would be misnomers for the whole state-change category. Within the referential scope of a sentence, a change of state can be a result only if it is conceptually paired with a cause. But this is an arrangement that we have just seen is only one option

out of a number. While such a cause-result pairing may predominate in the usage, or in some syntactic circumstances be obligatory, it is not definitional of the entire state-change category. Accordingly, we avoid the terms "result" and "resultative" for referring to the whole category and reserve them only for where they literally apply.

5.1 Forms Suggesting Parallelism with Path + Ground

As before with temporal contouring, the demonstration of state change can be heuristically best begun with an example in which English can represent the core schema—here, the transition type together with the state—part for part by a preposition plus a noun. This would exhibit explicitly the analogy to the usual type of construction that represents the Path plus the Ground of an event of Motion. Thus, as the conceptual structure of the macro-event is schematized in (8), the core schema sequence TO DEATH can be represented in English by the phrase *to death*. This phrase as a whole is perhaps to be interpreted as corresponding to a framing satellite. The Spanish counterpart conflates the core schema together with the activating process, represented by "MOVE" or agentive "$_{A}$MOVE," with the combination mapping onto the framing verb.

(8) a. *Nonagentive*
[he "MOVED" TO DEATH] WITH-THE-CAUSE-OF
[he choked on a bone]

English: He choked to death on a bone.
Spanish: Murió atragantado por un hueso/porque se atragantó con un hueso.
'He died choked by a bone/because he choked himself with a bone.'

b. *Agentive*
[I "$_{A}$MOVED" him TO DEATH] WITH-THE-CAUSE-OF
[I burned him]

English: I burned him to death.
Spanish: Lo mataron con fuego/quemándolo.
'They killed him with fire/[by] burning him.'

For the domain of Motion, English was earlier seen to exhibit the satellite-framed pattern as its most characteristic type. But in the domain of state change, it exhibits more of a parallel system of conflation (see chapter II-1). In particular, it often has parallel forms, satellite-framed

and verb-framed, both of them colloquial. For example, in (8) above, English has ready use of the state-change verbs *die* and *kill*, as in *He died from choking on a bone* and *I killed him by burning him*. Similarly, the earlier-seen constructions with the state-change satellites *shut* and *awake*, as in *I kicked the door shut* and *I shook him awake*, can also be colloquially rendered with state-change verbs, as in *I shut the door with a kick* and *I awoke him with a shake*. In fact, for some state-change notions, English has only the verb-framed construction colloquially available. Thus, English allows only *I broke the window with a kick*, but not **I kicked the window broken*.

By contrast, as discussed below, Mandarin is a far more thoroughgoing examplar of the satellite-framed type. It not only strongly exhibits satellite framing for Motion, as does English, but also for state change. For example, this language does formulate the just-cited 'breakage' example as "I kicked the window broken."

The core schema of the previous illustration, TO DEATH, serves triple duty in that it is further found in German to map as a combination onto a monomorphemic framing satellite, the inseparable verb prefix *er*$_1$-, as seen in (9). A satellite of this semantic sort thus parallels a Path + Ground-expressing satellite like English *home*. But while such satellites are unusual for Motion in English, they are the norm for state change in English-type languages.

(9) *German:* er$_1$-V NP-ACC 'V NP to death'/'kill NP by Ving NP'
(er-) drücken/schlagen/würgen/stechen/schiessen
'to squeeze/beat/choke/stab/shoot (to death)'

We can add one further step in this introductory series. To express the meaning of another German satellite, *er*$_2$- 'into one's possession', English lacks either a satellite or a "P + NP" construction. Instead, it must express the meaning in a verb such as *get/obtain/win*, in just the way typical of a verb-framed language. However, for heuristic purposes, the "P + NP" phrase *into [subject's] possession*, though not used thus in English, does sufficiently follow extant patterns as to be readily pressed into service to render the German construction, as seen in (10). Not all of the state-change concepts treated below will be as amenable in English to this type of suggestive paraphrasing, so that the macro-event representations for such concepts (which here, after all, are indicated with English words) will seem more awkward, but they can still serve as schematics showing the interrelations of the component meanings.

(10) *German:* er_2-V NP-ACC (REFL-DAT) "V NP into one's possession"/'obtain NP by Ving'

a. [the army "$_A$MOVED" the peninsula INTO ITS POSSESSION] WITH-THE-CAUSE-OF [it battled]

Die Armee hat (sich) die Halbinsel erkämpft.
"The army gained the peninsula by battling."
As if: "The army battled the peninsula into its possession."

b. Die Arbeiter haben sich eine Lohnerhöhung erstreikt.
"The workers won a pay raise by striking."
As if: "The workers struck a pay raise into their possession."

c. Wir haben uns Öl erbohrt.
"We obtained oil by drilling."
As if: "We drilled oil into our possession."

Note that, in its different usages above, the German prefixal satellite *er-* has been given different subscripts to indicate that it is here regarded as a polysemous morpheme with distinct pockets of meaning, not a morpheme readily fitted with a single abstractionist gloss like 'completive', as is often attempted. This distinctional approach is based on such evidence as the fact that *erdrücken* does not mean 'to squeeze to completion' but rather 'to squeeze to death'. That is, the German notion of 'squeezing' does not have an intrinsic or standardly associated end point that a generic *er-* simply invokes.

5.2 Change in State of Existence

Having introduced the state-change type with examples involving death and possession, we can continue considering the semantic range of state change with an exploration of one domain: change with respect to state of existence. We first consider the transition from an existent to a nonexistent state—that is, from presence to absence. This conceptual type is generically expressed in English by the phrases *go/put out of existence*, which directly represent part for part the final three components of the framing event. However, some more particular senses are expressed conflatedly. Our first example exhibits a discrete transition type. The concept of a flame or light becoming extinguished can be expressed in English by the monomorphemic satellite *out*. In Spanish, as per the usual contrast, it is expressed in the verb, as seen in (11).

(11) V out (NP) 'V (NP) to extinguishment'/'extinguish (NP) by Ving'

a. *Nonagentive with Manner*
[the candle "MOVED" TO EXTINGUISHMENT] WITH-THE-MANNER-OF [it flickered/...]

The candle flickered/sputtered out.

b. *Nonagentive with Cause*
[the candle "MOVED" TO EXTINGUISHMENT] WITH-THE-CAUSE-OF [SOMETHING blew on it]

The candle blew out.

c. *Agentive with Cause*
[I "$_{A}$MOVED" the candle TO EXTINGUISHMENT] WITH-THE-CAUSE-OF [I blew on/... it]

I blew/waved/pinched the candle out.

Spanish: Apagué la vela soplándola/de un soplido.
'I extinguished the candle [by] blowing-on it/with a blow'

The next example has a "bounded gradient" transition type—that is, the change is a progressive transition through a gradient state that terminates with a final state. The concept of an object's gradual diminishment until final disappearance, through some usually organic process, is expressed in English by the satellite *away* and, again, in Spanish by a main verb, as seen in (12).[4] One test for the transition types just adduced is a form's behavior with different types of temporal expressions. Thus, a discrete transition type is consonant with a punctual expression, as with *The candle blew out at exactly midnight* as against **The meat rotted away at exactly midnight.* On the other hand, a bounded gradient transition type is consonant with an expression of bounded temporal extent, as in *The meat rotted away in five days.*

(12) V away 'V to gradual disappearance'/'gradually disappear as a result of Ving'

[the meat "MOVED" GRADUALLY TO DISAPPEARANCE] WITH-THE-CAUSE-OF [it rotted]

The meat rotted away.
Also: The ice melted away. / The hinge rusted away. /
The image faded away. / The jacket's elbows have worn away.

English: The leaves withered away.
Spanish: Las hojas se desintegraron al secarse.
"The leaves disintegrated by withering."

A further case of the bounded gradient transition type is expressed by the English satellite *up* in examples like those of (13). Though needing further elucidation, the semantic difference between *away* and *up* at least involves a conceptual categorization of rate and time scale, with *away* as slow and lengthy and *up* as quick and brief. In addition, these forms with *up* seem to have a particularly aspectual character, and thus point to the likelihood of a conceptual continuum between aspect and state change as opposed to any sharp category division. Accordingly, as noted in the previous section on temporal contouring, much that is traditionally treated as aspect also involves state change, so that a number of the examples appearing there could equally have fit in the present section. It can be further noted that all particular state changes have a specific aspectual contour (or a range of possible contours).

(13) V up 'V to consumedness'/'become consumed in Ving'
V up NP 'V NP to consumedness'/'consume NP by Ving it'

a. [the log "MOVED" TO CONSUMEDNESS in 1 hour] WITH-THE-CAUSE-OF [it was burning]

The log burned up in 1 hour.
Contrast *burn* alone: The log burned (for 30 minutes before going out by itself).

b. [I "$_{A}$MOVED" the popcorn TO CONSUMEDNESS in 10 minutes] WITH-THE-CAUSE-OF [I was eating it]

I ate up the popcorn in 10 minutes.
Contrast *eat* alone: I ate the popcorn (for 5 minutes before I stopped myself).

The German prefixal satellite *ver-* also expresses a gradient progression to a final state, indicating that an Agent has exhausted the entirety of some object in acting on it, as illustrated in (10). Here, however, the object itself need not physically disappear and may merely become altered, but what does disappear is the *supply* of the object in its original condition available for the Agent's use in acting on it. Thus, here, the state change from presence to absence pertains not to a first-order object, which instead may continue in existence, but rather to an abstract second-order meta-object, the supply.

(14) *German:* ver-V NP-ACC 'use up/exhaust the supply of NP by Ving (with) the NP'/"V NP to exhaustion"

a. [I "$_A$MOVED" all the ink TO EXHAUSTION] WITH-THE-CAUSE-OF [I wrote with it]

Ich habe die ganze Tinte verschrieben.
'I've written all the ink to exhaustion.'
"I've used up all the ink in writing."

b. Ich habe alle Wolle versponnen.
"I've used up all the wool in spinning."

c. Ich habe meine ganze Munition verschossen.
"I've exhausted my ammunition in shooting."

Still in the area of change with respect to state of existence, we now turn to the reverse of the preceding direction of change, hence to the transition from a nonexistent to an existent state—that is, from absence to presence. Again, there are English expressions, *come/bring into existence*, that directly map the final three components of the generic framing event part for part onto syntactic and lexical structure. But in addition, the English satellite *up*—in a different usage than that seen just previously—expresses the same generic concept, as illustrated in (13). Here, the core schema INTO EXISTENCE as a whole maps onto the single morpheme that constitutes the satellite. This satellite covers either a discrete or a bounded-gradient interpretation for the transition type, according to the context, as demonstrated by its equal compatibility with either *at* or *in* type temporal phrases. In its agentive use, the present framing event type—state change from nonexistence to existence—amounts to the traditional notion of "effected object," as contrasted with "affected object." Thus, the English satellite *up* as used here and its counterparts in other languages can be taken as markers of an effected object construction.[5]

(15) V up NP 'V NP into existence'/'make/create NP by Ving'

a. [I "$_A$MOVED" INTO EXISTENCE three copies of his original letter] WITH-THE-CAUSE-OF [I xeroxed it]

I xeroxed up (*xeroxed) three copies of his original letter.
Contrast *xerox* alone: I xeroxed (*up) his original letter.

b. I boiled up (*boiled) some fresh coffee for breakfast at our campsite.

Contrast *boil* alone (any acceptable use of *up* has a different sense): I boiled (*up) last night's coffee for breakfast/some water at our campsite.

c. [I "$_A$MOVED" INTO EXISTENCE a plan] WITH-THE-CAUSE-OF [I thought (about the issues)]

I thought up (*thought) a plan.
Contrast *think* alone: I thought *up/about the issues.

It was seen above that the German satellite *ver-* expresses the gradual disappearance of an abstract second-order meta-object, namely, a supply. A counterpart for the reverse direction of change exists in English, again represented by the satellite *up*, now used in a third sense. This satellite expresses the gradual appearance of an abstract, second-order meta-object, an 'accumulation', as illustrated in (16). Here, the action specified by the verb affects but does not create the first-order objects named (below: money, property). Rather, the repetition of this action creates an accumulation per se as a higher-level Gestalt entity.

(16) V up NP 'progressively accumulate/amass NP by Ving'

a. [I "$_A$MOVED" INTO AN ACCUMULATION $5,000 in five years] WITH-THE-CAUSE-OF [I saved it]

I saved up $5,000 in five years.
Contrast *save* alone: I saved (*up) (the/my) $1,000 for two years.

b. Jane has bought up beachfront property in the county.—that is, has progressively amassed a good deal of property over time
Contrast: Jane has bought beachfront property in the county.—possibly just a little on one occasion

Two Russian satellites contrast nicely with respect to the conceptual level of the object in reference. The path prefix "s-[V] [NP-pl]-ACC" merely specifies paths of motion that yield a spatial juxtaposition of plural objects, thus corresponding well to English *together*. But the state-change prefix "na-[V] [NP-pl]-GEN" indicates that such a juxtaposition constitutes a higher-level Gestalt, an accumulation, as seen in (17).

(17) *Russian:* na-V NP-GEN 'create an accumulation of NP by Ving NP'

Ona nagrebla orexov v fartuk.
'She accumulation-scraped nuts(GEN) into apron.'

"By scraping them together in her apron, she accumulated (a heap/pile of) nuts."
Contrast: Ona sgrebla orexi v fartuk.
'She together-scraped nuts(ACC) into apron.'
"She scraped together the nuts into her apron."

5.3 Change in Condition

As the introductory examples showed, the state-change type encompasses more than just state of existence, and, for heuristic purposes, we now represent a range of this "change in condition" with examples of both physical and cognitive change, both in the Patient and in the Agent. For a physical case, the concept of changing an object from an intact condition to what can be conceptually categorized as a nonintact condition can be expressed in English again by an *up* satellite, now used in a fourth sense. The same concept is expressed in German more specifically and more productively by the satellite *kaputt-*, and in Spanish, as usual, with a main verb, as seen in (18).

(18) a. *English:* V up NP / *German:* kaputt-V NP-ACC 'make NP nonintact by Ving it'
[the dog "$_{A}$MOVED" TO NON-INTACTNESS the shoe in 30 minutes] WITH-THE-CAUSE-OF [he chewed on it]
The dog chewed the shoe up in 30 minutes.
Contrast *chew* without *up*: The dog chewed on the shoe (for 15 minutes).

b. *German:* Der Hund hat den Schuh in 30 Minuten kaputtgebissen.
'The dog bit the shoe up in 30 minutes.'
Contrast: Der Hund hat 15 Minuten an dem Schuh gekaut.
'The dog chewed on the shoe [for] 15 minutes.'

c. *Spanish:* El perro destrozó el zapato a mordiscos/mordiéndolo en 30 minutos.
'The dog destroyed the shoe with bites/[by] biting it in 30 minutes.'
Contrast: El perro mordisqueó el zapato (durante 15 minutos).
'The dog chewed-on the shoe (for 15 minutes).'

A number of state-change satellites in other languages have no counterpart in English, which must resort to framing verb constructions to render

them, and the concepts such satellites express can range quite broadly, more so than English speakers might expect. An example with range of application from the physical to the cognitive is the German satellite construction "ein-V NP/REFL-ACC." The satellite's meaning can be characterized in broad strokes as 'to readiness'. The whole construction's meaning can be more finely characterized as 'to warm (NP) up for Ving by (practicing at) Ving'. Instances of usage include *die Maschine einfahren* 'to warm up the machine for operating it' and *sich ein-laufen/-spielen/ -singen* 'by practicing at the activity itself, to warm up for running/playing/ singing'.

Another German example, possibly in a polysemous chain with the preceding example but semantically distinct enough, is an *ein-* satellite with a solely cognitive meaning that can be characterized broadly as 'to familiarity' and more finely as in (19).

(19) *German:* ein-V REFL-ACC in NP-ACC 'to have gradually managed to become easefully familiar with all the ins and outs of NP in Ving (in/with) NP'

a. Ich habe mich in das Buch eingelesen.
'I have read myself into the book.'
"I've gotten familiarized enough with the book that I can keep all the characters and plot involvements straight."

b. Der Schauspieler hat sich in seine Rolle eingespielt.
'The actor has played himself into his role.'
"The actor has come to know his part with ease in the course of acting in it."

c. Ich habe mich in meinen Beruf eingearbeitet.
'I have worked myself into my job.'
"I know the ropes in my work now."

In these preceding transitive examples, including the reflexive ones, what has manifested the change in condition was the Patient expressed in the direct object NP. But in another transitive example that does not fit this mapping, and so calls for further investigation, the Agent or Experiencer expressed by the subject NP is the entity that manifests the change in condition. In particular, with the German satellite illustrated in (20), the subject Experiencer undergoes a cognitive change, one that can be characterized in broad terms as 'to awareness' and more finely as indicated below.

(20) *German:* heraus-V NP-ACC [V: sensory verb] 'detect and sensorily single out NP among other comparable NPs via the sensory modality of Ving'

Sie hat ihr Kind herausgehört.
'She has heard out her child.'
"She could distinguish her child's voice from among the other children talking."

An inspection of particular satellite-framed languages often yields state-change satellites with meanings that can seem unprecedented from the perspective of other languages. Here are some examples that may seem curious from the English perspective.

(21) a. *Russian:* za-V -s'a (= reflexive) 'become attentionally engrossed/absorbed in the activity of Ving and hence be inattentive to other events of relevance in the context'

where V = čitat' 'read': za-čitat'-s'a 'to get absorbed in what one is reading' (so that, e.g., one misses a remark directed at one)

where V = smotret' 'look': za-smotret'-s'a 'to get absorbed in watching something' (e.g., a person ahead of one as one walks along, so that, e.g., one bypasses one's destination)

b. *Dutch:* bij- V NP 'put the finishing touches on NP in Ving it/execute the few remaining bits of Ving action that will bring NP up to optimal/complete/up-to-date condition' [example from Melissa Bowerman, personal communication]

where V = knippen 'cut with scissors': bij-knippen e.g., 'trim those hairs that have grown out beyond the hairdo'

where V = betalen 'pay': bij-betalen 'pay the additionally necessary increment' (e.g., to correct an error and bring a sum up to the right amount or to upgrade a ticket to the next-higher class)

c. *Yiddish:* tsu-V (NP_1) tsu NP_2 'add NP_1 by Ving it—or add the (intangible) product of Ving—to the same or comparable material already present in NP_2'

Ikh hob tsugegosn milkh tsum teyg.
'I have ADD-poured milk to-the dough.'
"I added milk to the dough by pouring it."
Ikh hob zikh tsugezetst tsu der khevre.

'I have REFL ADD-sat to the group.'
"I pulled up a chair and joined the group."

The present perspective on state-change satellites suggests a pair of worthwhile projects. One project would be to ascertain as exhaustively as possible the set of states represented by the satellites within a single satellite-framed language in order to assess the semantic range that such forms can cover in a language. The other project would be to compare the sets of states represented by satellites across two or more satellite-framed languages. In this regard, a casual look at the state-change satellites in German and Mandarin suggests some similarity of the states represented. Despite the examples of seemingly odd state meanings just presented, a more systematic examination might reveal a universal tendency toward the representation of a certain inventory of state concepts. Such a finding, if true, would contribute much to our understanding of cognitive organization in language.

5.4 Further Construction Types

We have so far seen a state change represented by two different constructions. One construction is the combination of a preposition and a noun, like English *to death*, where the preposition represents the transition type and the noun names a state. The combination here is largely fixed as a collocation with particular lexical forms that cannot vary freely. The other construction is simply a monomorphemic satellite, like German *er-* 'to death', that conflatedly represents both the transition type and the state. We now note the occurrence of further constructions.

In one further state-change construction, the state is represented by a nominal form that now can vary freely. Actually, the NP in this construction is used metanymically to represent 'the state of being an NP'. The transition type is represented by a preposition. This can be accompanied by a satellite whose reference can be construed as qualifying either the transition or the state. The English forms in (22) and (23) exemplify this type of construction.

(22) *English:* V into/to NP 'become NP by Ving'

[the water "MOVED" TO a STATE [BEING a solid block of ice] WITH-THE-CAUSE-OF [it froze]

The water froze into a solid block of ice.

(23) *English:* V down to/into NP 'by Ving, reduce qualitatively (and quantitatively) until becoming NP'

[the wood chips "MOVED" REDUCTIVELY TO a STATE [BEING a pulp]] WITH-THE-CAUSE-OF [they boiled]

The wood chips boiled down to a pulp.

In another state-change construction, an adjective names the state. No further forms are present to represent the transition type, but the constructional meaning is typically that of 'entering' the named state (though another possibility is described below). The construction is illustrated for English in (24).

(24) a. V Adj 'become Adj by Ving'

[the shirt "MOVED" TO a STATE [BEING dry]] WITH-THE-CAUSE-OF [it flapped in the wind]

The shirt flapped dry in the wind.
Contrast: The tinman rusted stiff. / The coat has worn thin in spots.

b. V NP Adj 'make NP Adj by Ving'

[I "$_{A}$MOVED" the fence TO a STATE [BEING blue]] WITH-THE-CAUSE-OF [I painted it]

I painted the fence blue.

One justification for treating a bare adjective construction of this sort as representing a "TO" transition type is that it semantically parallels a construction with an overt *to* phrase in the adjective slot. Thus, parallel to *The shirt flapped dry* is the sentence *The man choked to death.*

5.5 Further Transition Types

In all the state-change examples so far, the transition type has been that of 'entry' into a state, which was represented by the deep preposition TO in conjunction with the deep verb "MOVE." But other transition types can be observed or construed.

One further transition type is 'departure' from a state, which can be represented by a deep preposition FROM in conjunction with "MOVE." This type would appear to underlie a combination of preposition plus nominal that explicitly expresses departure from a state. An example of such a combination is *out of existence*, as in *The apparition blinked out of existence*. Further, a state-change satellite like *out*, as in *The candle blew out*—previously construed as representing a concept of state entry, 'to extinguishment'—can alternatively be construed as representing a concept of state departure, 'from ignitedness'.

Other transition types actually involve the lack of transition—that is, they involve fixity or stasis. One such type is 'situatedness' in a state, which can be represented by the deep preposition AT in conjunction with the deep verb BE. Another such type is the continued 'maintenance' of a state, which can be represented by AT in conjunction with the midlevel verb REMAIN or, for the agentive, with the midlevel verb KEEP. An example of this type is shown in (25). Here, the satellite is an adjective, but the constructional meaning is not one of 'state entry', as before, but rather one of 'state-situatedness'. The interpretation of this sentence is that the door was already shut and that I initiated the maintaining of the door in that shut state by driving nails into it. Note that the homologous construction in Mandarin does not permit this 'maintenance of a state' interpretation but only the usual 'change of state' interpretation, so that the sentence corresponding to *I nailed the door shut* could only mean that, by hammering on a nail held against an open door, I moved the door into a shut position.

(25) [I KEPT the door AT a STATE [BEING shut]] WITH-THE-CAUSE-OF [I nailed it]

I nailed the door shut.

At this point, we can present several further English forms that push the envelope of the framework developed so far. These forms, on the one hand, exhibit the satellite-framed type of construction. Their core schema is represented by a satellite and/or preposition, while the co-event is represented by the verb. On the other hand, the concepts represented by the satellite and/or preposition are ongoing processes, rather than fixed states. Perhaps such forms should be treated as representing a sixth type of conceptual domain, one of 'processual progression'. However, we will instead attempt a treatment of these forms as involving the domain of state change, but with their transition type regarded as something like 'traversal' through a state. Such a transition type might be represented by the deep preposition ALONG in conjunction with "MOVE."

One of the new forms involves the preposition *for* in the sense of 'in search of', in conjunction with a verb that expresses the action used to carry out the search. The satellite-framed construction that is the target of this discussion is shown in (26a), while (26b) shows the counterpart verb-framed construction, which in this case also exists in English. The assumption here is that the combination of deep and midlevel morphemes ALONG IN-SEARCH-OF conflates into the preposition *for*.

(26) *English:* V for NP 'V in search of NP/seek NP by Ving'

a. [I "MOVED" ALONG IN-SEARCH-OF nails on the board] WITH-THE-MANNER-OF [I felt the board]

I felt for nails on the board. / I felt the board for nails.
Contrast: I listened to the record for scratches. / I looked all over for the missing button.

b. I searched for/sought nails on the board by feeling it.
Contrast: I searched for scratches on the record in listening to it. / I sought the missing button by looking all over.

Another English form involves the combination of satellite plus preposition *off with*, which has the sense 'carrying along something that one has stolen', in conjunction with a verb that expresses the Manner in which one moves along as one progressively distances oneself from the site of the theft. As with the previous example, the assumption here is that the combination of the deep and midlevel morphemes ALONG IN-THEFTFUL-POSSESSION-OF gives rise to the surface expression *off with*. This form is illustrated in (27).

(27) *English:* V off with NP 'upon stealing NP, continue in theftful possession of NP while distancing oneself/making one's escape by Ving'

[I "MOVED" ALONG IN-THEFTFUL-POSSESSION-OF the money] WITH-THE-MANNER-OF [I walked/...]

I walked/ran/drove/sailed/flew off with the money.

Note that the *off with* in this construction cannot be regarded simply as a path satellite plus a preposition of concomitance that happen to be applied to a motion event in which one can additionally infer theft. The reason is that the same combination of satellite and preposition can be used with two nonmotion verbs—*make off with* and *take off with*—that still have the theft reading (in fact, the form with *make* has only the 'theft' reading).

6 ACTION CORRELATING AS THE FRAMING EVENT

The fourth type of framing event has not to my knowledge been previously recognized. It is part of a much broader linguistic phenomenon—which I propose to call **coactivity**—that has also received scant attention as a consolidated topic. In a case of coactivity, a first agency executing a particular activity is associated with a second agency whose activity is

correlated with the first. Typically, the second activity is either comparable to or complementary to the first activity. Prototypically, the first agency is represented by a subject NP and the second agency by an object NP (direct or oblique). Prototypically across languages, such a **coactive** object NP is required by symmetric verbs, comitatives, datives, and certain further syntactic categories. Thus, *I met John/*the mannequin* requires that John also engage in the action of meeting me. The sentence *I ate with Jane/*the mannequin* requires that Jane also engage in eating. The sentence *I threw the ball to John/*the mannequin* or *I threw John/*the mannequin the ball* require that John engage in the action of trying to catch the ball, as an action complementary to my throwing it. And *I ran after Jane/*the building* requires that Jane also engage in swift forward motion.

In the fourth type of framing event, which we term **action correlating**, an intentional Agent effects or maintains a particular correlation between an action performed by herself and an action performed by another Agency, which can be either animate or inanimate. Note that we use the term "Agent" for the first entity and the distinct term "Agency" for the second entity. The framing event consists of the establishment of this correlation per se. The types of such correlation that will be treated below are 'concert', 'accompaniment', 'imitation', 'surpassment', and 'demonstration'. The co-event consists of the specific action performed by the Agent. Except for the 'demonstration' type, this action is either the same as the action performed by the Agency or is in the same category, as understood according to pragmatic norms that will need investigation.

In the way that conceptual structure is organized for linguistic expression, such action correlating appears to be analogized to Motion. Specifically, the correlation of one action with respect to another parallels the path of one object with respect to another. In particular, in the conceptual structuring of the framing event, as schematized in (28), the Agent places his own action as figural entity—generically represented by the term Action—in correlation with an Agency's same-category action as ground entity—generically represented by the term Action′. This structure is thus comparable to that of agentive motion of the type: [Agent $_{A}$MOVE Figure Path Ground]. The core schema here—the In-Correlation-With component—is then a straightforward Path analogue.

The remainder of the macro-event, also schematized in (28), consists of the co-event, which is the specific action performed by the Agent, here represented as [Agent PERFORM], and the constitutive support relation

that this co-event bears to the framing event. This support relation is characterized as "constitutive" because the specific activity of the co-event constitutes the action that the Agent sets in correlation with the Agency's action. It will also constitute the Agency's action in the case where that happens to be identical to the Agent's action rather than just of the same category.

(28) [Agent PUT Agent's Action In-Correlation-With Agency's Action′] CONSTITUTED-BY [Agent PERFORM]

The macro-event structure as schematized in (28) seems to represent the interrelationships among the conceptual components more closely. But a particular adaptation of this structure, as schematized in (29), seems to be closer to the patterns in which this semantic type is mapped onto occurrent syntactic structures, at least in the languages considered here. Thus, on the basis of (29) and in accordance with the usual typology, in verb-framed languages the core schema maps onto a satellite (plus adposition) and the co-event maps into the main verb. And in verb-framed languages, the combination of the ACT component and the core schema maps onto the main verb (plus adposition) and the co-event maps into an adjunct.

(29) [Agent ACT In-Correlation-With Agency] CONSTITUTED-BY [Agent PERFORM]

With respect to the framing event's role in the present type, it clearly provides the overarching framework within which two actions are brought into correlation with each other. In addition, the general pattern is maintained in that the framing event is relatively abstract in character while the co-event is typically concrete. Thus, if an observer were present in the situation referred to by a macro-event of action correlating, that observer would directly perceive the specific co-event activity performed by the Agent and would perceive the same activity or something similar performed by the Agency. For example, as in the illustrations below, these actions could be playing, singing, drinking, and so on. But the observer could generally not perceive the intended relation of the one action to the other, but would rather need to infer it or otherwise know it. For example, the observer would need to infer or know that the Agent performs her action so that it will be in concert with that of the Agency, or in accompaniment to it, or in imitation of it, and so forth.

We now consider the five different cases of action correlating mentioned at the beginning of this section. The first four—'concert', 'accompaniment',

'imitation', and 'surpassment'—have the Agent and the Agency performing the same or same-category actions. The fifth case—'demonstration'—has the Agent and Agency performing different-category actions.

6.1 The Agency's Action is the Same(-Category) as the Agent's Action

In their semantic distinctions, the first three cases of action correlating—'concert', 'accompaniment', and 'imitation'—can be taken to form a series based on an increasing conceptual distance in the correlation of the Agent's action with that of the Agency. With English and German used as the languages of illustration, both are needed to represent the series in terms of expression by satellites, since only English has a satellite proper for the first case while only German has one for the third.

The conceptual difference between the first two cases of 'concert' and 'accompaniment' is instructive. In the first case, expressed in English by *together (with)*,[6] as illustrated in (30), the Agent acts in concert with the Agency. That is, both the Agent's action and the Agency's action are set in conception as equipotent components of a joint unity, perhaps with each component as essential for the existence of the whole.

In the second case, expressed in English by *along (with)* and in German by *mit- (mit-DAT)*, as illustrated in (31), the Agent acts in accompaniment or as an addition or adjunct to the Agency. That is, the Agency's action, which functions as a ground entity and hence as a conceptual reference point, is treated as independent or basic and as the essential or definitional activity of the situation. On the other hand, the Agent's action as figural entity is treated as an ancillary or incidental aspect of the total situation. (This second case is one manifestation of an extensive semantic system in language that distinguishes 'main' from 'ancillary'.)

To contextualize this conceptual difference for the situation of the illustrations, assume that "I" and "he" are each playing a piano on the same concert stage. Then, in the first case, he and I might be dual pianists, whereas in the second case, he might be a featured soloist whom I have joined to assist. Comparably, *I jog together with him* suggests that we schedule and execute our activity jointly and might not engage in it singly. However, *I jog along with him* suggests that he has his own regular routine of jogging independently, whether or not I am present, but where I sometimes accompany him as an addition.

Of note here is the fact that the referent situations for both cases can be indistinguishably the same physically—for example, as they would appear

on screen if filmed. For this reason, the first two action correlations, 'concert' and 'accompaniment', can be understood to function as conceptual structures overlaid or imposed on a substrate. They thereby constitute excellent examples for cognitive linguistics of conceptual imputation, a mind-to-world direction of fit, as opposed to the often-held notion that only properties in objects "out there" can be reflected in language in a truth-value oriented semantics or by a world-to-mind direction of fit.

The original stipulation that the second participant in an action correlation—which we have distinctively termed the "Agency"—can be either animate or inanimate was made to accommodate the observed linguistic patterns. For instance, in the examples for the first four cases of action correlating below, all three illustrative languages allow replacement of the "him" or its counterpart by "phonograph record" or its counterpart, as in the English *I played along with the phonograph record.* Comparably, the stipulation that the activity of the Agency need only be in the same category as that of the Agent was made to accommodate the English and German satellite usage. For instance, in *Mary sang along with John*, John could be playing an instrument while Mary sings, and rendering a different harmonic part than she. Similarly, the German *Ich trinke mit* "I (will) drink along" can refer to my drinking without eating, after I have joined someone who is eating without drinking.

In accordance with the general typology, the Spanish forms in the examples below express in the main verb the same concept of action correlation for which English and German mostly use satellites. Again, though, English has verbs borrowed from Romance (e.g., *accompany, join, imitate, copy*) with the same mapping pattern as their source language. A further difference can be observed between the two types of languages here, though it is not clear whether it strictly arises from their typological distinction. Specifically, the same-category affordance permitted in German and English does not hold in Spanish. For, in expressing the co-event in an adjunct, Spanish generally must employ different constructions that distinguish between identical actions and same-category but different actions on the part of the Agent and the Agency.

(30) *English:* V together with NP 'act in concert with NP at Ving'

[I ACTed IN-CONCERT-WITH him] CONSTITUTED-BY
[I played the melody]

I played the melody together with him.

(31) *English:* V along (with NP)
German: mit-V (mit NP-DAT)
'act in accompaniment of/as an adjunct to//accompany/join (in with) NP at Ving'
[I ACTed IN-ACCOMPANIMENT-OF him] CONSTITUTED-BY [I played the melody]
English: I played the melody along with him.
German: Ich habe mit ihm die Melodie mitgespielt.
Spanish: Yo lo acompañé cuando tocamos la melodía.
'I accompanied him when we played the melody' (both he and I played).
Yo lo acompañé tocando la melodía.
'I accompanied him [by] playing the melody' (only I played).

Further framing satellites can be observed that refer only to particular portions of the 'accompaniment' concept and so might be thought to add to the number of distinct types of action correlation that must be recognized. Thus, Yiddish has two satellites that, in effect, divide the category of 'accompaniment' in two. Both satellites represent the Agent's action as subsidiary to that of the Agency, but they center on distinct loci within the category. These loci differ as to the Agent's degree of participation in the Agency's action. Thus, one satellite, the prefix *mit-*, centers on a concept of 'contributory accompaniment', in which the Agent's action is understood as adding to the Agency's action so as to form a greater whole. The other satellite, the prefix *tsu-*, centers on a concept of 'peripheral accompaniment', in which the Agent's action is understood as minor or marginal in relation to the whole, and as self-standing, often personal. Though the examples for *tsu-* in (32) could refer to more participatory accompaniment, they are here given contexts that highlight their semantic center further toward the periphery.

(32) *Yiddish:* tsu-V 'V as a peripheral accompaniment to another action'
where V = krekhtsn 'to groan, gripe'
Er hot tsugekrekhtst.
'he has TSU-griped'; for example:
"He punctuated his exertions with an undertone of periodic groans." or "He chimed in/piped up in our gripe session with some of his own gripes."

where V = tantsn 'to dance'
Zi hot tsugetantst.
'she has TSU-danced'; for example:
"She did a little dance on the sidelines in time to the music."

English also has a form that can be considered to mark a subtype of 'accompaniment'. It has some similarity to the preceding Yiddish form in that it has a noncontributory, often personal, sense, but it is distinctively narrower in reference. This form is the preposition *to*, as illustrated in (33). In it, the Agency is (the manifestor of) a rhythmic pattern through time, prototypically auditory. The Agent also produces a rhythmic pattern and sets it into some kind of alignment with the Agency's pattern.

(33) *English:* V to NP 'in Ving, set the rhythm of Ving in correlation with the rhythm of NP'

I swayed/tapped my foot/danced/hummed to the rhythm/beat/music/sound of the waves lapping against the shore.

The third in the series of action correlations, 'imitation', is the case where the Agent directs her own activity so as to be an imitation or copy of the Agency's activity, as illustrated in (34). Here again, the Agency's activity, as ground element, is the reference point in relation to which the Agent endeavors to shape her own activity as a figural entity. In particular, from observing the Agency's activity, the Agent endeavors to make her own activity similar or equivalent to the whole of or to selected structural aspects of the Agency's activity.

Whereas in the first two cases the Agent's activity was concurrent with that of the Agency, here it follows that of the Agency. In this regard, the German *nach-* satellite prototypically suggests that this delay is only a brief part-for-part lagging behind, but the interpretation is also available that the Agent's performance wholly follows the ending of the Agency's performance. Again, the Agency can be an inanimate device like a phonograph, and the Agency's activity can be identical to or only in the same category with the Agent's activity, so that the German sentence in (34) could equally well refer to a recorded vocalist that I imitate on an instrument. And, as before, Spanish employs its main verb to render the action correlation itself, while the adjunct specifies the activities and also distinguishes whether they are the same or different within the same category.

(34) *German:* nach-V (NP-DAT) 'V in imitation of NP'/'imitate/copy NP at Ving'

[I ACTed IN-IMITATION-OF him] CONSTITUTED-BY
[I played the melody]

German: Ich habe ihm die Melodie nachgespielt.
English: I played the melody in imitation of him.
Spanish: Yo lo seguía cuando tocamos la melodía.
'I followed him when we played the melody' (both he and I played).
Yo lo seguía tocando la melodía.
'I followed him [by] playing the melody.' (only I played).

The fourth case of action correlating is that of 'surpassment'. It is illustrated in (35) with the English prefixal satellite *out-*. Here, the Agent either marshals his activity to surpass the Agency's activity, or his activity simply happens to surpass the Agency's activity, which is again used as a reference point. In the specific context of a competition, the Agent thus 'beats' the Agency. As before, the Agency can be inanimate, as in *I outplayed the player piano*, but now the Agency's activity is limited to being the same as that of the Agent, not just to being of the same category, so that there is no ***I outplayed the singer*** in the sense that I played better than the singer sang. Spanish again can use its main verb to convey the correlation, but this time the gerundive adjunct can be used with the identical-activity interpretation, though apparently a different-activity interpretation is also possible.[7]

(35) *English:* out-V NP 'surpass/best/beat NP at Ving'

[I ACTed IN-SURPASSMENT-OF him] CONSTITUTED-BY
[I played (the melody)]

English: I outplayed him.
Compare: I outran/outcooked him.
Spanish: Yo le gané tocando la melodía.
'I surpassed him playing the melody.'

6.2 The Agency's Action Is Fixed and Distinct from the Agent's Action

The fifth case of action correlating is that of 'demonstration'. It is expressed by the German satellite *vor-*, as illustrated in (36). Here, the Agent executes an activity so that it will function as a demonstration to an Agency that, in turn, will observe the Agent's activity. In the concept of 'demonstration' present here, the Agent has the knowledge and capacity to perform a certain activity that the Agency lacks. The Agent executes this activity so that the Agency can register it either as information about

the Agent or as a model for learning to perform the same activity, and the whole situation can have the metaphoric sense of a transfer from the Agent to the Agency. This 'demonstration' case differs from the preceding cases in that the Agency's own activity is fixed, in particular as an activity of observation, and as such it regularly diverges from the Agent's activity. This difference merits a revised schematization of the original macro-event, shown first in (28) and (29). The revised schematization is shown in (36).

Further, this case stretches the preceding notion of correlating, which had been based on the interrelating of comparable activities, to a notion of the coordinating of complementary activities. Specifically, these activities are ones of demonstration and of observation. Still, this case—in common with the others—does relate the activity of one entity to that of another. And the typological mapping patterns are comparable. Thus, German expresses the relationship in the satellite, and Spanish expresses it in the main verb. For this case, though, English lacks a satellite like that of German, and so switches to a verb-framed mapping pattern.

(36) *German:* vor-V NP-DAT 'demonstrate to NP one's Ving'

[Agent PUT Agent's Action IN-DEMONSTRATION-TO Agency's OBSERVATION] CONSTITUTED-BY [Agent PERFORM]

[I ACTed IN-DEMONSTRATION-TO him] CONSTITUTED-BY [I played the melody]

German: Ich habe ihm die Melodie vorgespielt.
'I played the melody in demonstration to him.'

English: I showed him how I/how to play the melody.

Spanish: Yo le mostré como toco/tocar la melodía (same as English).

7 REALIZATION AS THE FRAMING EVENT

The fifth type of framing event is an event of **realization**. This itself is an encompassive category for a pair of related types that will be termed **fulfillment** and **confirmation**.

7.1 Incremental Semantic Series Containing Realization Types

Since the semantic properties of these types are not very familiar, it may be best to begin by demonstrating them. The demonstration will consist of

an incremental series of four verbal patterns into which the two realization types fit. It is presented in (37) in the agentive for a satellite-framed language, English.

For each of the four verbal patterns in the series, the verb is lexicalized to express progressively more kinds of referential material. What is common to all four types of verb is that they represent a particular action that the Agent performs. The scope of the Agent's intention extends at least over the performance of this action. In the first verbal pattern, the scope of intention is coextensive with this action. This intended action thus constitutes the entirety of the verb's reference. In the second verbal pattern, the scope of intention extends beyond the action alone. It now further includes a goal and the intention that the action lead to this goal. The verb is lexicalized to represent only this extent of reference, and so it leaves moot whether or not the intention to attain the goal was fulfilled. In the third verbal pattern, the verb is lexicalized to represent all of the preceding plus the implicature that the intended goal was attained. And in the fourth verbal pattern, the verb refers to all of the preceding, except that it enhances the implicature, in effect, into an assertion that the intended goal was attained. Each different type of verb can enter into construction with a different type of semantically complementary satellite.

(37) a. *Intrinsic-fulfillment verb:* action
Further-event satellite: the state change resulting from that action

For example:
V: *kick* 'propel foot into impact with'
Sat: *flat:* 'thereby causing to become flat'
I kicked the hubcap. / I kicked the hubcap flat.

b. *Moot-fulfillment verb:* action + goal
Fulfillment satellite: fulfillment of that goal

For example:
V: *hunt* 'go about looking with the goal of thereby finding and capturing'
Sat: *down:* 'with fulfillment of the goal'
The police hunted the fugitive for/*in three days (but they didn't catch him). The police hunted the fugitive down in/*for five days (*but they didn't catch him).

c. *Implied-fulfillment verb:* action + goal + implicature of fulfillment of the goal

Confirmation satellite: confirmation of that implicature

For example:
V: *wash* 'immerse and agitate with the goal of cleansing thereby + the implicature of attaining that goal'
Sat: *clean:* 'with confirmation of the implicature of attaining the goal of cleansing'
I washed the shirt (but it came out dirty). / I washed the shirt clean (*but it came out dirty).

d. *Attained-fulfillment verb:* action + goal + fulfillment of that goal
Pleonastic satellite: fulfillment of the goal (generally avoided in English)
For example:
V: *drown* 'submerge with the goal of killing thereby + attainment of that goal'
Sat: *dead/to death:* 'with the attainment of the goal of killing'
I drowned him (*but he wasn't dead). / *I drowned him dead/to death.

7.1.1 Intrinsic-Fulfillment Verb + Further-Event Satellite At the semantically simpler end of the series, illustrated in (37a), the verb refers to a situation in which an Agent intends and executes what can be taken as a simplex action. One criterial characteristic of this pattern is that the Agent's scope of intention extends only over the action itself, and no further (i.e., as far as the meaning of the verb per se is concerned). A second characteristic is that the executed action can be conceptualized as a single qualitatively unitary action, as assessed at a certain coarser scale of granularity. Thus, under this conceptualization, the referent of the verb *kick* is regarded as a unitary act consisting of an Agent volitionally thrusting her foot from a more body-proximal location through space into impact with another object, where the Agent has intended this entire sequence but not necessarily any consequences beyond it. A verb with this semantic pattern of lexicalization will be termed an **intrinsic-fulfillment verb**. This term is intended to convey the idea that the Agent's intention for a certain outcome is exactly fulfilled by the action referred to by the verb itself.

With this verbal pattern, the addition of a satellite adds a semantic increment that is wholly extrinsic to the referential content of the verb. For example, adding *flat* to *kick*, as in (37a), simply adds the meanings of

the satellite and of the satellite construction to the meaning of the verb. Thus, the same act of kicking is now additionally understood to cause the named state change. A satellite with this semantic relationship to the verb will be termed a **further-event satellite**.

It can be seen that, with respect to the present incremental series, the beginning entry consists of an intrinsic-fulfillment verb paired with a further-event satellite. But, with respect to the categories developed so far in this chapter, these paired constituents are simply a co-event verb that bears the relation of Cause to a framing satellite of the state-change type.

7.1.2 Moot-Fulfillment Verb + Fulfillment Satellite The next verbal pattern involves the fulfillment type of realization. Here, as before, the verb refers to an Agent intending and executing a particular action, the whole of which takes place. But here, in addition, the Agent's scope of intention extends beyond the execution of this action alone. Specifically, the Agent further intends that the action lead to a particular result, one that, within the referential scope of the verb, does not come about and whose eventual success or failure is left moot. A verb with this pattern of lexicalization will be termed a **moot-fulfillment verb**.

With this verbal pattern, the addition of a satellite indicates that this intention to bring about a particular goal has in fact been fulfilled and the goal achieved. Here, the meaning of the satellite's addition is not independent of the meaning of the verb but is sensitive to the internal structure of that semantic complex and complements it. A satellite of this type will be termed a **fulfillment satellite**.

Thus, as illustrated in (37b), the referent of transitive *hunt* consists of an Agent's activity of going about looking, inquiring, tracking, and so on where the Agent has intended this activity, together with the Agent's further intention that this activity will lead to finding and capturing a particular animate entity. When used without a satellite, this verb is moot regarding the outcome. It has unbounded (atelic) aspect—hence, it can take the type of temporal expression that begins with *for*. But the addition of the satellite *down* indicates that the additional intention was fulfilled—that is, that the finding and capturing actually took place. This combined event complex now has bounded (telic) aspect—hence, it can take a temporal expression that begins with *in*.[8]

The fulfillment sense of this type of satellite construction can be regarded as a special kind of state change, one pertaining to ontology. The ontological state of the intended result that is expressed by the verb is

originally **potential**, but the satellite indicates the change of this state to **actual**. Thus, when fulfillment is regarded as a kind of state change, one in ontology, it could be equivalently termed **actualization**. In effect, the verb by itself can be considered to express the **schema** for a desired result, while the satellite indicates that this schema has been "filled in," or actualized.

7.1.3 Implied-Fulfillment Verb + Confirmation Satellite The third verbal pattern involves the confirmation type of realization. In this type, the verb includes the same two components as in the moot-fulfillment type. These two components are an Agent's intended and executed action plus her further intention that this action lead to a certain desired result. But, in addition, the verb conveys a particular implicature: that the intention to bring about the result has been fulfilled. The evidence for the presence of such an implicature is simply that the normal reading of a sentence containing this type of verb, even unaccompanied by a satellite, is that the desired goal is achieved. However, this component of the verb's meaning is merely an implicature, since this reading is defeasible by a disclaiming phrase. A verb with this pattern of lexicalization can more accurately be termed an **implicated-fulfillment verb**. Or it can be more loosely called an **implied-fulfillment verb** for greater brevity.[9]

With the addition of a satellite, though, the attainment of the intended result is now certain and not merely a defeasible implicature. Accordingly, any disclaiming phrase is now unacceptable. That is, the addition of the satellite **confirms** what otherwise is only implicated. A satellite of this type is thus termed a **confirmation satellite**.

Thus, the (37c) sentence *I washed the shirt* not only indicates that I intentionally immersed and agitated the shirt in liquid and had the further intention of getting it clean as a result, but, with nothing more said, also implicates that the shirt in fact got clean. But this implicature can be defeated by adding the clause ... *but it came out dirty*. However, the addition of the satellite *clean*, as in *I washed the shirt clean*, certifies that the verb's original implicature has now extended beyond that status to become a claimed fact.

While English is not rich in implied-fulfillment verbs, another example may be the verb *call*. This verb indicates dialing a number with the intention of thereby telephonically connecting with a party, together with the implicature that this connection has occurred. Thus, the sentence *I called her* by itself normally implicates my reaching her. But this implicature is readily defeated, as in *I called her three times but there was no*

answer. Now, for some speakers at least, the addition of the satellite *up* confirms the connection and thus precludes a disclaimer: *I called her up (*but there was no answer)*. While English has only scattered examples of this verbal pattern, it is a major type in other languages, like Mandarin, as illustrated below.

In both English and Mandarin, the satellites that indicate realization, either fulfillment or confirmation, are of two kinds. The satellite can explicitly name the verb's intended result—as *clean* does in relation to *wash*. Or the satellite can have a meaning not related (unless metaphorically) to the verb's intended result, as is the case with *down* in relation to *hunt* and *up* in relation to *call*. The former kind is a state-change satellite that secondarily indicates fulfillment or confirmation of the verb's intended result by making an independent specification of arrival at the result. But in the latter case, the satellite acts as an abstract marker of the realization factor per se, indicating realization of the verb's intended result, whatever that happens to be. In this way, the second kind of satellite is cleaner evidence of realization as a conceptual category in its own right.

As already seen for a fulfillment satellite, the meaning of the confirmation satellite is—especially for the second kind of satellite—not independent of the verb's meaning, but is sensitive to its internal semantic structure and complements it. In this case, it does so by addressing the verb's incorporated implicature and confirming it, or in effect, upgrading it to the lexical equivalent of an assertion.

And, as before, this confirmation sense of the confirmation type of satellite construction can be regarded as a special kind of state change, one pertaining this time not to ontology but to epistemology. What is basically operative here is the epistemic state of the speaker—and the corresponding epistemic state that the speaker aims to induce in the addressee —with respect to the 'intended result' component of the verb's meaning. With the satellite absent, the speaker is *presumptive* of the occurrence of the intended result. But with the satellite present, the speaker is *certain* of the occurrence of the intended result.

However, by a process that can be termed **objectivization**, these originally epistemic states of the speaker can be converted into so-conceived objective properties of the 'intended result' component itself. Thus, with the satellite absent, the counterpart "objective" state of this component is that it is *apparent*, while with the satellite present, the counterpart "objective" state is that it is *definite*.

To expand on the notion of objectivization, it is a general cognitive process also found in the conceptual organization of language. By this process, an individual's subjective cognitive state regarding some external entity is projected onto that entity, yielding a certain counterpart form. This counterpart is then conceived as an objective property of that entity itself. A ready linguistic example of this process is seen in a formulation like *The cliff is beautiful*, which seems to assert that the cliff has an objective property of 'beauty', in the same way that *The cliff is white* predicates an objective whiteness of the cliff. Alternate constructions like *The cliff is beautiful to me* or *I find the cliff beautiful* directly represent the non-objectivized subjective evaluation or affect of an observing experiencer.

7.1.4 Attained-Fulfillment Verb (+Pleonastic Satellite) In the fourth verbal pattern of the incremental series, the verb includes the same two components already seen in the second and third verbal patterns—that is, in verbs of moot fulfillment and of implied fulfillment. These two components, again, are an Agent's intended and executed simplex action plus his intention that this action lead to a certain desired result. However, in addition, the verb indicates neither a moot outcome nor simply an implicature of the fulfillment of the further intention, but rather the actual fulfillment of that intention. A verb of this type cannot add a satellite sensitive to and complementing the verb's internal semantic structure—specifically to indicate the realization of unrealized aspects—since all the conceptual elements referred to by the verb are in fact realized. English, in fact, tends to disfavor even a semantically pleonastic satellite with such a verb.

Thus, as seen in (37d), English *drown* indicates that an Agent intentionally executes the action of submerging an animate entity in liquid, that the Agent further intends that this action will lead to the death of the animate entity, and that this death in fact takes place. This verb, further, does not allow the addition of what would be a redundant satellite constituent such as *dead* or *to death*, as in *I drowned him *dead/*to death*.

Characterized in this way, therefore, the referent of a verb of the fourth pattern is understood as semantically complex, consisting of two qualitatively distinct subevents, one that is earlier than the other and intended to cause it. A verb so conceived can be termed an **attained-fulfillment verb**.

However, it is not clear that this putative attained-fulfillment verb can be systematically distinguished from the putative intrinsic-fulfillment

verb described in section 6.1.1, either by formal syntactic criteria or referentially. It may be that the putative intrinsic-fulfillment and attained-fulfillment verbs really comprise only a single referential type on which can be imposed either of two conceptual structures with different granularities.

For example, the referent of *kick*, earlier described as a unitary simplex action of the intrinsic-fulfillment type, could, under a finer-grained conceptualization, be alternatively construed as an attained-fulfillment actional complex in this way: An Agent intentionally executes the action of thrusting her foot forth; she further intends that this action lead to an impact of the foot with a specific object; and this impact takes place (see the comparable Mandarin analysis below). In the other direction, the referent of *drown* could alternatively be construed, under a more coarse-grained conceptualization, as a unitary Gestalt action, and hence be regarded as an intrinsic-fulfillment type of verb.

The intrinsic-fulfillment and the attained-fulfillment types of verbs appear to differ only as to a construal of their granularity. But they share a common factor: their scope of intention matches their extent of fulfillment. Accordingly, we introduce the single term **fulfilled verb** to refer to both types. Correlatively, the moot-fulfillment and the implied-fulfillment types of verbs differ as to their implicatedness of fulfillment. But what they have in common is the fact that their scope of intention overshoots their extent of fulfillment. Accordingly, we introduce the single term **conative verb** to refer to both types. As already seen, the fulfillment and the confirmation types of satellites that can respectively accompany the two verb types are both cases of the single notion of "realization."

7.2 Cline in Strength of Implicature

The implicature associated with the implied-fulfillment type of verb apparently behaves not as a discrete factor that is either present or absent, but as on a cline with different degrees of strength. This might correlate in part with different strengths of the Agent's intention for a further result. Thus, in (38), the first three verbs for some speakers show increasing degrees of implicature of the fulfillment of an intention to kill, while the fourth verb, included as a reference point, no longer implicates but asserts the killing.

(38) The stranger choked/stabbed/strangled/drowned him.

The verb *choke* appears to range from having no implicature of killing for some speakers—referring solely to the action of squeezing in on the

neck—to having a slight implicature of killing for other speakers. For the second group of speakers, the example with *choke* in (38) can be fairly felicitously followed by a denial constituent like ... *but he was still alive when the police arrived.*

The verb *stab* seems to implicate killing more strongly, to be felt to do so by more speakers, and to combine well with the same denial clause just cited.

For some speakers, *strangle* entails killing as fully as does *drown*, and if these speakers also sense no implicature of killing in either *choke* or *stab*, the whole series in (38) cannot serve for them as a demonstration of an implicational cline. However, other speakers do find in *strangle* a slight opening for the possibility of unrealized killing and can follow the sentence with the denial clause, as in *The stranger strangled him, but he was still alive when the police arrived.* This is especially the case if these speakers are asked to compare this sentence with one containing *drown* instead, which for them clearly precludes denial. Such speakers thus have in *strangle* an excellent example of very strong implicature that is nonetheless only an implicature and not determinate.

As represented in (39), the increasing degree of implicature of fulfillment across the four example verbs tends to correlate with the verbs' decreasing ability to take a satellite that confirms the fulfillment, perhaps because such confirmation would be increasingly redundant.

(39) The stranger choked/stabbed/?strangled/*drowned him to death.

7.3 Lexicalized Implicature

The implicature of the implied-fulfillment type of verb represents a semantic-syntactic phenomenon that, to be understood adequately, must be narrowed in on through a series of contrasts with related but distinct phenomena. We here take *wash* through this progression of contrasts. We first note that a part of the meaning of *wash* is the Agent's intention to make the Patient clean. This contrasts with the otherwise comparable meaning of *soak*, which lacks such a notion of further intention. Evidence for this is the fact that *soak* but not *wash* can occur felicitously in reference to a situation that precludes cleansing, as in (40).

(40) I soaked/??washed the shirt in dirty ink.

Second, in addition to an Agent's *intention* to make something clean, the use of *wash* as in (41a) implicates that the Patient *becomes* clean, even

without any explicit mention of cleanness. This behavior can be contrasted, say, with the use of *soak* as in (41b), whose use makes no such suggestion.

(41) a. I washed the shirt. Suggestion that Patient becomes clean as a result of the named process
b. I soaked the shirt. No such suggestion

Third, the notion of the Patient's becoming clean is *only* an implicature and not an essential part of the meaning of *wash*, since that notion can be denied, as in (42a). By contrast, in the meaning of the verb *clean* the notion of 'becoming clean' *is* an essential and hence nondeniable part, as seen in (42b) (where *clean* is not used in the sense of sending to the cleaners).

(42) a. I washed the shirt, but it came out dirty.
b. *I cleaned the shirt, but it came out dirty.

Fourth, the notion of 'becoming clean' that we find associated with *wash* cannot be present simply by virtue of being part of some larger metonymic frame. For example, it might be proposed that *wash* refers directly only to the action of immersion with agitation, and that this would act as a metonym for an expanded frame that further included getting clean, drying, and putting away. But there is evidence against such an interpretation. Thus, it is perfectly felicitous to say (43a), thus canceling the 'drying' component of the putative frame, but it is not felicitous to say (43b), which cancels the 'making clean' component, even though by the metonymic interpretation both these components are equally part of the frame.

(43) a. I washed the shirt and left it wet.
b. ??I washed the shirt and left it dirty.

Fifth, while pragmatic theory has a notion of "conventional implicature" that is associated with a lexical item—for example, the implicature of 'contrast' that is associated with the morpheme *but*—this kind of implicature is not defeasible (see Levinson 1983). By contrast, the implicature of 'becoming clean' that is associated with *wash* is indeed defeasible, as in *I washed the shirt, but it came out dirty*, so that this cannot be an instance of conventional implicature.

By zeroing in this way on the implicational phenomena exhibited by a word like *wash*, one must conclude that it is distinct from linguistic

phenomena previously described. It is a defeasible implicature associated with a lexical item, and thus presumably part of the lexical content. We propose the term **lexicalized implicature** for this linguistic phenomenon.

7.4 Typological Difference in the Expression of Realization

Languages that systematically express realization appear to divide into the same two typological categories we have seen on the basis of whether the realization is expressed in the main verb or in the satellite, and this assignment appears to align with that of the other framing categories. That is, satellite-framed languages that employ the satellite to express Path, temporal contour, changed state, and action correlation also extend that set to include realization, while verb-framed languages tend to employ the main verb to express the full set of five categories. Apparently, in the organization of conception for linguistic expression, realization is set into analogy with the other framing-event types in something like the following way: As the space domain has motion from elsewhere to a particular location, and as the state domain has change from the absence to the presence of a particular property, so the realization domain has transition from a potential stage to an actualized stage of realization, or from an assumed degree to a definite degree of realization. Reinforcing the analogy, realization can, as we saw, be interpreted as a specialized kind of state change, pertaining to ontological and epistemic states. This analogy can be captured by the conceptual structure assumed for a realization-type macro-event. This is schematized for fulfillment in (44a) and for confirmation in (44b).

(44) a. [Agent "$_{A}$MOVE" TO FULFILLMENT the INTENTION (to CAUSE X)] WITH-THE-SUBSTRATE-OF [Agent ACT + INTEND to CAUSE X THEREBY]

b. [Agent "$_{A}$MOVE" TO CONFIRMATION the IMPLICATURE of the FULFILLMENT of the INTENTION (to CAUSE X)] WITH-THE-SUBSTRATE-OF [Agent ACT + INTEND to CAUSE X THEREBY + IMPLICATURE of the FULFILLMENT of the INTENTION to CAUSE X]

Although the implied-fulfillment type of verb is minimal in English and many other familiar languages, some languages have an extensively developed system of lexicalized implicature and confirmation thereof. Two such languages are Mandarin and Tamil, representing the two typological categories of satellite-framed and verb-framed languages, respectively.

7.5 Mandarin: A Satellite-Framed Language Exhibiting Realization

Mandarin is a strongly satellite-framed language, regularly using its satellites to specify Path, aspect, state change, some action correlation, and much realization. Perhaps the majority of its agentive verbs are of either the moot-fulfillment or the implied-fulfillment types—requiring a satellite for their realization—with the latter apparently the more strongly represented. Some examples appear in (45) to (47).

(45) a. wǒ kāi le mén (dàn-shì mén méi kāi)
I open PERF door (but door not-PAST open)
b. wǒ kāi kāi le mén
I open(V) open(Sat) PERF door

(46) a. wǒ shā le tā (dàn-shì méi shā sǐ)
I kill PERF him (but not-PAST kill dead)
b. wǒ shā sǐ le tā
I kill dead PERF him

(47) a. wǒ tī le tā (dàn-shì méi tī zháo)
I kick PERF him (but not-PAST kick into-contact)
b. wǒ tī zháo le tā
I kick into-contact PERF him

The semantics of these examples can be explicated as follows. The meaning of (45a) without the parenthetical addition is that I acted on the door in order to open it, with the implicature that the door in fact left the jamb. However, the interpretation that I did not succeed in moving the door from the jamb remains a possibility, one that has greater or lesser prominence in the hearer's attention according to the context. For example, adult speakers report frequent suspicion of their children's implicatures: *Child:* "I opened the door"; *parent:* "Yes, but did you open it open?" With the parenthetical addition, (45a) suggests that I worked at getting the door open—for example, trying to get the key to turn, twisting the doorknob, shoving, and so on—but that the door still never left the jamb. With the confirmational satellite in place in (45b), however, the sentence is now an undeniable assertion that I succeeded in moving the door from the jamb.

Comparably, the first clause in (46a) means that I assaulted a person with the intention of killing him and with the deniable implicature that I succeeded. And the first clause of (47a) means that I kicked my foot out at

someone with the intention of connecting and with the deniable implicature that I did make the impact.

7.5.1 Comparison of English and Mandarin Verb Lexicalization Of course, the English verbs used to gloss the Mandarin verbs here, such as *open, kill, kick*, do not really correspond in meaning, hence they can be misleading. For example, a sentence gloss like "I killed him but he didn't die" is genuinely paradoxical in English but thus incorrectly represents the nonparadoxical Mandarin original. The original would be more closely rendered as "I assaulted him with intent to kill (and with what would otherwise have been the presumption of killing), but he didn't die." The difference is that the English verb is generally construed to refer to a simplex action of the intrinsic-fulfillment type. In particular, it is generally construed to specify the attainment of a certain final state, and to be neutral as to the particular actions that led up to that state. Accordingly, an English verb in the frame cited above leads to a paradox because the follow-up clause contradicts the verb's assertion that its particular final state was attained.

In Mandarin, by contrast, the referential terrain covered by a typical English verb is conceptually divided into two portions, as in the implied-fulfillment pattern. The two portions are as follows: the final outcome, conclusively confirmed by a satellite, and an action performed with the intention that it lead to that outcome, which is indicated by the verb.

Accordingly, the unitary referent of an English verb often has as a counterpart in Mandarin a two-part conceptualization expressed by a verb plus a satellite. We have already seen several examples of this correspondence. Thus, the counterpart of 'kick' is "'propel the foot so as to impact with' + 'into impact'." The counter part of 'kill' is "'assault so as to kill' + 'to death'." And the counterpart of 'open' is "'work on so as to open' + 'ajar'." In the same way, we can observe that the counterpart of 'cure' is "'treat so as to cure' + 'to health (lit.: good)'." The counterpart of 'break' (e.g., snap a stick) is "'squeeze circumpivotally in on so as to break' + 'broken'." And the counterpart of 'select' is "'deliberate over so as to choose among' + 'into choice'."

This contrast between English and Mandarin can be expanded to reveal a complementarity between the two languages. We have just seen that Mandarin verbs are characteristically lexicalized to express either moot fulfillment or implied fulfillment and require additional forms—typically

a satellite—to upgrade such a reference to that of attained fulfillment. But we can now note that English verbs work in virtually the opposite way. They are characteristically lexicalized to express attained fulfillment (recall that an intrinsic-fulfillment verb can also be conceptualized as one of attained fulfillment). And they can take additional forms to cut back on the original total reference so as to express moot fulfillment or implied fulfillment. The terms we have used for the typically Mandarin process of filling in the schema of a conative verb have been "fulfillment" and "confirmation"—or, in general, "realization." A term can now be introduced for the English process of cutting back on a verb's basic total reference. It is **resection**, adapted from its usual meaning, the surgical removal of part of an organ.

One linguistic form that performs resection in English is the progressive. Consider the fulfilled verb *open*, say, used in the context of opening a door, as in (48a). If conceptualized as an attained-fulfillment verb, *open* refers to an Agent's acting on the door—for example, by unlocking it, turning the doorknob, and pushing on it—with the intention that that action will lead to the door's moving away from the jamb so as to stand ajar, together with the indication that that intention was fulfilled. But if the verb is in construction with the progressive form *be -ing*, as in (48b), the overall reference is now only to the earlier portion of the verb's meaning—that is, to the Agent's action + goal. In (48b), we do not know whether or not I ultimately moved the door ajar. Thus, the progressive has resected the final portion of the meaning—fulfillment of the goal—and so has cut the verb's reference back to the moot-fulfillment type. (Note that replacing *door* with *wine bottle* in (48b) yields an example that works better for some speakers.)

(48) a. I opened the door.
b. I was opening the door when I heard a scream.

Another form that performs resection in English is the preposition *at*, sometimes in conjunction with a satellite. Thus, *kick* and *grasp* are normally fulfilled verbs and, specifically, can be conceptualized as attained-fulfillment verbs, as in (49a). Thus, as described earlier, the referent of *kick* can be conceptualized as an Agent's thrusting her foot out with the intention that that action lead to impact with another object, together with the fulfillment of that intention. But the addition of *at*, as in (49b), resects the fulfillment notion, leaving the referent reduced to the status of moot fulfillment.

(49) a. I kicked him. / I grasped the rope.
b. I kicked (out) at him. / I grasped at the rope.

In fact, English *kick* and Mandarin *tī* may form a nearly perfect complementary pair. Conative *tī* can be closely rendered in English as *kick at*—that is, by a fulfilled verb that has been resected. And fulfilled *kick* can be closely rendered in Mandarin by *tī zháo*, 'kick into-contact'—that is, by a conative verb that has been realized.

7.5.2 Further Semantic Verb-Satellite Relationships in Mandarin The semantics of the Mandarin verb-satellite system ranges more widely than in English. It includes relationships beyond those described in the incremental series in section 6.1. In particular, Mandarin conative verbs can enter into construction not only with satellites expressing fulfillment or confirmation, but also with ones that express 'underfulfillment', 'overfulfillment', 'antifulfillment', and 'other-event'. We sketch these further relationships here.

We first introduce two Mandarin implied-fulfillment verbs. These verbs refer, respectively, to the breaking (specifically, snapping in two) of a somewhat resistant linear object, like a stick, and to the bending of such an object. The first of these verbs, *zhé*, can be glossed as 'to squeeze circumpivotally in on [a linear object] with the intention of thereby breaking [it], with the implicature that [it] gets broken'. The second verb, *wān*, can be glossed in the same way, except with the notion of 'bending' replacing that of 'breaking'. Each of these verbs can take a confirmation satellite that confirms the implicature, as seen in (50a).

(50) a. wǒ bǎ gùn-zi zhé shé/ duàn le
I OBJ stick break broken/ snapped PERF
'I broke the stick broken/snapped.'
"I broke the stick."
b. wǒ bǎ gùn-zi wān wān le
I OBJ stick bend bent PERF
'I bent the stick bent.'
"I bent the stick."

But the verb for 'break' can alternatively take a state-change satellite that refers to a 'bent' state, as in (50b). One reading of such a sentence is that I had squeezed in on the stick with the intention of breaking it, but that I only got as far as bending it (perhaps because the stick was too

strong).[10] Note that in the usual course of executing the intention expressed by *zhé*, a bent state for the Patient is on the way to a broken state. Thus, the satellite marks an insufficient fulfillment of the full scope of intention. Accordingly, the satellite can be aptly termed an **under-fulfillment satellite**.

(51) wǒ bǎ gùn-zi zhé wān le
I OBJ stick break bent PERF
'I broke the stick bent.'
"I squeezed in on the stick to break it, but only managed to bend it."

In a complementary way, the verb for 'bend' can take a state-change satellite that refers to a 'broken' state, as in (52). This sentence means that I pressed in on a piece of bamboo bark with the intention of getting it into a bent shape but that I overshot the mark and wound up breaking it (perhaps because the bark was too brittle). Since the concept of 'breaking' is here on a continuum with that of 'bending' and conceived as lying beyond it, the satellite that marks this excess is aptly termed an **over-fulfillment satellite**.

(52) wǒ wañ shé le zhú pī
I bend broken PERF bamboo skin
'I bent the bamboo bark broken.'
"I pressed in on the bamboo bark to bend it but wound up breaking it."

Mandarin also allows a conative verb—that is, one expressing an action that is intended to lead to a particular result—to take a satellite that indicates that the reverse of the intended result is what actually occurs. Thus, the implied-fulfillment verb *xǐ* 'wash' has much the same meaning as English *wash*, namely, 'immerse and agitate with the goal of cleansing thereby'. But, as illustrated in (53), this verb can take the state-change satellite *zāng* 'dirty' to yield the following combined meaning: 'immerse and agitate [an object] with the intention of making [it] clean thereby, but actually making [it] dirtier than before'. A satellite for this semantic effect on the verb can be termed an **antifulfillment satellite**.

(53) wǒ bǎ chèn-yī xǐ zāng le
I OBJ shirt wash dirty PERF
'I washed the shirt dirty.'
"I washed the shirt (e.g., in the river), but it came out dirtier than before."

Note that Mandarin does not have a 'nonfulfillment' satellite construction indicating that an intended result was not reached. If it did, the previous example might have a second meaning: "I washed the shirt, but it came out just as dirty as when I started." This meaning is instead expressed by the type of construction in "I washed the shirt not clean," which explicitly represents the failure of fulfillment.

Note that in all the preceding new verb-satellite relations, the state expressed by the satellite fell somewhere along the conceptual axis leading to the verb's represented goal. Thus, the state expressed by the satellite was either before the starting point, at the starting point, almost at the goal, or past the goal. But a Mandarin satellite can also express a state that results from the action of a conative verb but that does not lie on the axis leading to the intended goal. For example, the verb for 'wash' could take a satellite with the meaning 'torn', as illustrated in (54). This sentence means that I performed the action of immersing and agitating or rubbing the shirt with the intention of getting it clean, but, unintendedly, this action led to the shirt's becoming torn. Perhaps such a satellite can simply be said to act as a further-event satellite, as described in section 6.1.1. But there the verb was an intrinsic-fulfillment verb and here it is an implied-fulfillment verb. This fact may entail enough of a different verb-satellite relationship to merit giving the satellite a new term: an **other-event satellite**.

(54) wǒ xī può le chèn-yī
I wash torn PERF shirt
'I washed the shirt torn.'
"I washed the shirt, and it got torn in the process."

7.6 Tamil: A Verb-Framed Language Exhibiting Realization

Tamil is a language that systematically expresses realization, but is the typological complement of Mandarin. Tamil is a verb-framed language using its finite-inflected verb for the expression of at least Path and aspect, as well as for the expression of realization. Unlike Mandarin, in which confirmation is indicated by any one of numerous satellites determined by the particular lexical verb present, Tamil uses a single specific verb to express confirmation per se (although apparently other verbs, mainly serving other functions, do also express confirmation). The examples in (55) illustrate.

(55) a. Nāṉ avaṉai koṉṟēṉ.
I he-ACC kill(FINITE)-PAST-1S
'I "killed" him.'

Āṉāl avaṉ cāka-villai.
but he die-NEG
'But he didn't die.'

b. Nāṉ avaṉai koṉru-(vi)ṭṭēṉ.
I he-ACC kill(NON-FINITE)-leave(FINITE)-PAST-1S
'I killed him.'
*Āṉāl avaṉ cāka-villai.
but he die-NEG
*'But he didn't die.'

8 EVIDENCE THAT THE FRAMING SATELLITE EXPRESSES THE MAIN EVENT

At the conceptual level, the framing event has been shown to be determinative in various respects within the macro-event that contains it—for example, by providing an overarching framework, or by anchoring, or by imposing structure. But, at the level of expression, it remains to demonstrate that what has been called the framing constituent—whether verb or satellite—in fact represents the framing event, as evidenced by its being determinative of a corresponding set of semantic and syntactic factors within the clause that contains it. Such a demonstration is presented in this section. Since the idea that the satellite should have this determinative role is more controversial, the demonstration concentrates on the satellite constituent. However, almost all the same arguments could apply to a framing verb as well.

8.1 Determining Complement Structure and the Semantic Character of Arguments

A framing satellite determines most or all of the complement structure of its clause as well as the semantic character of the arguments represented in these complements. This observation can be demonstrated with a series of paired examples in which the satellite is first absent, then present.

In the initial example, the addition of a framing satellite does not change the semantic character of the arguments, but shifts the clause from an intransitive to a transitive-type complement structure—as well as changing the aspectual properties. With no satellite present, *blow* is inherently an intransitive activity verb able to occur in construction with an oblique constituent with *on*, as in *I blew on the flame*. But, if added, the state-change satellite *out*, 'to extinction', requires a direct object complement for the clause, as in *I blew the flame out* (the conflated counterpart of

I extinguished the flame by blowing on it). Both constructions here can take an object of the same semantic character, like a flame. But the differences are that the construction that lacks a satellite is intransitive, is aspectually unbounded, and refers to a steady-state activity, while the construction with the satellite is transitive, is aspectually punctual, and refers to a transition into a particular state.

A second case is comparable except for also having semantically different objects. The verb *run* refers to an unbounded steady-state activity and is an intransitive form regularly taking an oblique object, as in *I ran along the street*. But the addition of the prefixal action-correlating satellite *out-*, 'into surpassment', changes the reference to a bounded accomplishment and now requires a direct object, as in *I outran him*. Semantically, further, the oblique object with *run* alone refers to a Path and names a Ground object, thus indicating the course followed. But the direct object with *out-* refers to an animate Patient that constitutes the coactive entity surpassed.

Our third example shows that the satellite can determine not only the intrinsic semantic character of an object but also an incidental property—in this case, that of 'definiteness'. Thus, the German verb *schreiben*, 'write', can take an oblique phrase indicating an Instrument or Medium that may be either definite or indefinite, as in *mit (der) Tinte schreiben*, 'write with (the) ink'. But, when added, the state-change satellite *ver-*, 'to exhaustion', now not only requires a direct object, but also requires that this direct object be definite. Thus, it is acceptable to say *die (ganze) Tinte verschreiben* 'exhaust (all) the ink in writing'. But it is unacceptable to say **Tinte verschreiben*, '*exhaust ink in writing'.

Finally, a framing satellite can determine the syntactic realization of not just one argument, as in the preceding examples, but of two arguments, and, further, can determine their relative standing in the complement hierarchy (as treated at length in chapter II-1). For example, in construction with *pour* as a Manner verb, each Path satellite that requires both a Figure argument and a Ground argument also determines the particular complements in which these arguments are expressed. Thus, the Path satellite *in*, in conjunction with the preposition *to*, calls for the Figure to be expressed as the direct object and the Ground as an oblique object, as in *I poured the water [Figure] into the glass [Ground]*. However, the Path satellite *full*, in conjunction with the preposition *of*, has the Ground as direct object and the Figure as oblique, as in *I poured the glass [Ground] full of water [Figure]*.

We have just seen that the framing satellite transfers certain features of the framing event into the argument and complement structure of the whole clause that represents the entire macro-event. But we must note that the framing satellite does not always determine all such features. Specifically, the co-event verb in some cases can transfer particular features of the co-event into the clause. Such transfers are determined by a complex of constraints pertaining to the particular language, construction, satellite, and verb, as well as the interactional effects among these. For one illustration, the English action-correlating satellite *along*, 'in accompaniment', permits the Patient in the co-event to be expressed as a direct object within the full clause, as in *I played the melody along with him.* But the action-correlating satellite *out-*, 'in surpassment', does not permit this: *I outplayed him *the melody.*

Comparably, of course, the framing satellite is typically not determinative of features of complement structure that arise outside the macro-event proper. For example, an external agentive causal chain, and not the framing event, is typically responsible for getting an Agent represented as the subject of the clause and the Figure as direct object.

8.2 Determining Overall Aspect

When appearing in its basic use without a framing satellite, a lexical verb typically exhibits a particular type of inherent aspect (*Aktionsart*). Regardless of this, a framing satellite occurring with that verb is the constituent that determines the aspect for the clausal reference as a whole. The inherent aspect of verbs found in a co-event function is generally of the unbounded steady-state type—either a stative or an activity—though other aspect types do occur. And the aspect type of a framing satellite is perhaps most often that of a bounded extent, but punctual and unbounded types also readily occur. Our demonstration of the aspectual determinativeness of the framing satellite will proceed through the different framing event domains from Motion through realization. The terms for aspect types and the tests with *in* and *for* phrases are described in chapter I-1. (Such aspect terminology as "bounded," "unbounded," "steady-state," and so on is explicated in that chapter and is used instead of terminology based on Vendler 1968.)

Consider first the Motion domain. The inherent aspect of the verb *float*, which can be observed in a clause representing a simplex event, is of the unbounded type, as in *The bottle floated on the water for an hour/*in an*

hour (before finally sinking). But when *float* functions as a co-event verb, it is the Path satellite's associated temporal contour that determines the aspect for the full macro-event referent of a clause. Thus, the bounded-extent aspect that can be associated with the Path satellite *across* is determinative in the sentence *The bottle floated across (the entire canal) in 10 minutes/*for 10 minutes*. The punctual aspect of *in* or *past* determines the overall aspect in *The bottle floated in (-to the cleft)/past (the rock) at exactly 3:00/*for an hour*. And the unbounded aspect of *along* appears overall in *The bottle floated along (the canal) for one hour/*in an hour*—where, now, the aspectual unboundedness is due to the satellite, not to the verb's inherent aspectual character.

In the domain of temporal contouring, a framing satellite by definition determines the aspect, as all the pertinent examples in section 3 illustrate. Here, we can illustrate the change in aspect when the satellite is added to the verb. Thus, the English verb *sigh* is inherently of punctual aspect, as shown by its compatibility with a punctual phrase—for example, *She sighed at exactly 3:00*. But the addition of the satellite complex *on and on*, of unbounded aspect, precludes an overall punctual aspect for the clause and permits only unboundedness: *She sighed on and on *at exactly 3:00/ for hours*.

Framing satellites that, as noted earlier, seem to be transitional between the domains of temporal contouring and of state change also exhibit aspectual determinativeness. Thus, the addition of *up* to indicate 'consumption' or 'loss of intactness' introduces bounded aspect where the verb alone has unbounded aspect. This is seen in *The log burned for hours/ ?in one hour* versus *The log burned up in one hour/*for hours*. And it is also seen in *The dog chewed on the shoe for hours/*in one hour* versus *The dog chewed the shoe up in one hour/*for hours*.

Examples fully within the domain of state change exhibit similar contrasts. Thus, *flicker* alone can have either unbounded or punctual aspect but not bounded-extent aspect, as seen in *The candle flickered for minutes/ at exactly midnight/*in 5 minutes*. However, the state-change satellite *out* 'to extinction' calls for either of the latter two aspect types, as seen in *The candle flickered out *for minutes/at exactly midnight/in 5 minutes*.

Comparably, transitive *boil* alone is of unbounded aspect, while the addition of an *up* signaling an effected object requires bounded-extent aspect, as seen in *I boiled some coffee for 10 minutes/*in 10 minutes* versus *I boiled up some coffee in 20 minutes/*for 10 minutes*.

In the domain of action correlating, the 'surpass' satellite *out-* can show the imposition of bounded-extent aspect on an unbounded-aspect verb. An example is *I sawed wood for hours/*in 15 minutes* as contrasted with *He had a head start in the wood-sawing contest, but I outsawed him in just 15 minutes.*

Finally, in the domain of realization, the transitive verb *hunt* alone refers to an unbounded activity, but the addition of the fulfillment satellite *down* introduces an overlay of bounded-extent aspect, as seen in *The police hunted the fugitive for days/*in one week* versus *The police hunted the fugitive down in one week/*for days.*

As with an earlier aviso, we must note that the framing satellite does not determine features of aspect that arise outside its scope. Thus, the state-change satellite *out*, as in *The candle blew out*, may fix the aspect as punctual or bounded within the scope of a single event of candle extinguishment. But it gives way before the usual superordinate aspect-influencing phenomena like those depending on plural subjects or extrinsic iterativity, as seen in *Candles blew out for hours.*

8.3 Determining the Auxiliary in German

In conjunction with its determination of both argument structure and aspect, the framing satellite in German also determines the auxiliary required to mark the past tense, *haben* 'have' or *sein* 'be'. For example, when unaccompanied by a framing satellite, the verb *laufen* 'run' is perhaps basically an intransitive verb with unbounded aspect and a directional complement that requires the *sein* auxiliary, as in (56a). But the addition of the state-change satellite *wund* 'to soreness' converts the sentence into a transitive construction with bounded-extent aspect that requires the *haben* auxiliary, as in (56b).

(56) a. Ich bin/*habe um die ganze Stadt gelaufen.
'I ran around the whole city.'

b. Ich habe/*bin die Füsse (*um die ganze Stadt) wundgelaufen.
'I ran my feet sore (*around the whole city).'
"I made my feet sore in running."

8.4 Determining the "Upshot"

The framing satellite, in representing the main event, expresses the "upshot" of the whole macro-event. That is (as already indicated in the introduction), it expresses the core of what is asserted in a declarative

construction, denied under negation, asked about in an interrogative construction, and demanded in an imperative. When occurring without a framing satellite, the main lexical verb is generally the constituent that focally conveys the upshot, but when a framing satellite is present, it takes over that function.

We illustrate this phenomenon for the upshot of 'negation'. Notice that a negative sentence with the verb *eat* unaccompanied by a framing satellite, as in (57a), indicates that no eating took place. But now consider the sentence in (57b), to which has been added the particle *up*—a state-change framing satellite with aspectual properties that means 'to exhaustion'. The sentence now indicates that eating *did* take place but that the Patient was not exhausted in the process. That is, the negative particle denies the referent of the satellite, in consonance with our claim that this referent is the main framing event of the whole situation, rather than denying the referent of the verb, which we would claim now only represents the co-event.

(57) a. I didn't eat the popcorn.
b. I didn't eat up the popcorn.

Comparably, a negative with transitive *hunt* alone, a verb of moot fulfillment, as in (58a), indicates that no search took place. But with the fulfillment satellite *down* also present, as in (58b), the search did take place, but there was no finding and no capture. That is, it is the fulfillment meaning of the framing satellite that is denied, here, not the activity referent of what is now only a co-event verb.

(58) a. The police didn't hunt the fugitive.
b. The police didn't hunt down the fugitive.

A certain type of departure from this pattern as to which constituent is affected by negation does exist. Consider this example. The negative with the verb *run* alone, as in *I didn't run when the alarm sounded*, indicates that no running took place—perhaps I walked or stood still. The additional presence of the Path satellite *out* to yield *I didn't run out when the alarm sounded*, as in the previous pattern, does involve the negation of that satellite's reference. Hence, there was no exiting. But in the previous pattern the positive occurrence of the verb's reference was presupposed. In the present pattern, though, such occurrence is moot. Here, I may or may not have run.

One account for this behavior is that the reading with the positive occurrence of running results in the expected way from the interpretation of *run out* in accordance with the previously discussed pattern. In this pattern, two events are combined: the framing event as upshot, represented by the satellite, and a presupposed co-event represented by the verb. But the reading with the nonoccurrence of running may result from an option available in English to treat a sequence like *run out* as representing a unitary concept. This unitary concept would here comprise an integrated action complex. Under this treatment, negation would deny the whole of the action complex. Such an account gains support in that it is in any case needed for collocations like *turn in* 'go to bed'. Thus, a sentence like *He didn't turn in* has no option to indicate that the reference of *in* is to be denied while that of *turn* is to be maintained. Rather, the denial is of the unitary referent of the lexical complex as a whole.

8.5 Licensing Generic (Dummy) Verbs

In the general pattern for a satellite-framed language, as we have seen, the framing satellite expresses the upshot of the sentence, while the co-event verb refers to some specific ancillary event. Accordingly, the speaker must ascertain within the full referential situation some suitable ancillary event for expression by a lexically specific verb, whether or not that event is especially pertinent in the communicative context. Given this consideration, one might expect a satellite-framed language to develop a system for maintaining the general pattern syntactically while semantically bypassing the expression of an unnecessarily specific ancillary event. And, indeed, serving this function, many such languages have developed a system of **generic** or "dummy" verbs. Such verbs can act, in effect, as syntactic "placeholders" while conveying relatively generic or neutral semantic content and thus permitting the sentence to procede to the satellite, whose semantic content is the relevant factor.

English exhibits a system of this kind, employing such generically functioning verbs as *go, put, do*, and *make*. To illustrate, the specific cause of a flame's extinction is indicated as 'blowing' in the nonagentive sentence *The candle blew out* and in the agentive sentence *I blew the candle out*. But the extinction can be expressed alone, without any indication of a specific cause, through the use of a state-change satellite together with a generic verb, as in nonagentive *The candle went* out, and agentive *I put* the candle out.

Comparably, the temporal contour of 'continuation' can be expressed by the framing satellite *on*. And this satellite can occur with a specific co-event verb, as in *They talked on*, which has the meaning 'They continued talking'. But replacing the specific verb with the generic *go* yields the sentence *They went on*, which now simply means 'They continued'. Similarly, the action correlation of 'surpassment' can be expressed by the framing satellite *out-*. This satellite can occur with a specific co-event verb, as in *I outcooked him*. But it can also occur with the generic verb *do*, as in *I outdid him*, to form a lexical complex that now simply means 'to surpass'. And, in a comparable way, we saw that the combination of satellite plus preposition *off with* represents the core schema for a traversal type of state change, one pertaining to theft and escape. This form can be used with a specific verb, as in *I ran off with the money*, that expresses the locomotive Manner of the escape. But the form can also be used with generic *make*, as in *I made off with the money*, which allows reference to the theft and escape without indication of Manner.

German largely uses *machen* and *gehen* as generic verbs with its extensive system of framing satellites. Examples are *fertigmachen* 'to finish', *weitermachen* 'to continue', *kaputtmachen* 'to destroy', *mitmachen* 'to accompany, join in with', *nachmachen* 'to imitate', and *vormachen* 'to demonstrate'. All these examples employ framing satellites that were discussed earlier in the chapter, though there in construction with specific co-event verbs.

Within a satellite-framed language, the construction consisting of a generic verb and a framing satellite is, in effect, the semantic equivalent of a single framing verb of the kind characteristic of verb-framed languages. In some cases, the analogy can develop still further. In such cases, when some specific co-event does need specification, it can be expressed not only by the verb, in the pattern characteristic of satellite-framed languages, but alternatively by an adjunct, in the pattern characteristic of verb-framed languages. For example, as just noted, the English action-correlating satellite *out-* can occur with the generic verb *do* to yield a resulting unitary meaning equivalent to 'surpass', as in *I outdid him*. The specification of a particular co-event can then be accomplished in the usual pattern through a specific verb substituted for the generic one, as in *I outcooked him*. Or it can be accomplished through the addition of an adjunct, as in *I outdid him at cooking*.

Comparably, the temporal contouring satellite *on*, 'into continuation', can occur with a lexically specific co-event verb, as in *They talked on*. But

it can also occur with the generic verb *go* to form a construction meaning 'to continue', and this construction can in turn take a specific co-event complement, as in *They went on talking.*

8.6 Licensing Pleonastic and Extended-Prototype Verbs

We have just seen that satellite-framed languages can use a generic verb to permit expression of the framing event by the satellite without having to express a particular co-event with the verb. But such languages can also use other verb types to accomplish this purpose. One case involves the pleonastic use of a framing verb with a meaning close to that of the framing satellite. Here, the framing event is referred to twice, once by the satellite and once by the verb. The verb is thus removed from service for expression of a co-event. And the combination of verb plus satellite, as in the generic case, can again be treated as a phrasal form of framing verb.

An English example of such a **pleonastic verb** is *search*, when used with the framing preposition *for* 'in search of', in the sequence *search for*. This latter combination of forms can be regarded as a phrasal framing verb equivalent to 'seek'. Such a phrasal form would then require a further adjunct to express the co-event, as in *I searched for nails on the board by feeling it*, by contrast with the original example in the text, *I felt for nails on the board.* Comparably, the 'as an addition' sense of the Yiddish satellite *tsu-* is matched somewhat compatibly in its use with the verb *gebn* 'to give', so that the combined form *tsugebn* can be glossed rather straightforwardly as 'to add'. The 'to exhaustion' sense of the German satellite *ver-* can be paired with the semantically comparable verb *brauchen* 'to use', so that the combination *verbrauchen* can now be glossed as 'to exhaust (use up)'.

A still further device that satellite-framed languages exhibit is to generalize the use of an originally specific co-event verb. The co-event expressed by this verb is usually the prototypical action undertaken to carry out the framing event expressed by the satellite. This arrangement is evident in an English case. The framing-event activity of 'seeking' can be represented by the framing preposition *for* 'in search of'. Seeking is prototypically conducted visually, hence the frequent combination of *for* with the specific co-event verb *look*, to yield the combination *look for.* But this phrasal combination has come to be used to refer to any kind of seeking, whether conducted visually or not. Thus, the sentence *I looked for nails on the board by feeling it* has just about the same meaning as *I felt for nails on the board.* Accordingly, *look* here can be termed an **extended prototype verb.**

9 CONCLUSION

Much material has been left out of this chapter that would extend the theoretical and cognitive framework and provide linguistic demonstration for more of the analysis. However, as it stands, I believe this chapter has shown that there is psychological reality to a certain fundamental conceptual entity with possibly universal linguistic expression. This entity can be conceptualized either as a complex event, consisting in turn of a minor event related to a major event or, alternatively, as a single fused event. The fact that this second alternative is readily expressed by core constructions in any language is evidence for our robust cognitive capacity to integrate certain large amounts and diverse kinds of conceptual material into a single monad. The body of this chapter has primarily been spent documenting the particular patterns and structuring of conceptual material that enter into the present specific process of monad formation. But as a whole, the chapter is intended as a contribution on conceptual integration and unification as a fundament of human thought.

Notes

1. This chapter is a much revised and expanded version of Talmy (1991).

With my thanks to them, the sources of the non-English forms cited are, for German, Elisabeth Kuhn, Luise Hathaway, and Wolfgang Wölck; for Mandarin, Jian-Sheng Guo; for Spanish, Jon Aske, Guillermina Nuñez, and Jaime Ramos; and for Tamil, Eric Pederson and Susan Herring. In addition, I am indebted to Dan Slobin, Melissa Bowerman, Eric Pederson, Jon Aske, David Wilkins, Patricia Fox, Ruth B. Shields, and Kean Kaufmann for valuable discussions on the material of this chapter.

2. This Spanish type was independently noticed by Jon Aske.

3. It remains to clarify why the syntactic pattern in Spanish for temporal contouring differs from that for Motion as to the constituent in which the co-event's Patient is expressed. For example, the Spanish for (7a) is *not*

(i) *Terminé la carta, escribiéndola.
"I finished the letter, writing it."

4. For some English speakers, the *away* satellite indicates total disappearance, so that for them, *The meat rotted away* suggests nothing more than a brown stain left on the table. For other speakers, however, the satellite's sense permits a residue.

5. In English, the satellite *out* can, like *up*, also represent the core schema INTO EXISTENCE and, hence, also mark the presence of an effected object:

(i) [I "$_{A}$MOVED" INTO EXISTENCE a message] WITH-THE-CAUSE-OF [I tapped on the radiator pipes]

I tapped out a message on the radiator pipes.
Contrast *tap* alone: ?I tapped a message on the radiator pipes.

Note that the 'into existence' state change does not have to be represented explicitly by a satellite in English, either for the nonagentive or for the agentive, as seen in (ii) and (iii). In such cases, the structure of the macro-event can be assumed to resemble that described in the text. By one interpretation, though, the core schema simply does not show up in a satellite. By another interpretation, the core schema conflates with the basic "MOVE" verb to constitute a "mid-level verb"—"FORM" for the nonagentive, and "MAKE" for the agentive—onto which the co-event then conflates. This is the interpretation adopted in chapter II-1.

(ii) [a hole "MOVED" INTO EXISTENCE in the table] WITH-THE-CAUSE-OF [a cigarette burned the table]
A hole burned in the table.

(iii) [I "$_{A}$MOVED" a sweater INTO EXISTENCE] WITH-THE-CAUSE-OF [I knitted (yarn)]
I knitted a sweater.

6. The sense of *together* addressed here is that of 'concert' as contrasted with 'accompaniment', not the sense of 'co-location' as contrasted with 'separation'.

7. In this instance, Spanish also has a construction resembling a satellite-framed construction:

(i) Toqué mejor/más que él.
'I-played better/more than he.'

8. Other moot-fulfillment verbs in English are *try* and *urge*, as in *I tried to open the window* and *I urged them to leave*, as well as *beckon* and *wave*, as in *I beckoned to them / I beckoned them toward me / I waved them away from the building*. However, these verbs do not take a fulfillment satellite.

9. This type of verbal pattern was first described by Ikegami (1985) with respect to Japanese and was called to my attention for Mandarin by Jian-Sheng Guo.

10. Beside its implied-fulfillment sense, the verb *zhé* apparently also has an intrinsic-fulfillment sense that consists solely of the action of squeezing in. Based on this sense, an alternative reading of (51) is simply "I bent the stick."