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Access to contextually-determined states in the interpretation of English stative participles

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Abstract. Stative passive participles (SPPs) differ in acceptability for different verbs: cf. *The boxes are flattened/#kicked*. However, examples like those with *kicked* can be felicitous in very specific contexts, e.g. when box-kicking is an item to be checked off of a list: what will be called a 'Job is Done' (JiD) interpretation. An unresolved question in the prior literature is whether JiD is eventive or stative. This question takes on added significance in the context of recent work on the interpretation of SPPs. We argue that JiD is indeed stative, and show that this analysis has numerous consequences for understanding the syntax and interpretation of SPPs.

Keywords. participle, stative passive, states, event semantics

1. Introduction. The focus of this paper is the *stative passive participle*, which is seen in the following examples:

(1) a. The **flattened** boxes ... *attributive stative passive*
b. The boxes are **flattened**. *predicative stative passive*

These are also often called *adjectival passive participles*. We prefer *stative* passive participle (SPP) to avoid complications associated with the category 'adjective'; at the same time, SPP interpretation is more complex than this name suggests, as we will see immediately below.

In the extended case study presented in Biggs and Embick (2025), we argue that the distribution and interpretation of SPPs provide important insights into category-changing processes and the nature of syntactic categories more broadly. Our argument builds on a novel generalization about SPP interpretation: namely, that SPPs exhibit two distinct readings that are crucially tied to their syntactic distribution. In predicative syntax, the interpretation is uniformly stative; in attributive position, however, the interpretation of the participle is either stative or eventive.

(2) GENERALIZATIONS: Distribution × interpretation
a. **attributive syntax:** Both stative and eventive interpretations
b. **predicative syntax:** Only stative interpretation.

We will illustrate the observations motivating (2) in §2. For now, (2) suffices to provide context for the main focus of this paper, which is a particular type of example that is potentially problematic for it. The apparent problem can be illustrated in two steps. On the one hand, the literature regularly observes that certain verbs in the stative passive are odd out of the blue. Some examples are illustrated in (3), where the difference in felicity is relative to (1b):

(3) #The boxes are kicked/examined/poked. *(requires context and coercion)*

Although deviant with no additional framing, it is observed that examples like (3) are more acceptable given certain contexts; for example, if we work in a setting in which it is necessary to

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kick each box once per day, *The boxes are kicked* improves significantly. This is what we will refer to as a *Job is Done* (JiD) interpretation. For now, the issue we wish to address concerns how JiD relates to (2). Previous work has often referred to JiD as a type of eventive interpretation of SPPs (cf. Kratzer (2000) and related work). If the JiD reading of (3) is eventive, then (2) requires revision.

This paper argues that, under the JiD interpretation, examples like those in (3) are in fact stative rather than eventive. As such, the generalization in (2) is maintained. The finding has further implications concerning how the state in the stative passive is understood, as we will see later in the paper.

2. Stative passives: A generalization about interpretations. The interpretation of SPPs can be examined in comparisons to/contrasts with *adjectives* and *eventive passive participles*:

(4) a. The boxes are *flattened*. *stative passive*
b. The boxes are *flat*. *'pure' stative/ adjective*
c. The boxes were *flattened*. *eventive passive*

The adjective in (4b) is a 'pure' state (hence the alternative way of referring to it); pure states are neutral with respect to their having been brought about by an event. The eventive passive in (4c), in contrast, is basically eventive: it says that a flattening event took place (here, in the past).[1] The stative interpretation of SPPs combines these components, denoting a state that is the end of an event. This has sometimes been called a *Target State* (Kratzer 2000) ((adapting Parsons 1990). In (5a) we refer to this as an @-interpretation, emphasizing that a state must hold **at** the Topic Time (TT). We argue that SPPs also have a purely E(ventive)- interpretation, shown in (5b); cf. (2). In contrast to the @-interpretation, the E-interpretation does not require that a state hold at TT.

(5) *Interpretations*

a. @-interpretation: Argument is in *target state* of Root-identified event **at** Topic Time.
$\lambda x \lambda s \exists e\ \sqrt{\text{ROOT}}(e) \wedge \text{End}(e, s) \wedge \text{Theme}(x, s)$
b. E-interpretation: Argument underwent Root-identified **event** prior to Topic Time.
$\lambda x \lambda t \exists e\ \sqrt{\text{ROOT}}(e) \wedge \text{Patient(/Theme)}(e,x) \wedge \tau(e) < t$

The idea that SPPs may have distinct interpretations along the lines of (5) appears in the prior literature; cf. Kratzer (2000), and much related work. Crucially, though, our proposal is that the interpretations in (5) are distributionally conditioned, as stated in (2).

To illustrate the relationship between (2) and (5), we introduce a simple scenario in which one interpretation is true and the other false. The context involves the five robots in Fig. 1, below.

(6) CONTEXT: *The robots as seen in Figure 1 (and nothing more)*

a. Which robots are painted? (a), (c) *predicative:* @
b. The painted robots are... (a), (c) *attributive:* @

In (6), both the predicative and attributive SPPs have @-interpretations: The robots are in a painted state at TT. A further E-interpretation for the attributive can be facilitated with additional context:

[1] Verbs like *flatten* secondarily allow access to a state; see §3.1

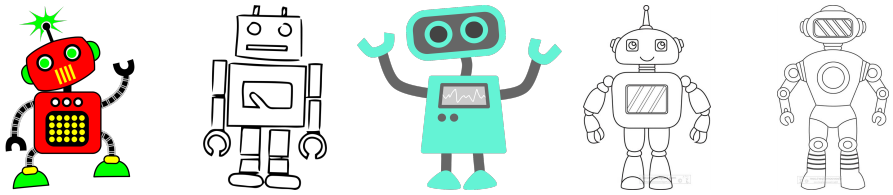


Figure 1. Five robots

(7) CONTEXT: *In Fig. 1, we have knowledge that robots (a), (c) and (d) have been painted in the past, but that the paint on (d) has completely peeled off.*

a. Which robots are painted? (a), (c) *predicative:* @

b. The painted robots are...

i. (a), (c) *attributive:* @

ii. (a), (c), (d) *attributive: E*

In (7), the predicative SPP still has only an @-interpretation. However, the attributive SPP is ambiguous between the @- and E-interpretation, where the latter does not require the painted state to hold at TT. Adverbs like *recently* further facilitate the E-interpretation, as in (8):

(8) a. Which robots are recently painted? (a), (c) *predicative:* @

b. The recently painted robots are...

i. (a), (c) *(attributive:* @*)*

ii. (a), (c), (d) *attributive:* E

The adverb does not facilitate an E-interpretation for the predicative SPP in (8a). (There is another well-known contextual effect that is possible with example (8a), to be examined in §3.3.)

As a second illustration, the attributive/predicative asymmetry can also be detected in SPPs negated by *un-*. We again start with just Fig.1, and no additional context:

(9) CONTEXT: *The robots as seen in Fig.1 (and nothing more)*

a. Which robots are unpainted? (b), (d), (e) *predicative:* ¬@

b. The unpainted robots are ... (b), (d), (e) *attributive:* ¬@

In (9), the participle in both attributive and predicative positions requires an interpretation that picks out the robots that are visibly not painted: i.e., an @-interpretation. Updating the context as in (10) adds the E-interpretation, but only for the attributive SPP:

(10) CONTEXT: *Robot (d) has been painted in the past; the paint has since completely peeled off.*

a. Which robots are unpainted? (b), (d), (e) *Predicative:* ¬@

b. The unpainted robots are ...

i. (b), (d), (e) *Attributive:* ¬@

ii. (b), (e) *Attributive: ¬E*

In this context, the attributive participle is ambiguous. In, (10b.i), robot (d) is *unpainted* at TT, like robots (b) and (e) (¬@). In (10b.ii), it is not true that robot (d) is *unpainted*, because – in contrast to robots (b) and (e) – robot (d) underwent a painting in the past (¬E-interpretation).

In summary, there is an asymmetry in the distributional availability of @- and E- interpretations. We introduce further diagnostics that confirm this in the next section, where we argue that JiD constitutes a special kind of @-interpretation.

3. The 'Job is Done' interpretation. As noted in the introduction, there is an important constraint on stative passive formation, emphasized in prior literature, that SPPs are most felicitous with Roots that are associated with an end-state, as in (11a), and are deviant out of context for verbs that are not associated with end states, as shown in (11b).[2]

(11) a. These boxes are flattened/opened/emptied/destroyed.
b. #These boxes are kicked/touched/poked/examined.

The acceptability pattern in (11a-b) correlates with established diagnostics that distinguish accomplishment/change of state verbs from other verb types. For example, with accomplishments like *flatten*, the modifier *for an hour* can modify either an event or a resulting state, as shown in (12). In contrast, with verbs like *kick*, only event modification is possible, as illustrated in (13):

(12) They *flattened* the boxes for an hour.
a. Event modification: One hour of box-flattening events.
b. State modification: Maintained the boxes in a flattened state for one hour.

(13) They *kicked* the boxes for an hour.
a. Event modification: One hour of box-kicking events.
b. State modification: *

The idea in (12-13) is that *flatten* has both an eventive and a stative component, while *kick* has only the eventive part. This distinction, in turn, corresponds to the contrast observed in (11).

Our central concern is that, although examples of the type in (11b) are infelicitous out of the blue, there are specific conditions under which they become acceptable (see, among others, Kratzer 2000; Anagnostopoulou 2003; Embick 2004; Maienborn 2009; Alexiadou et al. 2015; Gehrke 2015; Ramchand 2018). These contexts typically involve tasks that must be completed, often resembling the process of checking items off a 'to-do' list. For example:

(14) CONTEXT: *We work in a tire factory and it is required that we kick each tire once per day to ensure quality control.* <After kicking tires>:

Ok, the tires are kicked, let's go home. (Embick 2004)

[2] We assume a view of Roots and categorization along the lines of Embick & Marantz (2008) and related work, in which Roots become associated with eventualities by virtue of the interpretation of the syntactic structure in which they appear. This contrasts with approaches in which Roots 'contain' or 'project' events or states directly.

This is the *Job is Done* interpretation, *JiD* for short.

While there is broad agreement on the availability of JiD, the effect has been characterized in two very different ways. On one side, a significant body of work, following Kratzer (2000), treats JiD as a particular type of eventive interpretation, one that simply asserts that the tires have undergone a kicking event at some prior time. In our terms, this corresponds to the E-interpretation in (5b).[3] An alternative view takes JiD to involve a coerced stative interpretation, essentially a subtype of what we have referred to as the @-state (Embick 2004; see also Ramchand 1018 for related discussion).

These views have not, to our knowledge, been directly compared. However, the question at issue takes on a new importance in light of the distributional generalization in (2): if the JiD interpretation in (14) is eventive, the generalization stated there is false (or needs to be revised). Crucially, evidence supporting either the stative or eventive view of JiD has not been produced in prior work.

In the remainder of this section we address this gap by demonstrating that a number of diagnostics converge on the conclusion that JiD is stative; that is, a type of @-interpretation.

3.1. ROOT-SPECIFIC EFFECTS. A first argument comes from the Root-specific effects introduced above, namely the contrast in Root distribution between (11a) and (11b) (out of context). To review, the pair in (11) illustrated that verbs with natural end states are acceptable as predicative stative passives, while verbs lacking such end states are infelicitous and require a JiD-like context, as in (14). If we take this observation at face value – and there is no reason to believe we should not – the contrast between (11a) and (11b) provides a straightforward argument in favor of a stative analysis of JiD. If JiD were eventive – that is, if E-interpretations were acceptable in predicative position – there would be no clear explanation for why coercion is necessary for SPPs formed from verbs like *kick* that lack natural end states.

As we observed in §2, an E-interpretation is possible for attributive SPPs **without** JiD coercion. Consistent with this, we find that no JiD coercion is required for SPPs formed from eventive verbs like *kick*, provided the SPP appears in attributive position. Compare the attributive example in (15) with the predicative case in (11):

(15) The (recently) kicked/touched/poked/examined boxes... *attributive*

If E-interpretations were equally available in both attributive and predicative positions, we would expect no difference in the coercion required between the predicative *The tires are kicked* and the attributive *The (recently) kicked boxes* — contrary to fact.

3.2. DEGREE MODIFICATION. A second argument that JiD is stative comes from modifiers that are sensitive to the distinction between states and events. To begin, we consider degree modifiers like *half* and *partially*, which can measure an @-state (when properly controlled for; cf. discussion in Baglini & Kennedy (2019)). In contrast, adverbs such as *repeatedly* and *twice* are interpreted as event modifiers. Combining these modifiers with SPPs in attributive and predicative positions confirms our generalization regarding the availability of @- and E-interpretations, as illustrated in (16)-(17).

[3] Kratzer (2000) refers to this as a Resultant State interpretation, following Parsons (1990). On her account, the tires are said to hold a "kicked" state forevermore, solely by virtue of having undergone a kicking event. Despite its label, Kratzer's discussion makes clear that this is an eventive, aspectual interpretation, not a stative one.

(16) *Attributive stative participle*

a. State modifiers: The half-/completely/partially painted desk... @

b. Event modifiers: The repeatedly/twice painted desk ... E

(17) *Predicative stative participle*

a. State modifiers: This desk is half-/completely/partially painted. @

b. Event modifiers: #This desk is twice/repeatedly painted. *E

The # annotation on (17b) reflects the fact that this type of example can be coerced into an acceptable @-interpretation; we return to this point later in §3.3.

Staying for now with the question of E-interpretations in predicative syntax, a second useful modifier is *almost*, which has two interpretations: a degree-related reading with states and a counterfactual reading with events (for discussion of its use with SPPs, see Paparounas (2023)). Modification of attributive and predicative SPPs reveals the same distributional contrast:

(18) Attributive: The almost flattened box...

@: almost attained end state (degree)
E: almost got flattened (counterfactual)

(19) Predicative: This box is almost flattened.

@: almost attained end state (degree)
*E: almost got flattened (counterfactual)

With these contrasts established, we turn now to how these modifiers interact with JiD. Degree modification of the SPP *kicked* in predicative position is infelicitous:

(20) #We can't leave yet, this tire is (only) half-/partially kicked.

The oddity of this example is expected, given that (out of the blue) kicking does not introduce the kind of degree structure that admits partiality: a kicking event either occurs or does not. However, given a task scenario that introduces (a discourse-based) degree structure, examples like (20) improve:

(21) CONTEXT: *Factory scenario, where each tire must undergo a six-step kicking procedure.* <Tire X has undergone 3 of the six steps.>

We can't leave yet, this tire is still (only) half-/partially kicked.

The improvement in (21) is expected only if JiD involves a coerced state reading.

Similarly, task-oriented scenarios can facilitate degree readings of *almost* with predicative SPPs, as illustrated in (22a). Crucially, however, the counterfactual interpretation of *almost* is not available with the predicative SPP, as shown in (22b).[4]

[4] As expected, a counterfactual interpretation of *almost* is possible in attributive position. For instance, in a scenario where a number of boxes were nearly kicked by a group of rampaging llamas, one could say, *The almost kicked boxes were put into the supply closet to prevent future mishaps*.

(22) CONTEXT: *Factory scenario, where each tire must undergo a six-step kicking procedure.*

We can leave soon, this tire is almost kicked.

a. @: Tire X has undergone 5 of the six steps (degree)
b. *E: Tire X missed undergoing the procedure (counterfactual)

In short, these modifiers provide further evidence that JiD is an @-interpretation.

3.3. MANNER MODIFICATION. Modification with manner adverbs (using 'manner' in a broad sense) has played an important role in previous analyses of SPP interpretation. Some care, however, is required in approaching the relevant facts. Prior literature has revealed an interesting contrast: on the one hand, adverbial modification of the type illustrated in examples like (23) is clearly acceptable; moreover, the SPP contrasts with the corresponding simple adjective:

(23) This box is carefully opened/*open. *stative passive/*pure state*

On the other hand, despite the clear acceptability of examples like (23), it has often been observed that manner adverbs (and event modifiers more generally) that are perfectly felicitous in eventive passives, as in (24a), are deviant in stative passives like (24b) (i.a. Rapp 1996; von Stechow 1998; Maienborn 2009; Meltzer-Asscher 2011; Gehrke 2015; McIntyre 2015):

(24) a. This package was opened secretly/recently/diligently by Ed yesterday. *ev. passive*
b. #This package is secretly/recently/diligently opened. *stative passive*

Importantly, felicity with these adverbs is again sensitive to the clausal distribution of the participle: event-related modification is perfectly acceptable with attributive participles but not predicative participles, as illustrated in (25) vs. (26).

(25) a. The slowly/quietly/sloppily typed letter...
b. The surreptitiously flattened boxes...
c. The violently kicked ball... *Attributive stative participles*

(26) a. #This letter is slowly/quietly/sloppily typed.
b. #These boxes are surreptitiously flattened.
c. #The ball is violently kicked. *Predicative stative participles*

Since attributive participles can have an E-interpretation, all modifiers should be acceptable in this position. This appears to be correct, although there are some complications (see Biggs and Embick (2025) for discussion).

Among predicative SPPs, the felicity of *carefully opened* in (23) – in contrast to the infelicity of the manner modifiers in (26) – implicates a condition often referred to as *State Relevance* (for different perspectives on this idea, see (among others) Rapp 1996; Meltzer-Asscher 2011; Alexiadou et al. 2015; Gehrke 2015; McIntyre 2015). A formulation is given in (27):

(27) *State Relevance Hypothesis:* Event-related satellites are unacceptable in (German, English, Hebrew) adjectival passives unless they contribute to the description of the state expressed by the participle or of the theme during the interval *i* during which this state holds. They are most acceptable if they provide information which can be inferred solely by inspection of the theme during interval *i*. (McIntyre 2015)

In other words, event (among other kinds of) modifiers are felicitous with (predicative) SPPs to the extent that the interpretation of the adverb manifests in some way in the state that ends the modified event. For instance, in the acceptable case of *carefully opened* in (23), the results of a careful opening should be visibly manifested in the resulting state of the box (e.g., no ragged tears). With other adverbs, such as *secretly opened*, it is less clear how the adverbial property would manifest in the *open* state. The result is infelicity, at least out of the blue. However, as with other cases, contextual support can improve acceptability. For example:

(28) CONTEXT: *We know that the secret openings are clinical– e.g., the boxes are undamaged, and the wrapping paper is neatly folded– while other openings are not.*
<Indicating a package with the properties just described>

Unlike those messy ones over there, this package is secretly opened.

The contextual sensitivity of State Relevance parallels many observations concerning JiD interpretations. We return to this point in §5 below, where we propose that the contextual aspects of the two effects may have a common source.

For now, our focus is on manner modification, and the idea that JiD interpretations pattern with typical states. For example, consider the scenario in (29):

(29) CONTEXT: *Spies infiltrate the tire factory, with instructions to kick each tire secretly.*
<Kicking occurs>

Ok, the tires are secretly kicked, let's go.

This example shows that manner modification of the JiD interpretation is felicitous, but only given a State Relevance context where the kicking must remain secret. Without such context, the example is decidedly odd. If JiD were a type of E-interpretation, manner modification should be fully acceptable across the board without contextual support, as it is in the eventive passive examples in (24a) and the attributive examples in (25). This, however, is not the case.[5]

Overall, then, adverbial modification again supports the conclusion that JiD is a kind of state interpretation.

3.4. SUMMARY. We have examined several diagnostics that interact with different kinds of eventualities (events and states). The results support the conclusion that JiD is a type of @- interpretation that requires coercion. A consequence of this conclusion is that there are two distinct ways in which the state that is the end of an event may be specified in the SPP. One involves the Root itself; this is the straightforward case with Roots typically associated with end-states (e.g., *flatten*, *open*). The second possibility, which we have examined, is that discourse context can supply the relevant end state. This is the JiD effect observed with verbs like *kick*, *etc.* We turn to a more detailed examination of such states in the next section.

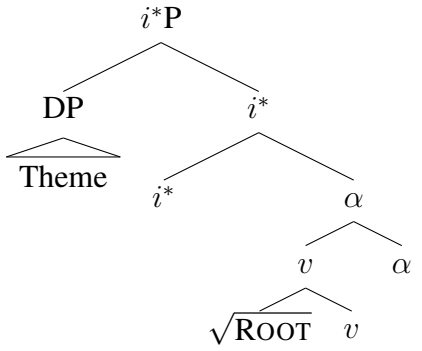
4. States, JiD, and Themes. Having identified the JiD interpretation as stative, we now turn to the question of why it has the particular properties that it does; specifically, its sensitivity to discourse context. We will argue that JiD effects derive from certain aspects of the @-interpretation of SPPs, in conjunction with how their argument is introduced. In particular, the argument of the SPP is interpreted as a state holder, which we take to be a kind of Theme. Correspondingly, the

[5] On how the adverbs are attached in examples of this type see §5.

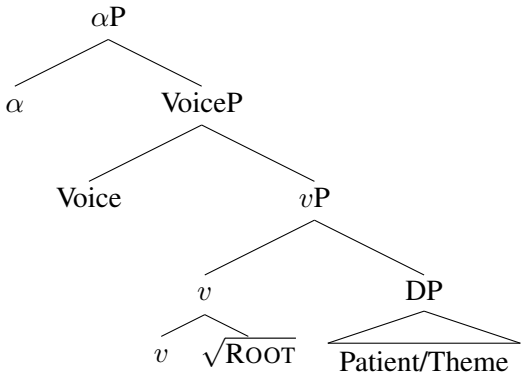
Roots that appear in SPPs must be able to serve as a predicate of a state variable. It follows that for verbs that do not typically give good end states or combine with Theme arguments – such as the verb *kick* – coercion is required to produce a contextually-determined state: roughly, 'counts as kicked as specified in this situation,' or (alternatively) 'state contextually specified to result from a kicking event.'

4.1. STATIVE STRUCTURE. As a first step in our analysis, we lay out our approach to SPP structure, drawn from Biggs and Embick (2025). Adding the eventive passive participle for illustrative purposes, the central idea is that both participle types are formed when a head α takes a verbal complement, like v(P) or Voice(P); whether Voice occurs in the SPP will not have any bearing on present discussion. The head α determines a non-verbal distribution; to a first approximation, that of an 'adjective' rather than a verb. The two participle types are as follows:

(30) *stative passive*



(31) *eventive passive*



There are a number of technical points about the structures in (30) and (31) that we abstract away from here. For present purposes, the crucial detail concerns argument introduction. In the eventive passive participle in (31), the argument is introduced within a 'typical' vP, as a complement to the verb. In contrast, in the SPP in (30) the argument is introduced external to α by the head i^* (cf. Wood & Marantz 2017). Crucially, an argument external to α can only be interpreted as a Theme. Unlike the (patient) arguments of verbs, these Themes are arguments of complex change-of-state eventualities and are thematically related to both an event and a state, in ways that will be made precise below.[6]

As we noted earlier, the stative interpretation involves a state that is the end of an event. Our analysis of this interpretation starts with an adaptation of the analysis of complex changes of state in Williams (2015). On this approach, verb phrases denoting changes of state involve three eventualities: the primary clausal event e_1, a Manner event e_2, and an End state s. The Manner and End state are linked to e_1 by Means and End operators respectively. Using *hammer the metal flat* in (32) as illustration, *hammer* is interpreted as a predicate of the Means event, while *flat* names the End state; the event e_1 is not pronounced. Ignoring for convenience the argument, the interpretation is as follows:

(32) $\lambda e_1 \exists e_2 \exists s$ Means(e_1,e_2) $\wedge$ hammer(e_2) $\wedge$ End(e_1,s) $\wedge$ flat(s)

[6] On further aspects of the Theme analysis, see also Biggs and Embick (in prep.).

On our view, the @-interpretation involves the same components, arranged differently such that the state is highest (extending Bešlin 2023). This is shown in (33), where we indicate the predicates of the Means and State eventualities with a placeholder PRED; the nature of these predicates will be the focus in the pages to come:

(33) $\lambda s \exists e_1 \exists e_2$ Means(e_1,e_2) $\wedge$ PRED(e_2) $\wedge$ End(e_1,s) $\wedge$ PRED(s)

The working semantics in (33) provides a way of articulating the Root-specific effects in the SPP that are involved with JiD interpretations. As we saw, certain Roots are naturally associated with End states, while others are not. Applied to (33), there are types of Root like $\sqrt{\text{FLAT}}$ that can easily be associated with an end state, such that the @-interpretation is as in (34a). For the second type of Root that are not easily associated with a good end state, such as $\sqrt{\text{KICK}}$, we take it that there is an interpretation in which the Means event named by the Root ends in an unspecified state, as in (34b). In (34a-b), we add the argument that is interpreted as the Theme of the state:

(34) *@-interpretations for two Root types:*

a. *@-interpretation with Root that associates easily with end states:*

$\lambda x \lambda s \exists e_1 \exists e_2$ Means(e_1,e_2) $\wedge$ PRED(e_2) $\wedge$ End(e_1,s) $\wedge$ flat(s) $\wedge$ Theme(x, s)

b. *@-interpretation with Root that lacks a good end state:*

$\lambda x \lambda s \exists e_1 \exists e_2$ Means(e_1,e_2) $\wedge$ kick(e_2) $\wedge$ End(e_1,s) $\wedge$ PRED(s) $\wedge$ Theme(x, s)

These are the foundational components of the analysis. The key questions to answer concern the placeholders PRED. Section 4.2 focuses on how PRED is interpreted in (34b), the locus of the JiD effect. Section 4.3 then turns to PRED in (34a), along with several related issues.

4.2. THE SOURCE OF THE JID EFFECT. Our primary claim is that JiD effects arise when Roots that typically do not appear in structures associated with End states appear as SPPs, and require a type of stative coercion. In other words, when $\sqrt{\text{KICK}}$ occurs in the structure in (30), JiD effects may arise because the root is not naturally associated with the change of state or theme interpretations that the stative SPP produces. The coercion that is required centers on the status of PRED in (34b), as we outline in the remainder of this section.

Given (34b), there is more than one way in which Roots like $\sqrt{\text{KICK}}$ could give rise to a good @-interpretation. One is that the end state is supplied in the syntactic context of the SPP, for example by a phrase. This is what happens with SPPs that occur with Resultative Secondary Predicates (RSPs), as in (35a-b) (see Embick 2004, 2023, and Biggs and Embick in prep.):

(35) a. This box is kicked flat.

b. The soles of Mary's shoes are run thin.

The examples in (35a) and (35b) differ in terms of whether the grammatical object is interpreted as the Theme of the event e_1 or not. Otherwise, the pair shares several key properties. First, no coercion is required when the *kicked* SPP combines with an RSP in (35a-b), in contrast to counterpart SPPs that lack the RSP (#*The box is kicked*). Second, the pair have the same interpretation with respect to Manner and End states – supplied by the verb and the RSP, respectively – in both

cases. It follows straightforwardly that these examples do not require discourse context or coercion: their specified End states are simple stative predicates (*flat* and *thin*).

With JiD, the predicate of the End state in (34b) is supplied by a contextually-specified end of the event, while the Means event is associated with the Root; we indicate to the contextual specification of the state as K. Concretely, take an example where e.g., *kick* appears in an SPP (without an RSP). JiD effects arise because this Root is not associated with the change of state interpretation that the stative SPP produces. One way to represent this is as in (36):

(36) $\lambda x \lambda s \exists e_1 \exists e_2$ Means(e_1,e_2) $\wedge$ kick(e_2) $\wedge$ End(e_1,s) $\wedge$ kick$_{\mathsf{K}}$(s) $\wedge$ Theme(x, s)

The annotation with K in (36) indicates the role played by context in determining what counts as an End state, where this is not established by the Root. To a first approximation, kick$_{\mathsf{K}}$ is what the context specifies as the end state of a kicking event; this could be e.g., kicked once in a specified time-window, or in a way that involves a multi-step procedure, etc.[7]

It follows that it is easy to produce metalinguistic effects in JiD contexts. For example, the degree to which the state qualifies as holding can be explicitly referred to:

(i) Q: Are those boxes over there kicked? [Each having been kicked once]
A: No, they don't qualify as kicked until they have each received several good shots.

In these examples, *kicked* is *kicked*$_{\mathsf{K}}$, and its status is overtly remarked on.

A final layer of complexity to consider in the K cases is that – at the very least – the state must manifest the way in which it was brought about: in this example, by a kicking event. This point will be relevant to how the Means component is understood, as we will see in §4.3; it is also important for understanding what JiD shares with State Relevance, as we will see in §5.

4.3. EXTENSIONS. Thus far, our discussion has focused on Roots that are not typically associated with end states and that require coercion in the SPP. However, it is also possible to construct scenarios in which a JiD interpretation arises with Roots that are typically associated with stative meanings, such as $\sqrt{\text{FLAT}}$ in *flatten*. Crucially, we observe that the conventional @-interpretation and the context-dependent JiD interpretation differ in their truth conditions. Consider (37):

(37) CONTEXT: *In a box factory, it is necessary to flatten every box once per shift.* <We flatten and then reassemble the boxes.>
The boxes are flattened, let's go home.

a. Typical @-state: All of the boxes are in the flattened state at Topic Time.
b. JiD @-state: All of the boxes 'count as' flattened at Topic Time.

The first interpretation in (37a) represents the typical reading, and, in a scenario where each box has been flattened and then reassembled, it is false. In contrast, the JiD interpretation in (37b) is true. The reverse is also possible, where the @-interpretation is true while the JiD interpretation is false. For instance, if (37) is modified to require that each box be flattened and reassembled six times per shift, it is possible for (37a) to be true while (37b) is false. This would be the case, for example, if all the boxes had been flattened only three times; even if they are all in the flattened

[7] For related (but distinct) perspectives on the role of context in the interpretation of SPPs beyond JiD, see also Maienborn (2009) *et seq.*, as well as Gehrke (2015); Ramchand (2018); Baglini & Kennedy (2019).

state at TT – satisfying the conditions for (37a) – it does not follow that the boxes have been flattened in the sense required by (37b).[8]

The JiD interpretation in (37b) involves a modification to how $\sqrt{\text{FLAT}}$ is typically understood as an End state. Given our discussion of *kick* in (36), the update is as follows:

(38) $\lambda x \lambda s \exists e_1 \exists e_2$ Means(e_1,e_2) $\wedge$ PRED(e_2) $\wedge$ End(e_1,s) $\wedge$ flat$_{\text{K}}$(s) $\wedge$ Theme(x, s)

An important avenue for further investigation is whether phrasal RSPs can be coerced in the same way, that is, whether *The boxes are kicked open* can have an interpretation with open$_{\text{K}}$ that diverges from the typical interpretation of *open* in the manner described above.

We conclude by highlighting an interesting asymmetry in the subcomponents of the stative passive interpretation. We have suggested that when Roots like $\sqrt{\text{FLAT}}$ appear as SPPs, the Means component remains unspecified, as illustrated in (34a) above. This assumption is common. The point of interest is that while there appears to be pressure with $\sqrt{\text{KICK}}$ etc. to coerce a name for the end state s, there is no analogous pressure on the SPP of $\sqrt{\text{FLAT}}$ to specify the Means by which the state was achieved. This asymmetry is intuitive to some extent, given that a statively interpreted SPP precisely concerns the resulting state. Nonetheless, there are a number of questions connected to this point that could be investigated further.[9]

As a final point summarizing what we have shown, the discussion in this section provides a different kind of support for the view that JiD involves a (type of) @ stative – rather than eventive (E) – interpretation. The @-interpretation invariably entails the E-interpretation: if something is in the VERBed state, it is because a VERBing event has occurred. However, as we have just shown, @ does not entail JiD; nor does JiD entail @.

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[8] It is worth noting that the 'counts as' judgment in (37b) can be paraphrased as: "All of the boxes have been flattened in the required sense; therefore, it is not necessary for them to be in the flattened state at TT." The intuition is that a contextual 'counts as' flattened (i.e., flat$_{\text{K}}$) does not strictly require the canonical flattened state to hold. This apparent flexibility might be what has given rise to treatments of JiD as involving an eventive interpretation.

[9] For example, in §4.2 we treated $\sqrt{\text{KICK}}$-type Roots as typical Means predicates, with the state component introduced through coercion. In (38) the action occurs in conjunction with the predicate of states. The question now is how to analyze e_2 with Roots like $\sqrt{\text{FLAT}}$, both within SPP structures and in standard verb phrases such as *flatten the boxes*.

Our current assessment suggests that there are good reasons not to interpret $\sqrt{\text{FLAT}}$-type Roots as Means predicates. One such reason is that if $\sqrt{\text{FLAT}}$ could function as a Means predicate, we would expect it to appear felicitously as the main predicate in Resultative Secondary Predicate (RSP) constructions. This prediction, however, is (by and large) not borne out, as the following examples demonstrate:

(iii) *Mortimer...

a. flattened the chairs [paper-thin/level].

b. emptied the room [bare/vacant].

c. darkened the tables [black/charred/sooty].

The unacceptability of these sentences seems to result from a constraint against "double delimitation": roughly, if $\sqrt{\text{FLAT}}$ must be interpreted as the predicate of the end state in a complex eventuality, then it cannot co-occur with another predicate – like an RSP – that also targets that same end state interpretation. For more on this constraint and theoretical treatments of it, see Tenny (1987); Kratzer (2005); Creemers (2018); Benz (in prep.).

With respect to the concerns in the main text, this observation leads us to conclude that there is no specification of the Means event e_2 with Flat-type Roots. We signal this with the abstract label PRED in the structure in (38).

5. A common locus for JiD and State Relevance. The core intuition developed in the preceding section is that the JiD effect arises because context can determine what counts as an End state in SPPs. This perspective yields a further consequence that becomes evident when we revisit the State Relevance effect discussed in §3.3. There, we observed that modification of SPPs is possible, but only insofar as the modifier contributes to the definition of the End state; or, in the terms introduced earlier, insofar as the effects of the modifier are **manifested** in the End state. Recall that the effect results in contrasts of the following kind:

(39) These boxes are carefully/#secretly flattened.

Building on the proposals in §4, it is possible to view State Relevance effects as sharing the same locus as JiD. Specifically, in modified SPPs, the presence of a modifier produces a state that is properly a subtype of the state associated with the unmodified SPP. Just as JiD requires context to yield an interpretation STATE$_K$, State Relevance requires that the effects of the modifier be reflected in the resulting state. The effect on the End state that is produced by the modifier can be represented as STATE$_M$. Using *flattened* as an example, this is illustrated in (40):[10]

(40) $\lambda x \lambda s \exists e_1 \exists e_2$ Means(e_1,e_2) $\wedge$ PRED(e_2) $\wedge$ End(e_1,s) $\wedge$ flat$_M$(s) $\wedge$ Theme(x, s)

As we have seen, our analysis is that the modifier must be interpreted as applying specifically to the state. If this were not the case – i.e., if a modifier could apply directly to the event – State Relevance effects would not be expected. Empirically, we would then predict that sentences like *The boxes are secretly flattened* should be acceptable without contextual support, and mean merely that the boxes are in a flattened state resulting from an event that occurred in secret. However, this is not what we find.

This observation prompts a broader question about how modifiers relate to the clausal event e_1. We follow Williams (2015) and others in assuming that, in clauses expressing complex change, modification applies to e_1, and not to the Means event e_2. Thus, in examples like (41a), the modifier is interpreted as in (41b):

(41) a. Mary quickly flattened the boxes with a hammer.
b. ... quick(e_1) ...

What is required in the case of modified SPPs is a way of linking a property of the state to a property of the clausal event that ends in that state. Notably, this kind of linkage is independently needed to account for other aspects of SPP interpretation: most significantly, for argument interpretation. As discussed earlier, the argument of an SPP is a Theme, the holder of the resulting state. Following Parsons (1990), this argument must also be understood as the Theme of the clausal event that ends in that state. Using the notation adopted here, this is formalized by the following meaning postulate:[11]

(42) End(e,s) & Theme(s,x) $\models$ Theme(e,x)

[10] It would of course be possible to decompose flat$_M$ into subparts.

[11] Parsons frames this in terms of a BECOME operator; he also notes the action in (42) is intended to be bidirectional. See Biggs and Embick (in prep.) for additional discussion.

One way of treating the interpretation of state-manifested modifiers parallels (42). Consider (43), which postulates that when an End state manifests a modifier Mod, then the event that ends in that state is also entailed to have occurred in the manner specified by Mod:

(43) $\text{End}(e_1,s_{\mathsf{M}}) \models \text{Mod}(e_1)$

If this analysis is on the right track, then the eventualities involved in the SPP are tightly linked in the semantics, in ways that shape both argument structure and modification. At the same time, there is an asymmetry in how arguments and modifiers behave. As noted above, argument behavior appears to be biconditional: both (42) and its converse hold. This means that in a typical verbal clause such as *Mary flattened the box*, the box is interpreted as the Theme of the clausal event e_1, and – by the converse of (42) – as the holder of the End state. Modifiers, by contrast, exhibit a unidirectional entailment: while (43) appears to hold, its converse does not. For instance, in *Mary secretly flattened the box*, there is no requirement that the secrecy be manifested in the End state. Intuitively, this is because in a verbal clause this kind of modification is doing what it typically does, i.e. applying to an event. The situation is more complex in stative clauses, where, as emphasized above, modification must be mediated through the state.

To conclude, this paper has identified two ways in which contextual effects are manifested in the states produced by SPPs. Formally speaking, there are various ways these effects might be analyzed; our aim here has been simply to outline the central issues. We hope that our main contribution – the role of context in both JiD and State Relevance – will prove useful in guiding more detailed future investigations of these phenomena.

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