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Deconstructing and Reconstructing the Event Integration Model in a More Hierarchical Way

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Abstract

This paper reconstructs the internal and external event integration model with its hierarchy based on the deconstructing review of its research represented by the single clause with the verb complex consisting of the verb and the satellite. This hierarchical event integration model not only demonstrates how the conceptual primitives are internally integrated into the verb or into the satellite respectively, but also exhibits how the mapping and projecting slots are externally fused between the primitives in the verb and the satellite. The working process of the hierarchical event integration model can share lights with the study of lexicalization, constructionalization, and grammaticalization across different languages in the future.

Keywords

Event Integration, Deconstructing, Reconstructing, Hierarchy

1. Introduction

Event integration, as a basic cognitive processing model of the world conceptualized by human beings, is a hot topic discussed in cognitive science especially in cognitive linguistics from different theoretical perspectives (Talmy, 2000a, 2000b; Goldberg, 2006; Fauconnier & Turner, 1998, 2002; Langacker, 1987, 1991, 2005, 2008; Givón, 2001; Pustejovsky, 1991a, 1991b, 1995, 2011; Li, 2018, 2020; etc.). Since this paper only concentrates on the event integration model processed and represented by the single clause with verb complexity in the form of language, that is, the verb as well as its satellite, a variety of deconstructing approaches of event integration are reviewed in Section 2 with Talmy's macro-event theory, Fauconnier & Turner's conceptual blending theory, and Langacker's constructional integration theory as well. Based on the above theories, Section 3 reconstructs a general framework with hierarchies in term of the in-

ternal event integration processed in the verb or in the satellite and the external event integration fused between the verb and the satellite. Finally, Section 4 summarizes the conclusions of this paper.

2. Event Integration: A Deconstructing Review

With the purpose to reconstruct the event integration model, its various deconstructing perspectives are necessary to be reviewed. Section 2.1 concentrates on Talmy's macro-event theory, which provides hierarchical conceptual primitives and their conflations in the main verb of the verb complex. Section 2.2 focuses on Fauconnier & Turner's conceptual blending theory that deals with the mapping of similar conceptual primitives in each component of the verb complex. Section 2.3 probes into Langacker's constructional integration theory that can illustrate how unmapped conceptual primitives in each component of the verb complex can also be fused together.

2.1. Talmy: Macro-Event Theory

Talmy (2000b) proposes that a macro-event consists of a framing event and a co-event, and the latter bears a support relation to the former. The framing event is the event schema abstracted from different event types, including motion event, temporal contouring event, state change event, action correlation event and realization event. We will take the basic components in the framing event and the support relation of co-event as schematic conceptual primitives, and regard the corresponding of these schematic conceptual primitives in different event types as instantiated conceptual primitives. These schematic conceptual primitives in the framing event are represented in Figure 1.

In Figure 1, four schematic conceptual primitives are subsumed in the framing event (Talmy, 2000b: p. 218). 1) The first conceptual primitive is the **figural entity**, which is currently focused on. 2) The second one is the **ground entity**, which functions as the background or the reference point in contrast with the figural entity. 3) The third is called the **activation process** that contributes to the factor of dynamism to the whole event. It contains, by and large, only two values—transition and fixity. For instance, in a motion event, these two values are conceived as "motion" and "stationariness", and they can also be interpreted as "change" and "stasis" in a state change event. 4) Finally, the last one is the **association function**, which sets a relationship between the figural entity and the

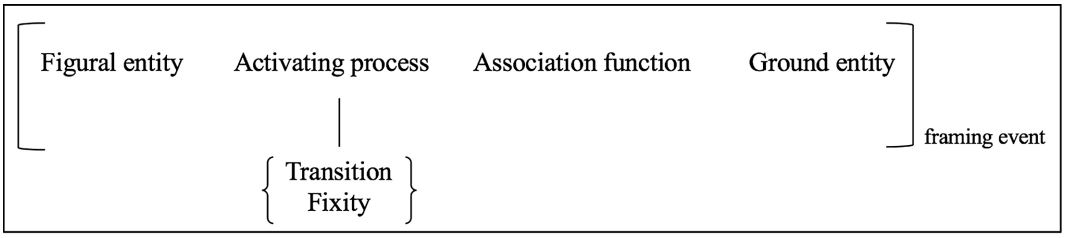

Figure 1. Talmy (2000b)'s schematic conceptual primitives in the framing event.

ground entity. These four schematic conceptual primitives can be instantiated and reified in terms of different event types.

Firstly, in a motion event (Talmy, 2000b: pp. 226-227), the figural entity is a physical object and plays the role of Figure in relation to the whole event. The figural entity can be agentive or nonagentive. Its ground entity is a second physical object functioning as a reference point, playing the role of Ground in the event. The activating process is a transition between Figure and Ground, and there are two modes of transition, one is *motion* and the other is *stationariness*. The association function is related to the activating process, which contains the path for the motion event or the site occupied by the Figure.

Secondly, a temporal contouring event (Talmy, 2000b: pp. 230-232) can be approached from two ways to illustrate: 1) In one way, the figural entity designates the degree of manifestation of an event, concerning how much the event is manifested—fully, none or to some degree; the ground entity is a fixed situation with particular points or periods of time. Some related instances include "starting", "stopping", "continuing", "remaining unmanifested", "iterating", "intensifying", and "tapering off". 2) In another way, the figural entity is the affected object, and the ground entity is the temporal contour itself. The activating process is realized by this affected object's progression through time (also represented as MOVE[1]), and the association function indicates that the affected object has a direction with the temporal contour, e.g. "taking it on" or "letting it go".

Thirdly, in a state change event, the figural entity is the object or situation associated with a property, and the ground entity constitutes its state or property (Talmy, 2000b: pp. 237-253; Jia & Li, 2015: p. 24). The activating process is normally understood as the "change" (including state change and state stasis), and the association function is termed as the "transition type" (Talmy, 2000b: p. 238; Jia & Li, 2015: p. 24).

Fourthly, the action correlating event (Talmy, 2000b: pp. 254-255) can be seen as an analogy to the motion event. The figural entity is an Agent's action, while the ground entity is an Agency's[2] similar or related action. Similar to the "Path" in a motion event, the association function can be conceptualized as "In-Correlation-With", and the activating process can be, in specific, termed as "Act". This event includes "concert", "accompaniment", "imitation", "surpassment", "demonstration", from which the "interaction" between Agent and Agency is the specific property of the action correlating event.

Finally, in a realization event, the figural entity can be the patient or agent depending on the context and the ground entity is the process of acting (Talmy 2000b: pp. 261-271; Jia & Li, 2015). Corresponding to the state change event, the activating process can be "fulfillment" or "confirmation", and the association function is still the "transition type". In this event type, the scope of the Agent's intention ex-

[1]Talmy (2000b: p. 231) considers temporal contouring event "as part of a broader cognitive analogy by which it is conceptualized as paralleling spatial structuring".

[2]In an action correlating event, Talmy (2000b: p. 254) uses "Agent" for the first entity and takes "Agency" for the second entity.

tends at least over the performance of this action (Talmy, 2000b: p. 262).

Apart from the schematic and instantiated conceptual primitives of the framing event, the schematic conceptual primitive of co-event functions as a "support relation" with regard to the framing event, and these specific relations subsume "precursion", "enablement", "cause", "manner", "concomitance", "purpose", and "constitutedness", in which "cause" and "manner" are the most frequent support relations (Talmy, 2000b: p. 220). In addition, the support relation of co-event in the temporal contouring event and the action correlating event bears a "constitutive" relation to the framing event (Talmy, 2000b: p. 232, 255).

To recap, the schematic and instantiated conceptual primitives of macro-event in different event types can be preliminarily summarized in **Table 1**.

In **Table 1**, the macro-event or the process of event integration, by and large, consists of five schematic conceptual primitives, including Figural Entity, Ground Entity, Activating Process, Association Function in the framing event and Support Relation in the co-event. These schematic conceptual primitives can be taken as variables, and their corresponding instantiations can be considered as values in different macro-event types. **Table 2** summarized these variables and values in the process of the event encoding.

In **Table 2**, the variables (i.e. the schematic conceptual primitives) and their values (i.e. the instantiated conceptual primitives) are elucidated as the following: 1) the Figural Entity has the variables that can be either agentive or non-agentive, animate or inanimate; 2) the variables in the Ground Entity can be indicated by the reference point of space in the motion event, the temporal contour of time in the temporal contouring event, the property in the state change event, the agent's action in the action correlating event, and the process of acting in the realization event; 3) the Activating Process falls into two values, that is,

Table 1. The conceptual primitives in Talmy's (2000b) macro-event types.

Conceptual Primitives / Macro-event Types	Framing Event				Co-Event
	Figural Entity	**Ground Entity**	**Activating Process**	**Association Function**	**Support Relation**
Motion Event	a physical object	a second physical object as a reference point in space	motion or stationariness	path or site	Precursion; Enablement; Cause; Manner; Subsequence; Constitutedness
Temporal Contouring Event	the degree of event manifestation or the affected object	a fixed time point or a time stretch	analogical motion or stationariness	direction	
State Change Event	the object or situation	the property of the object	change or stasis	transition type	
Action Correlating Event	Agent's action	Agency's action	act	correlation	
Realization Event	the patient or agent	the process of acting	fulfillment or confirmation	transition type	

Table 2. The variables and their values in the event coding.

Variables	Values
Figural Entity	[±agentive]; [±animate]
Ground Entity	[reference point of space]; [temporal contour of time]; [property]; [agent's action]; [process of acting]
Activating Process	[motion], [stationariness], [change], [stasis], [act], [fulfillment], [confirmation]
Association Function	[path], [site], [direction (of time)], [correlation], [transition type]
Support Relation	[precursion]; [enablement]; [cause]; [manner]; [subsequence]; [constitutedness]
Macro-event Types/ Macro-event types	[motion event]; [temporal contouring event]; [state change event]; [action correlating event]; [realization event]

transition or fixity. However, their concrete variables can be motion or stationariness in the motion event or the temporal contouring event, change or stasis in the state change event, act in the action correlating event, fulfillment or confirmation in the realization event; 4) the Association Function is realized by path or site in the motion event, direction of time in the temporal contouring event, correlation in the action correlating event and transition type both in the state change event and the realization event. 5) the variable of support relation contains the values of "precursion", "enablement", "cause", "manner", "concomitance", "purpose", and "constitutedness". 6) Moreover, the macro-event type or the macro-event type can also be taken as a valuable, in which the values are characterized as "motion event", "temporal contouring event", "state change event", "action correlating event", or "realization event".

Since the schematic and their instantiated conceptual primitives are identified in the hierarchy of variables and their values, and the conceptual primitives can be interpreted in terms of subevents of a macro-event, Talmy (2000b) explicitly elucidates that the event integration mainly occurs in the main verb of a verb complex, which integrates the subevents of Activating Process and Support Relation. However, Talmy has only discussed the event integration occurring either in the main verb or in the satellite, and Section 2.2 and Section 2.3 will introduce some related theories dealing with the event integration between the main verb and the satellite.

2.2. Fauconnier & Turner: Conceptual Blending Theory

Fauconnier & Turner (1998, 2002) claims that conceptual blending occurs when different concepts are fused together, and it works by means of four kinds of spaces—two input mental spaces, a generic space, and a blend. The working process of conceptual blending is displayed in **Figure 2** (Fauconnier & Turner, 2002: p. 46).

In **Figure 2**, the selected mappings between the two mental spaces are projected by some conceptual elements (shown by the spots in the circles) and they

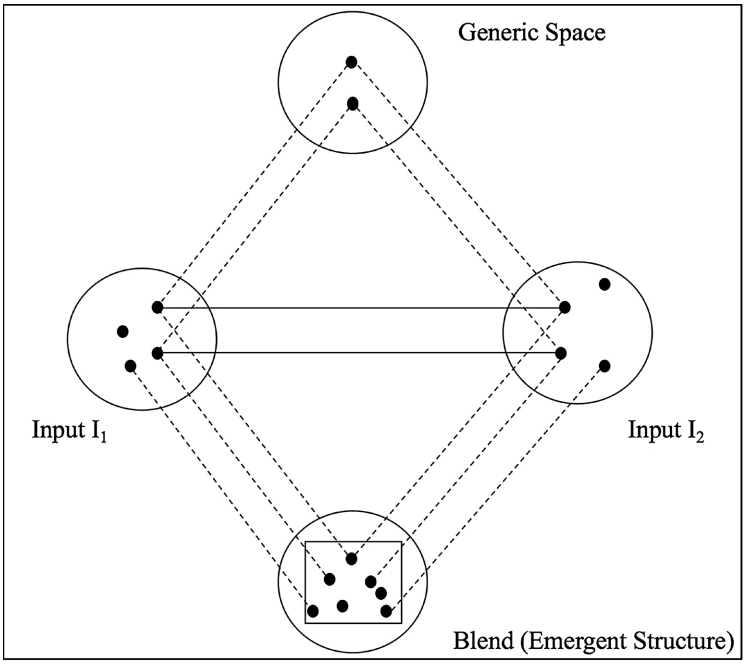

Figure 2. The basic diagram of the conceptual blending (Fauconnier & Turner, 2002).

are cross-space mapped (exhibited by the dotted lines). The unique and irreplaceable blend space consists of four progressive steps in mental representations.

1) Cross-domain Mapping. Every compounded conception can be partially mapped between the two separated mental spaces—Input I_1 and Input I_2—with their shared common similarities. As Fauconnier (1997: p. 1) claims, "mappings between domains are at the heart of the unique human cognitive faculty of producing, transferring, and processing meaning". For instance, "Peter is a pig". Since both Peter and pig are fat or lazy, they share some similarities with each other in common. It is the shared common similarities that make this sentence acceptable and grammatical.

2) Generic Space. A genetic mental space plays a decisive role in choosing the common-shared features from each input mental space.

[1] Skiing Waiters (Fauconnier & Turner, 2002: p. 47)

For instance, the shared common counterparts in [1] are captured in understanding the compounding phrase of "skiing waiters". Some prominent features of "waiters" are that they can listen to suggestions of customers, carry trays in their hand, move to different customers, receive payments, and so on. Meanwhile, "skitters" can move from one place to another space, carry ski poles in their hands, avoid obstacles, wear a pair of black glasses and so on. When "waiters" are interpreted by "skitters" with their "skiing", the genetic space of "skiing waiter" will choose some similarities between "waiters" and "skitters", such as their moving from one place to another place and something carried in their hands.

3) Blending. The blended space means a new space in which the structure from two input mental spaces is projected (ibid: 47). Still, in example [1], the

blending concept not only recruits the corresponding counterparts such as moving to somewhere and holding something in their hands but also contains some more specific features in the blend per se. That is, we can imagine a skitter carrying a tray or a waiter holding a pair of ski poles when we attempt to understand the compounding phrase of "Skiing Waiter".

4) Emergent Structure. The emergent structure is the most important step in the basic process of blending, for it is the emergent structure that yields the additional meaning that does not exist in the separate inputs (represented by the square inside the blend).

In the above four steps of conceptual blending, the emergent structure is often taken as the creative structure, thus, it is often used to elucidate the cognitive study of languages (Lakoff, 1987; Shen, 2006). The emergent structure is generated in three ways: through "composition" of projections from the inputs, through "completion" based on independently recruited frames and scenarios, and through "elaboration" that runs the blend (Fauconnier & Turner, 2002: p. 48). 1) In the first way of "composition", blending can comprise elements of input spaces to make their relations available, such as the common similarities that are projected in the blend. Fauconnier & Turner (2002: p. 48) take this kind of projection as "fusion". 2) In the second process of "completion", the background knowledge and the additional structure are brought into the blend unconsciously. In **Figure 3**, the completion is represented by the black spots in which we cannot find their counterparts from two mental inputs. In the example "the baby cried along after its mother" (Talmy, 2000b: p. 46), when "cry" and "along" are integrated as a blend, the blend not only recruits the background meaning of "cry" and "along", but also it automatically and effectively completes the additional meaning of "motion" to "cry" and "along". In this sense, as mentioned in Chapter 2, Goldberg (1995, 2006) does not further discuss how the meaning of construction is formed, but Fauconnier & Turner's "completion" in the blend does reveal the process of the construction's formation. 3) In the last step of "elaboration", it functions as running the blend imaginatively according to the

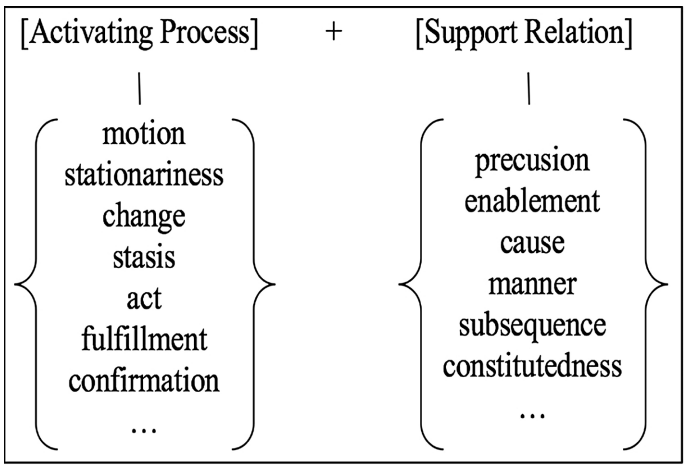

Figure 3. The conceptual conflation in the main verb.

principles that are established in the blend, and some of the principles are realized by the process of "completion" (Fauconnier & Turner, 2002: p. 48).

Fauconnier & Turner (2002: p. 49) regard the conceptual blending as "a basic instrument for achieving event integration", but their conceptual blending theory in **Figure 3** does not further explain how the unmapped conceptual components are projected in the blend. In addition, Fauconnier & Turner also neglect the degrees and hierarchies in the conceptual integration between the input mental spaces (Zhang & Wang, 2003). Zhang & Wang (2003: p. 47) propose an additional hypothesis on the hierarchies of conceptual blending:

If the blending is based on extracting the partial basic semantic elements of two concepts, then it is called a lower level conceptual blending; if the mapping between the two concepts is based on their partial metaphorical or metonymic meaning, then it is judged as a higher level conceptual blending (Zhang & Wang 2003: p. 47).

[2] John kicked the door.

[3] John kicked the bucket.

Based on Zhang & Wang (2003)'s hypothesis, the normal expressions, such as "John kicked the ball" in example [2], are taken as the lower level conceptual blending, for "kick" only assumes the basic meaning of the word as an action, and the "door" also means what it is in its original sense. Alternatively, some conventionalized expressions are said to be at a higher level of conceptual blending, such as the English idiom of example [3]. The relevant story in example [3] is that when someone is standing on a bucket and trying to hang himself/herself from a beam, he or she will kick the bucket away in order to kill himself/herself. The motion of "kick" and the "bucket" is the metonymic and prominent parts of the whole suicide event, thus the degree of conceptual blending between "kick" and "bucket" is higher than that between "kick" and "door".

[4] John kicked the sky.

The degree of conceptual blending varies with whether the words in question designate basic meanings, metaphorical meanings or metonymic meanings. However, almost all the examples they choose are conventionalized examples, such as "吃大锅饭 (people eat from the same big pot, which means they each get an equal share regardless of how much work they have done individually)", "喝西北风 (drink the northwest wind, which means having nothing to eat)". These examples have finished the process of grammaticalization and they have a higher degree of conceptual integration as the entrenchments or convention, but the metaphorical or metonymic meaning of the input mental spaces cannot fully explain the novel expressions that have not finished the process of grammaticalization. If a novel expression is coined as in example [4] "John kicked the sky", which means someone is very braggart. Supposing "kick" and "sky" are the metonymic parts of braggart event, then "kick the sky" can also be considered as a higher level conceptual blending, but it is not an entrenched or conventionalized expression. Therefore, the conceptual blending hierarchy hypothesis cannot

cover all the examples involved in the dynamic process of grammaticalization.

In a nutshell, Fauconnier & Turner's conceptual blending theory is based on the shared common similarities and the emergent structure arises in the blend of two input mental spaces or events. However, we find that the shared common similarities are not the only connections between input mental spaces or events. Langacker's constructional integration theory in Section 3.3 can help to illustrate how the conceptual primitives unshared in the two mental spaces or concepts are connected together in terms of event integration. Moreover, the constructional integration theory can also reveal the degree of event integration between two input mental spaces or events.

2.3. Langacker: Constructional Integration Theory

In Langacker's constructional integration theory, the term "grammatical construction" is applied to represent a more elaborate expression in which two or more symbolic structures are combined (Langacker, 1987: p. 277). The grammatical construction subsumes the component structures[3], their mode of integration, and the resulting composite structure (ibid: 277). For example, the composite structure of "near the door" is formed by the integration of its composite structures, as sketched in **Figure 4**.

The composite structure such as "near the door" in **Figure 4** is taken as a "minimal construction[4]" (Langacker, 2005: p. 169; Langacker, 2007: p. 159), and it consists of two component structures—the preposition "near" and the noun phrase "the door". The two component structures are integrated as a composite structure—"near the door". The dotted lines indicate that these structures are connected by correspondences, termed as "conceptual overlap" in which each corresponding entity is projected to the same entity of the composite structure (Langacker, 2005: p. 172). In addition, the "conceptual overlap" can provide the basis of the integration between the two components of the component structure (Langacker, 2008: p. 183). In **Figure 5**, "near" not only indicates a trajectory (tr) in relation with "the door", but also provides a schematic landmark (lm)—marked by the shaded circle. The shaded circle provided by "near" is called an elaboration-site[5] (abbreviated as "e-site"), which in fact refers to the "slot" that is to be filled or projected by the correspondence between component structures. In the case of "near the door", "the door" fills in the slot and overlaps with the schematic landmark (lm) of "near". Different from Fauconnier & Turner's

[3]In Langacker's (1987, 2006, 2008) view, component structure refers to the components in the sentence, e.g., both "crawled" and "through a tunnel" are the component structures in the whole sentence, and when combined together, such as "crawled through a tunnel" is considered as a composite structure.

[4]Langacker (2005: p. 168) uses the term "construction" in a broader sense than that in Construction Grammar. It can be any symbolically complex expression—fixed or novel, regular or irregular.

[5]In a typical valence relation with components X and Y, there are some substructures of X—referred to x_e—that corresponds to the profile of Y, and the x_e bears a relation with the schematic element of Y. This schematic element filled or elaborated by another component in X is called an elaboration site, or e-site for short (Langacker, 1987: p. 304; Langacker, 2008: p. 198). We take this e-site as the slot in this study.

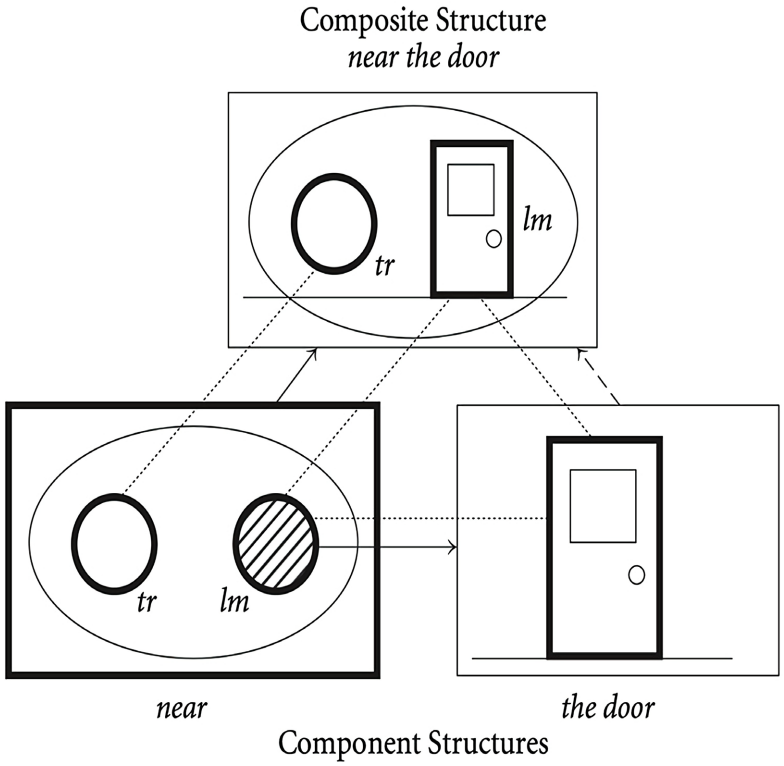

Figure 4. Component structures in the composite structure of "near the door" (Langacker, 2005, 2007).

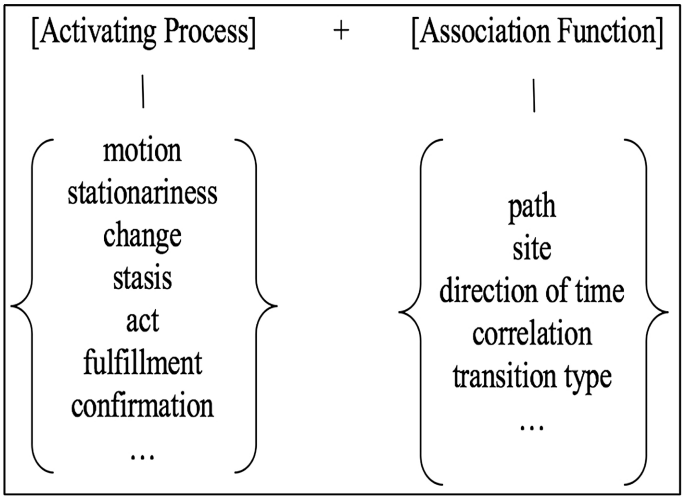

Figure 5. The conceptual conflation in the satellite.

conceptual mapping which focuses on shared common similarities between two input mental spaces or events, Langakcer's conceptual overlap of a composite structure indicates that the unmapped conceptual primitive of one component structure can fill or project in the slot that is provided by another component structure. Moreover, Langacker (2005: p. 169) claims that the component structures categorize the composite structure, and the arrows in **Figure 5** represent the relationship of categorization. That's why a solid arrow is employed here to

categorize the relationship between "near" and "near the door", indicating an elaboration or an instantiation between them. In contrast, the categorizing relationship between "the door" and "near the door" is projected by a dashed arrow that means an extension between them, for "the door" profiles a thing and "near the door" profiles a relationship.

As mentioned in Section 3.2, Fauconnier & Turner have not further discussed the degrees of event integration, but Langacker (2005: p. 172) proposes a hypothesis of the conceptual integration degree with regard to the conceptual overlap.

A construction exhibits tighter conceptual integration between component structures, a greater degree of conceptual overlap relative to their full semantic values. It is relevant to the historical process of grammaticalization (Langacker, 2005: p. 172).

The degree in the conceptual overlap between component structures is one typical aspect of grammaticization. For example, the derivational morpheme like "-er" is an extreme case of "full conceptual overlap", for the schematic slot of one component structure, such as "work", is exhaustive of another component structure "-er". In other words, "work" and "-er" are fully overlapped.

In the above examples, "near the door" and "worker" are the cases of prepositional phrase or noun phrase. In fact, the constructional integration theory can also be applied in the verb complex, such as "crawl through" in example [5].

[5] The little girl crawled through a tunnel. Langacker (1987: p. 305)

In example [5], Langacker (1987: p. 305) claims that the verb "crawl" can provide a slot of "path" for the figural entity of "the little girl", but the slot of "path" is filled (or elaborated) by the specific path of "through". In short, "crawl" and "through" are overlapped rather than isolated or discrete. The former provides the slot of "path", and the latter fills in the slot. However, since "crawl" profiles a process of an action, and "through" profiles a relation, both of them are dependent structures[6]. We claim that "through" can also provide a slot, which can be filled (or elaborated) by the motion and the manner of "crawl".

Different from Goldberg's construction grammar, Langacker (2005) only partially agrees with her in her claims about some caused-motion constructions. For instance, "sneeze" in example [6] is an intransitive verb, but it has been used as a transitive verb, and it is the caused-motion construction that endows "sneeze" this causative sense so as to make this expression grammatically. However, Langacker (2005) contends that example [7] is different from example [6].

[6] He sneezed the napkin off the table. (Goldberg, 1995: p. 9)

[7] Mia kicked the ball into the stands. (Langacker, 2005: p. 162)

In example [7], Goldberg (1995: p. 11) claims that the three arguments of "kick"—"Mia", "the ball", and "into the stands"—are directly associated with the

[6]A dependent structure refers to the semantic or phonological structure that presupposes another for its manifestation. Phonologically, consonants are dependent on vowels. Relations are conceptually dependent, since to conceive of a relation one must conceive (at least schematically) of the related entities (Langacker, 1987: p. 488). In contrast, the nominal phrase such as "the door" is an autonomous structure that means the semantic or phonological structure that "exists on its own", not presupposing another structure for its manifestation (Langacker, 1987: p. 486).

ditransitive construction, and the verbal meaning of "kick" is integrated into the ditransitive constructional meaning of "kick something into somewhere". In other words, the total meaning of "kick" is derived from the ditransitive construction and need not be ascribed to the verb "kick" per se. Nevertheless, Langacker (2005: p. 162) argues that "kick" in example [7] is just an "entrenched and conventional" expressions in our daily life, for it is a usage-based event that integrates "kick" and "into" as a unitary linguistic unit. On this account, like "crawl" in example [5], "kick" also implies that its trajector follows a special path when someone is kicking something. Thus, "kick" can provide a slot of "path" to be filled or elaborated by the concrete path specification of "into the stands". However, we insist that the prepositional phrase of "into the stands", as a dependent structure, can also provide a slot for the action performed and elaborated by the verb "kick". Goldberg (1995) takes "sneeze off" in example [6] as a caused-motion construction and considers "kick into" in example [7] as a ditransitive construction, but where are the caused-motion construction and the ditransitive construction derived from? Goldberg (1995: p. 11) criticizes the n-argument sense of verbs in generative syntax as a circularity. However, her constructional explanation of various structures is also a circularity, for her numerous construction are just the semantic abstraction of different n-argument structures. We infer that the difference between "sneeze off" and "kick into" lies in the degrees of their conceptual integration, which is also the difference between the novel expression and conventionalized expression. In this sense, when "sneeze" and "off" are integrated together, we prefer to use the "completion" principle of Fauconnier & Turner's conceptual blending theory to imagine and elaborate that someone "sneezes" on something and causes it to move, in which the air exhaled by the sneezing can yield a potential path of a motion event.

All in all, Talmy's (2000b) conceptual primitives are not only conflated within the main verb or the satellite in isolation, but some of conceptual primitives each component of the verb complex can share some similarities and can be fused together (Fauconnier & Turner, 1998, 2002). Moreover, some unshared conceptual primitives can be overlapped by providing and filling the slot from each component of the verb complex (Langacker, 1987, 2005, 2008). Based on the above theories, a theoretical framework in Section 3 will be established, and an integrated model in terms of the internal and external event integration will be discussed.

3. Reconstructing the Event Integration Model with Hierarchies

As proposed above, event integration not only assumes an internal event integration where the conceptual primitives (i.e. subevents) are conflated either in the main verb or in the satellite of a verb complex, but also involves an external event integration where conceptual primitives (i.e. subevents) are fused between the main verb and the satellite. In this section, we will introduce these different

event integrations, and combine them together to establish an internal and external event integration model.

3.1. The Internal Event Integration

In the internal event integration, two or more conceptual primitives (i.e. subevents) are conflated in the main verb or the satellite of a verb complex. As mentioned in Section 2.1, Talmy mainly discusses that the main verb can integrate the schematic conceptual primitives of "activating process" and "support relation". However, the "activating process" not only covers the main verb but also the satellite. Therefore, we claim that the satellite per se can also conflate the schematic conceptual primitives of "association function" and "activating process", which is also taken as the recombined process of conceptual primitives (Yu & Li, 2018: p. 75; Yu, 2021). In other words, the instantiated conceptual primitives of "support relation" or "association function" can be combined or recombined together with the instantiated conceptual primitives of "activating process" either in the main verb or in the satellite. **Figure 3** and **Figure 5** can reveal the conceptual conflation in the main verb or the satellite in general.

As **Figure 4** and **Figure 5** indicate, we find that the main verb or the satellite can integrate the instantiated conceptual primitives between [Activating Process] and those of [Support Relation], such as "motion + cause", or alternatively, between the subevents of [Activating Process] and [Association Function], such as "motion+path" (Yu & Li, 2018). On this account, example [8] can be analyzed by Talmy's macro-event theory in [8]a and be re-analyzed within our framework of the internal event integration in [8]b.

[8] The bottle floated into the cave.

a. = [the bottle$_{[Figure]}$ MOVED into$_{[Path]}$ the cave$_{[Ground]}$] WITH-THE-MANNER-OF [the ball floated] (Talmy, 2000b: p. 30)

b. = the bottle$_{[Figure]}$ + (MOVED$_{[Motion]}$ + floated$_{[Manner]}$) + (MOVED$_{[Motion]}$ + into$_{[Path]}$) the cave$_{[Ground]}$

Example [8] is a motion event, in which the internal event integration nor only occurs in the main verb "float", but also exists in the satellite "into". To be specific, in 8[a], Talmy (2000b) illustrates that "the bottle" is the "figural entity", "the cave" designates the "ground entity", "into" represents the "path", and the main verb "float" conflates the "motion" in [Activating Process] and the "manner" in [Support Relation]. Since "into" only contains the conceptual primitive of "path", Talmy does not make out an internal event integration in the satellite "into". As a prepositional phrase, "into" is subordinate to the verb "float", and it cannot be developed as "path" without "motion". We cannot deny the influence of "motion" on the satellite "into", even though the "motion" in the main verb "float" is stronger than that in the satellite "into". Therefore, we believe that the satellite "into" also involves an internal event integration that conflates the "motion" in [Activating Process] and the "path" in [Association Function]. That is, in 8[b], the internal event integration not only occurs in the main verb "float",

but also in the satellite "into".

To recap, the internal event integration is derived from Talmy's macro-event theory and its hierarchies of conceptual primitives, thus, the inner organization of different conceptual primitives is unfolded in terms of the internal event integration. Section 3.2 will reveal the outer relationship between the main verb and the satellite in terms of the external event integration.

3.2. The External Event Integration

The internal event integration in Section 3.4.1 indicates how conceptual primitives are conflated either in the main verb or in the satellite. In example [8], we find "motion" is not only conflated in the main verb "float" but also exists in the satellite "into". Thus, based on Fauconnier & Turner's (1998, 2002) conceptual blending theory, the conceptual primitive of "motion" is the shared common element between the main verb "float" and the satellite "into". In other words, the shared conceptual primitive of "motion" is mapped or linked as a fundamental connection between "float" and "into". Alternatively, according to Langacker's (1987, 2005, 2008) constructional integration theory, we can take the verb complex "float into" as a composite structure, in which "float" and "into" are the component structures in the composite structure of "float into". The verb "float" per se can provide a slot of "path" that is filled or elaborated by "into", and "into" can also offer a slot of "manner" performed by the verb "float". The mapping and overlapping between the conceptual primitives are summarized in **Figure 6**.

In **Figure 6**, we suppose that the main verb and the satellite are two input mental spaces or component structures represented by the two ellipses. Each component structure consists of different conceptual primitives as shown by the solid triangle, circle, and square. A slot of one conceptual primitive can be represented by the hatched circle or the hatched square in each component structure. If the two component structures share the similar conceptual primitive in common, such as the solid triangle, they can be mapped or linked to each other by the solid line. If two component structures can provide each other with slots represented by the hatched circle and the hatched square, the dotted lines

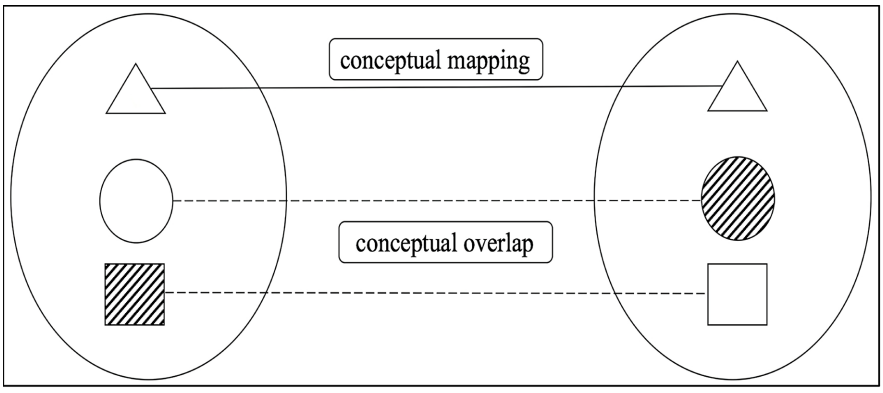

Figure 6. The conceptual mapping and overlap in the external event integration.

will overlap the slots together with their corresponded conceptual primitives represented by the solid circle and the solid square in each component structure. In addition, one component structure can provide many potential slots, for an event can contain many potential possibilities. The members of slots can be prominent or non-prominent, but only some of them are activated and filled by another component structure during the process of the external event integration.

In sum, the whole process of the external event integration between two component structures of a verb complex can be accomplished through the mapping and overlapping of related conceptual primitives or subevents.

3.3. The Internal and External Event Integration Model

As discussed above, Section 3.1 deals with the internal event integration either in the main verb or in the satellite, which can be represented by the schematic conceptual primitives of "[Activating Process] + [Support Relation]" or "[Activating Process] + [Association Function]" in general. Section 3.2 concentrates on the external event integration in the verb complex that can be roughly corresponded to Talmy's five types of event integration. The semantic representations of the internal and external event integration are summarized in Table 3.

In Table 3, the internal event integration in the main verb has been exhaustedly interpreted by Talmy (2000b). Different from Talmy, we claim that the internal event integration also occurs in the satellite. In the external event integration, we only list the semantic representation of the verb complex in general, but we will further explore and illustrate how the conceptual primitives or subevents are integrated together between the main verb or the satellite in the following Chapters. Theoretical speaking, based on Table 3 we can infer that the schematic conceptual primitives of "activation process" are mapped between the main verb and the satellite. Moreover, the "support relation" in the main verb and the "association function" in the satellite can provide the slots to each other. On this account, the internal and external event integration model can be represented in Figure 7.

The internal and external even integration model in Figure 7 involves different ways to integrate conceptual primitives or subevents. The main verb and the

Table 3. Semantic representations of event integration.

Event Integration		Semantic Representations
Internal Event Integration	the main verb	[Activating Process] + [Support Relation] (such as "[motion + [cause]"])
	the satellite	[Activating Process] + [Association Function] (such as "[motion] + [path]")
External Event Integration	verb complex	[motion event]; [temporal contouring event]; [state change event]; [action correlating event]; [realization event]

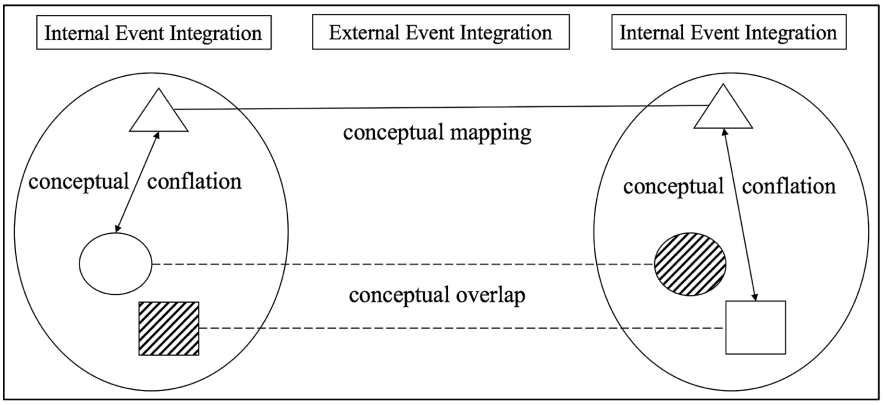

Figure 7. The internal and external event integration model.

satellite can be represented by two ellipses. In each ellipse, the double-arrow solid line represents the internal event integration that can conflate different conceptual primitives or subevents indicated by the solid triangle, circle, and square. In the external event integration, two ellipses can share the common conceptual primitive represented by the solid triangle, which is mapped by a solid line. In addition, each ellipse, as the subevent of a macro-event, can provide some potential e-sites or slots of conceptual primitives. When the two ellipses are fused together, only the slots represented by the hatched circle and the hatched square can be activated and overlapped by dotted lines.

In short, the inner world of the internal event integration provides the fundamental conceptual primitives to the richer world of the external event integration. Our aim of this internal and external event integration model is to reveal the event integration degrees and figure out the principles that constrain the mapping and the overlapping of the conceptual primitives or subevents between the main verb and the satellite.

4. Conclusion

This paper aims to reconstruct the event integration model by deconstructing it from various event-related theories in linguistics. To briefly recap, Talmy's (2000b) macro-event theory offers the hierarchy of conceptual primitives and illustrates how the conceptual primitives are conflated in the internal event integration of the verb complex. Fauconnier & Turner's (1998, 2002) conceptual blending theory indicates that the components in the verb complex are mapped to each other based on their shared common conceptual primitives. Moreover, according to Langacker's (1987, 2005, 2008) constructional integration theory, the components of the verb complex can provide conceptual primitives of e-sites or slots for each other. These theories together can illustrate how the main verb and the satellite can be integrated into the verb complex. That is, the verb complex can maximize the information and economize the linguistic form. On this account, an internal and external event integration model is reconstructed and established, which can provide insights in the study of verb complexity, lexicali-

zation, constructionalization and grammaticalization across various languages in the future.

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Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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