

Thematic Structure and Syntax: Revisiting English Depictive Predications*

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English depictive predicates have been analyzed as adjuncts, but their occurrences are not entirely free in that only certain types of predicates allow for the depictive predication constructions. Such restrictions have been analyzed in terms of the distinctions between Stage-Level Predicates and Individual-Level Predicates (Rapoport, 1993): both a main verb and a depictive predicate should be Stage-Level Predicates. However, I argue that the distinction is not sufficient to explain the English depictive predication constructions. Instead of the old distinctions, in this paper I suggest that it is more explanatory to analyze them on the bases of thematic roles: the predication subject of a depictive predicate bears either an agent or a theme role from a main verb. In this sense, I define them in terms of an Agent-Oriented Depictive (AOD) and a Theme-Oriented Depictives (TODs). They differ in that the AOD is predicated of the entity bearing an agent role, whereas the TOD is predicated of the entity bearing the theme role. The distinctive properties between AODs and TODs are explained by Thematic Hierarchy (Baker, 1988; Bresnan, 1989).

Key words: English, depictive predicates, thematic structure, agent, theme

1. Introduction

As pointed out repeatedly in the literature, the syntactic realization of arguments (their syntactic type and grammatical function) has been shown to be predictable to a large extent from the meaning of predicates. Since lexical entries are meant to designate unpredictable properties of lexical items, information concerning the syntactic realization of arguments should be factored out of the individual lexical

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entries of verbs, mapping lexical semantics to syntax. This indicates that the semantic category of each argument is selected by the verb. For instance, when we discuss the argument realization options of verbs, a verb that denotes an event in which an agent acts on and causes a change in a theme, such as *eat*, *cut*, or *destroy* is transitive in many languages, which the agent being expressed as the subject and the theme as the direct object.

Such selectional restrictions are shown in English depictive predicate constructions, which I will examine in this paper. Before providing my argument for the selectional restrictions, I will briefly describe English depictive predications. Then I suggest that a thematic role based approach is reasonable to explain English depictive predications, and that it also proves why only certain types of verbs allow for the depictive predication constructions.

2. English Depictive Predicates

2.1. Depictive predication constructions

A depictive predicate (d-predicate) describes the state of its predication subject at the time that an event caused by the main verb occurs. The depictive predication constructions have been classified with two types, namely Subject-Oriented Depictives (SODs), and Object-Oriented Depictives (OODs). It is a SOD if the subject of a d-predicate is a subject in a sentence; it is an OOD if the subject of a d-predicate is a direct object. For example, (1a) is the SOD in that the predicate *angry* is predicated of the subject NP *John*, while (2a) is the OOD in that the predicate *raw* is predicated of the object NP *the meat*. In this paper, the d-predicate is italicized and its predication subject is underlined.

- (1) a. John left the room *angry*.
 b. John sat on the bench *drunk*. (SOD)

- (2) a. Emily ate the meat *raw*.
 b. Mary brought the soup *hot*. (OOD)

In each sentence in (1) and (2), a predicate (italicized) modifies the

subject or the object noun phrase: the predicate characterizes the entity denoted by that NP in relation to the action of the verb, at the time of (the initiation of) the action or process described by the verb. Take (2a) as an example. It indicates that the event of eating is contemporaneous with the state of rawness, meaning that Emily ate the meat and at that time, it was raw. The entity denoted by the object NP undergoes the action described by the verb in the same way as it does in the parallel sentence without the d-predicate: Emily ate the meat; one can say of (2a): What Emily did was eat the meat. The action of eating the meat raw is still one of eating, and not one of eating raw. Thus, it has been argued that a d-predicate does neither contribute to the verb's description of the action of the clause, nor does have any thematic relationship with the verb, because it behaves as an adjunct.

However, while the object- or subject-hosted d-predicates are not theta-marked or selected, their occurrences are not entirely free in that only certain types of verbs allow for the depictive predication constructions. The restrictions have been explained in terms of Stage-Level or Individual-Level Predicates. Thus, before providing my analysis for a thematic-role based approach, I will briefly describe how the d-predication constructions have been analyzed and also point out some problems.

2.2. Stage-Level or Individual Level Predicates

The restrictions in depictive predication constructions have been explained in terms of Stage-Level Predicates (SLPs) and Individual Level Predicates (ILPs) (Drubig, 1991; Pustejovsky, 1991; Rapoport 1993). In general, a SLP (such as *sick* or *available*) attributes a temporary property to (a stage of) an individual at a particular time and space, whereas an ILP (such as *tall*) attributes an enduring or essential property to an individual. For example, Carlson observed that while the bare plural subject of a SLP can be interpreted either generically or existentially ((3a) and (3b)), the subject of ILP has only a generic interpretation ((4)).

- (3) Surfers are nervous.
- a. $(\forall x: \text{surfer}(x)) [\text{nervous}(x)]$
 - b. $\exists x[\text{surfer}(x) \wedge \text{nervous}(x)]$

(4) Surfers are neurotic.

(Gx: surfer(x))[neurotic(x)]

Given the distinction, let us consider how the notions have been applied to English depictive predication constructions. Look at the examples of (5) and (6).

(5) a. John bought his mansion **intelligent/jobless*.

b. John met his girlfriend **clever/naked*. (SOD)

(6) a. John ate the snail **brown/hungry*.

b. John taught the student **intelligent/injured*. (OOD)

The examples of (5) and (6) show that d-predicates should not be ILPs. In Carlson's theory, the predicates *brown*, *intelligent*, and *clever* are predicates of individual (objects and kinds) denoting inherent properties, whereas the predicates *hungry*, *tired*, *injured* and *naked* are predicates of stages of individuals, where a stage is defined as a spatially and temporally bounded manifestation of something (Carlson, 1978; 68). Similarly, Drubig (1991) argues that the adjectives occurring in the d-predication constructions must denote a temporal property. Furthermore, Rapoport (1993) argues that not only d-predicates but also main verbs should be ILPs in OOD constructions. Consider the sentences of (7).

(7) a. *John owned the chickens *young*.

b. *John sold the chickens *young*.

As shown above, the sentences of (7) are bad: the main verb *own* in (7a), the d-predicate *young* in (7b) are ILPs. Take (7a) as an example. In (7a), the sentence *John owned the chickens* without the d-predicate *young* is acceptable, but the addition of the d-predicate makes the sentence unacceptable. The distinction between SLPs and ILPs can be extended to explain Subject-Oriented Depictives (SODs). Look at the sentences of (8).

- (8) a. *John loved his cat *drunk*.
 b. *John knew the students *tired*.
 c. *John met his wife *intelligent*.
 d. *John solved the puzzle *smart*. (SOD)

The sentences of (8a)-(8d) are unacceptable because the predicates *loved*, *knew*, *intelligent*, and *smart* are ILPs, as pointed out by Pustejovsky (1991). Specifically, the main verbs, *love* in (8a), *know* in (8b) are ILPs, and the depictive predicates, *intelligent* in (8c), and *smart* in (8d) are ILPs. Thus, Rapoport (1993) argues that both predicates should be ILPs in English d-predication constructions.

However, I suggest that this is not sufficient to explain the d-predication constructions. Consider the following examples in (9).

- (9) a. *The blanket covered the baby *wet*.
 b. *The balloon blocked the scene of the window *inflated*.

Traditionally, the examples in (9) are called Subject-Oriented Depictives (SODs) in the sense that the predication subject of each d-predicate occupies a sentential subject position. However, it turns out that the sentences are questionable, even though both predicates (a main verb and a d-predicate) are SLPs. In other words, the sentences in (9), are unacceptable, although the predicates are SLPs.

Take (9a) as an example. Suppose that a blanket was not completely dried by a drying machine, and it was used by necessity to cover a baby. This situation might be described by stating that, when the blanket covered the baby, it was wet. However, the situation cannot be expressed by using the corresponding d-predication sentence as in (9a), even though both predicates *covered*, *wet* are SLPs. The same holds in (9b). Suppose that someone was watching the scenery through the window, but a big balloon flew and blocked the scene. Then, we might describe the situation by stating that the balloon blocked the scene of the window, when it was inflated. However, as shown in (9b), the sentence with the d-predicate *inflated* is questionable. Note that the predicates *blocked*, *inflated* are SLPs. So, the sentences of (9) pose a possibility that all the SLPs do not allow for English d-predication constructions.

Similarly, when the predication subjects are in the direct object

positions, the sentences are not acceptable, if depictive predicates are added. Consider the examples in (10).

- (10) a. *They entered the room *unfurnished*.
 b. *John alerted Tom *drunk*.
 c. *The students helped the professor *busy*.
 d. *I sold David the sofa *drunk*.

In each sentence of (10), both predicates (a main verb and a depictive predicate) are SLPs, but the sentences are unacceptable. Take (10a) as an example. Suppose that I wanted to look for an apartment to move into and the apartment manager showed me an empty apartment. Then, we might describe this situation by stating that, when I entered the apartment, it was unfurnished. However, this cannot be explained by a corresponding d-predication construction, as in (10a). The same holds in other sentences in (10b)-(10d). As implied by (10b), suppose that Tom lied on the floor drunk and John suddenly appeared in the darkness. In this situation, Tom must be alerted by John's appearance. Then this situation can be described by stating that, when John alerted Tom, Tom was drunk. But it cannot be described by a corresponding d-predication. Here what should be noticed is that the presences of SLPs do not always allow for d-predication constructions, supporting the assumption that the distinction between SLPs and ILPs is not sufficient. In other words, we need more restraints for the English d-predication constructions. So, in this paper, I propose that thematic restrictions are necessary in explaining the d-predication constructions, to which I will turn now.

3. Thematic Roles of Depictive Predication Construction

Above, I mentioned that the distinction between ILPs and SLPs is not enough to explain English depictive predication constructions. However, if we adopt the notions of thematic roles, such a problem might disappear.

3.1. Agent-Oriented Depictive Predication

The simple distinction between SODs and OODs is based on the syntactic position of the predication subject and not on its semantics.

However, it has long been recognized that there can be a selectional restriction between an adjunct (i. e., adverb) and an argument of a main verb. In particular, some adverbs (such as *intentionally*, *reluctantly*, *willingly*) may only construe with those subjects which can bear agentivity (Jackendoff, 1972; McConnell-Ginet, 1982; Wyner, 1998). Consider the examples from Wyner (1998, p. 337).

- (11) a. The antibiotic killed the infection.
 b. *The antibiotic reluctantly killed the infection.
 c. The scientist reluctantly killed the infection.

According to Wyner, the sentences in (11b) and (11c) show that the adverb *reluctantly* requires an argument that bears an agentive thematic role. That is, (11b) is ruled out because the subject does not support the thematic restriction, while (11a) and (11c) are acceptable because the restriction holds. A similar restriction might obtain for SODs. Consider the sentences in (12)-(13).

- (12) a. Mary sold Tom the sofa *drunk*. (cf. (10d))
 b. John left the room *angry*.
 c. James sang a song *drunk*.
- (13) a. *John feared the lion *drunk*.
 b. *John was intelligent *happy*.
 c. *John owned the chicken *young*. (cf. (7a))

According to the distinction between SLPs and ILPs with respect to d-predication constructions, the sentences in (12) are acceptable because both the main verb and the d-predicate are SLPs, which involve events, following Drubig (1991) and Rapoport (1993). In contrast, the sentences in (13) are unacceptable because the main verbs are ILPs. However, there exists the possibility that (13a)-(13c) are unacceptable because the subjects are not agents. In other words, we can say that SODs only occur with (volitional) agent subjects. What is the proper way to describe the restriction for SODs—that they do not allow for ILPs, or that they are not possible for non-agentive predicates? However, when checking this with the predicates that are SLPs but that do not have an agent subject, it turns out that SODs are questionable with some SLPs.

Now let us review the sentences in (9).

- (14) a. *The blanket covered the baby *wet*.
 b. *The balloon blocked the scene of the window *inflated*.

The sentences in (14) are unacceptable, although the main verbs are SLPs. For example, in (14a), the verb *covered* is a SLP and the sentence is acceptable without a d-predicate, while the d-predicate *wet* is added, the sentence is not acceptable. However, if considering the thematic roles assigned to predication subjects, we would get the generalization that the sentences are unacceptable as the secondary subjects are not agents. Here an agent is generally defined as an initiator of an activity with volitionality and willingness. More specifically, the d-predicates are sensitive to what can be called sub-aspects of Agentivity. Dowty (1991) argues that we should regard thematic roles as implications; being an argument of a predicate entails that the argument bears certain properties. In addition, he argues that Agent and Patient are not discrete roles but proto-role types, which have prototypical members as well as other members that are described from the prototype; the more proto-agent properties a particular thematic role has, the higher the chance for it to be realized as the subject in the basic verb form. This is an approach that maps thematic roles to syntactic argument positions based on the semantic properties of these roles. That is, an argument that bears the prototypical agent role entails that the argument has all the properties by Dowty (1991), whereas an argument with a non-prototypical agent role bears only some of these agent properties. In his classification, if an argument has certain key properties of those that Dowty (1991) considers Proto-Agent entailments, such as volitional involvement in the event or state, or causing an event or change of state in another participant, the argument will have the Proto-Agent classification. Given this, in this paper, based on Dowty (1991)'s classification partially, it is assumed that English d-predication constructions satisfy at least the following two properties.

- (15) Properties for Agent-Role in English Depictive Predications
 a. volitional involvement in the event or state.
 b. causing an event or state in another participant.

With regard to (15), the sentences in (14) do not entail that the predication subjects have the properties in (15). For example, in (14a), it is difficult to analyze the non-sentient subject *the blanket* as having any intention or volitionality to cause the event of covering the baby. Likewise, in (14b), the non-sentient subject *the balloon* cannot cause any event with volitionality. Now consider the minimal pairs in (16) with respect to these notions.

- (16) a. *The blanket covered her baby *wet*. (cf. (14a))
 b. She covered her baby *wet*.

(16b) has the interpretation that when she covered her baby, she was wet. However, the non-sentient subject *the blanket* cannot be the predication subject of the d-predicate *wet* as in (16a). In (16b), the subject *she* entails that it has the properties in (15), thus bearing an agentive thematic role, whereas such an entailment relationship is not found in (16a). In other words, the non-sentient subject *the blanket* does not involve any volition or willingness because the covering her baby was performed by an agent that could not have been the blanket. Rather the predication subject *the blanket* bears a thematic role of an instrument for covering the baby in (16b). A similar idea holds in (17).

- (17) a. *The balloon blocked the window *inflated*. (cf. (14b))
 b. The balloon hit the window *inflated*.

In (17a), the non-sentient subject *the balloon* cannot be a predication subject of the d-predicate *inflated*, whereas it can be in (17b). As in (16), it is difficult to interpret the subject *the balloon* as a causer of the event of blocking the window with volitionality, since blocking the window was not intentionally performed by the balloon. Rather the event (blocking the window) might happen by accident. However, the subject *the balloon* can be interpreted as an agent in (17b), even though it is a non-sentient argument. This is inferred by the lexical meaning of the main verb *hit*. As Wyner (1998) states, the verb *hit* hosts an agent as its subject. For example, in the sentence *he kicked the ball*, the subject *he* is an agent to cause the event of kicking the ball. Wayner (1998) points out that the subject hosted by the verb *hit* tends to bear an agentive thematic role. In this sense, I assume that the subject *the*

balloon can be interpreted as a causer to have an effect on the object *the window*, even though it is a non-sentient argument. So, the contrasts shown (17) indicate that the subject of a d-predicate should bear an agentive thematic role.

Now let us review some examples from previous studies. As mentioned earlier, the sentences in (18) are unacceptable in that the main verbs *love* and *know* are not SLPs. However, according to my analysis, they are bad because the subjects hosted by the verbs are not agents. For example, in (18a), the subject *John* does not cause the event of loving his cat with volitionality. Rather it bears a thematic role of an experiencer which involves the subject's feeling. On the other hand, the predication subjects of the sentences in (19) bear agentive thematic roles. For example, in (19b), the subject *John* is an agent who causes an event of leaving home with volitionality. So, the sentences in (19) are accepted as d-predication constructions.

- (18) a. *John loved his cat *drunk*. (cf. (8a))
 b. *John knew the students *tired*. (cf. (8b))
- (19) a. He came home *clean*.
 b. John left home angry. (cf. (1b))

Thus, all taken together, I argue that it would be reasonable to call this type of d-predication an Agent-Oriented Depictive (AOD) predication construction.

3.2. Theme-Oriented Depictives

Like the SOD, OOD is named based on the fact that the predication subject is a direct object of the main verb. Consider the sentences in (20).

- (20) a. Mary ate her bread *stale*.
 b. Mary drank her tea *cold*.
 c. Mary presented my paper *unfinished*.
 d. Mary brought her soup *hot*.

As the terminology of the OOD implies, the predication subjects of

d-predicates occupy direct object positions. The OOD is similar to the resultative predication construction in that the direct object receives two theta-roles from two predicates, namely a primary predicate (a main verb) and a d-predicate. For example, in (19a), the object NP *her bread* receives one theta-role from the main verb *ate* and the other from the d-predicate *stale*. Then we should consider which theta-roles are assigned to the direct objects in OODs. Look at the sentences in (21).

- (21) a. Mary brought her soup *cold*.
 b. James sent his mail *sealed*.
 c. Brian sold his furniture *used*.
 d. Mary drank the beer *cold*.

In (21a)-(21d), the predication subjects receive theme-roles from their main verbs. For example, in (21a), the object NP *her soup* is the theme which undergoes movement by the event of bringing. Similar patterns hold for all of the other object NPs in (21). As in Agent-Oriented Depictives, this types of d-predication constructions are somewhat sensitive to Dowty (1991)'s notion of Proto-Patient properties. Specifically, this type of d-predication should at least satisfy the following conditions.

- (22) Properties for Theme-Role in English Depictive Predications
 a. undergo change
 b. causally affected by another participant.

That is, all the sentences in (21) satisfy the two conditions for d-predication constructions. For example, in (21b) and (21c), the direct objects *his mail* and *his furniture* undergo movement and are caused to change their original locations by the event of sending and selling. Similarly, the direct object *the beer*, as an incremental theme, might be getting drunk up by the event of drinking, so that it is caused to change its original state. Now review the sentences in (10).

- (23) a. *They entered the room *noisy*.
 b. *John alerted Tom *drunk*.
 c. *The students helped the professor *busy*.
 d. *I sold David the sofa *drunk*. (cf.(10))

The sentences in (23) support the assumption that a theme role is an important criterion in d-predications. Note that all the predicates (both a main verb and a d-predicate) involved in (23) are SLPs. However, if we look at the thematic roles assigned to the predication subjects of d-predicates, it is found that the predication subjects do not bear theme roles from main verbs. In (23a), the secondary subject *the room* denotes a location in that the main verb *entered* takes an argument bearing a thematic role of location as a direct object. The secondary subject *Tom* is an experiencer as the so-called psych-verb *alerted* generally takes an argument bearing a theme role of experiencer as a direct object. On the other hand, the direct objects *professor* and *David* in (23c) and (23d) are beneficiaries. So, the predication subjects in (23) bear different thematic roles. However, what is common in (23) is that all the predication subjects do not bear the theme roles from their main verbs, thus resulting in unacceptable sentences. Look at the following minimal pairs:

- (24) a. *Tom entered the apartment *unfurnished*.
 b. Tom rented the apartment *unfurnished*.

The minimal pairs in (24) show that the main verb *rented* hosts a d-predication construction, while the verb *entered* does not. As mentioned earlier, we can imagine the situation implied by (24a), by stating that when I entered the apartment, it was unfurnished. However, the situation cannot be explained by a corresponding d-predication construction, as in (24a). Why does this happen? I assume that the notion of thematic roles can provide us with an answer as follows: the subject of the d-predicate *the apartment* bears a thematic role of location in (24a), whereas it bears a theme role from the main verb *rented* in (24b). Here (24b) satisfies the two conditions for theme roles in English d-predication construction in the sense that the predication subject *the apartment* is caused to change its original state by the event of renting and so is causally affected by the renter who is the subject *Tom*. The same holds in the following minimal pairs.

- (25) a. *The police helped Bill *drunk*.
 b. The police arrested Bill *drunk*.

The only difference between (25a) and (25b) is that the verb *helped*

cannot host a d-predication construction, while the verb *arrested* can. As for (25a), suppose that the police found Bill drunk on the street and the police tried to help him (e.g. to give a ride). Then, we might describe this situation by stating that, when the police helped Bill, Bill was drunk. However, this cannot be explained by a corresponding d-predication, as in (25a). But when the verb *arrested* are used, the sentence is acceptable. This unacceptability can be explained by the thematic roles assigned to the predication subjects. The subject of the d-predicate *Bill* bears the thematic role of beneficiary in (25a) because the verb *helped* tend to takes an argument bearing a benefactor as a subject and an argument bearing a beneficiary as a direct object. On the other hand, the direct object *Bill* bears a theme role from the main verb *arrested* in (25b). Here the predication subject *Bill* satisfies the two conditions in that the predication subject *Bill* undergoes a change in his state (e.g. he might be put in jail) by the event of arresting and so is causally affected by the subject *the police*.

So, the contrasts shown in (24) and (25) indicate that a d-predication is acceptable if the subject of a d-predicate bears a theme role from a main verb. Consequently, I argue that this type of d-predication should be called a Theme-Oriented Depictive (TOD) predication construction. This way of approach can explain the examples from previous studies. In (26), the predication subjects *her bread* and *her tea* are assigned to bear theme roles from the main verbs *ate* and *drank*, and so make the sentences acceptable. For example, the direct object *her bread* was getting eaten up by the event of eating and similarly, the direct object *her tea* was getting drunk up by the event of drinking.

- (26) a. Mary ate her bread *stale*. (cf. (20a))
 b. Mary drank her tea *cold*. (cf. (20b))

In addition, this approach can also explain well the status of its predication subject when a sentence is passivized, as illustrated in (27).

- (27) a. Mary played the piano *untuned*. (active)
 b. The piano was played *untuned*. (passive)
 c. Mary presented her paper *unfinished*. (active)
 d. Her paper was presented *unfinished*. (passive)

In the old distinction between a SOD and an OOD, (27a) and (27c) are OODs, while (27b) and (27d) are SODs, although the same entities are predicated of the same depictive predicate. However, if adopting the two notions, AOD and TOD, such a conceptual problem disappears: all the sentences in (27) are simply Theme-Oriented Depictives (TODs). Thus, in this paper, I define the English depictive predication construction in terms of AOD and TOD because the distinction is more explanatory in explaining the distributions of English depictive predications.

4. Syntax of English Depictive Predications

Above, I have addressed two points. First, following Pustejovsky (1991), and Rapoport (1993), English d-predications are sensitive to an event argument, explaining why the d-predication construction is not acceptable when either a main verb or a d-predicate is an ILP. This is congruent with previous studies by Rapoport (1993). Second, d-predication constructions are dependent on thematic roles in that d-predication constructions are acceptable only when the predication subjects bear the thematic roles of agent or of theme role.

With regard to English d-predication constructions, the notion of event has been employed to explain how d-predicates are licensed in the syntactic structures. Rapoport (1993) proposes that the d-predicates are licensed syntactically in terms of event-place (e-place) component. Her approach follows Kratzer's (1988) proposal that the stage-level/individual level predicates have an argument position for events or spatiotemporal location: individual-level predicates, in contrast, do not have this position. So, she argues that the theta-role assignment by the d-predicate to its host NP is not enough to license the adjunct. The connection between the secondary predicate and the main predicate must be directly connected with an e-place component. However, since it is not my purpose to give a detailed analysis of event or syntactic structure of d-predication, in this paper I would like to show the syntactic structures of AODs and TODs in terms of Thematic Hierarchy. The Thematic Hierarchy has been researched by many linguists. Among them, I just introduce Baker's (1988) and Bresnan's (1989) versions. Note that my purpose of presenting the hierarchy is just to show that an agent is higher ranked than a theme, as illustrated in (29).

AOD is predicated of the entity bearing an agent role, whereas the TOD is predicated of the entity bearing a theme role. However, both are bound by an event argument, confirming that the event plays an important role in explaining English depictive predication constructions.

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