# It's Hard to Extend: A Unified Account of Raising-Past-Experiencers and Passives in Child English

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## 1. Introduction

This paper is concerned with the relationship between *be*-passives of certain non-actional verbs such as *love* in (1) and raising-past-experiencer (RPE) constructions with the verb *seem* as in (2), both from a theoretical and an acquisition perspective.

(1) Alex was loved by Emma.
(2) Alex seems to Emma to be nice.

There are two questions that we would like to address in this paper. First, why are *be*-passives of certain non-actional verbs such as (1) dramatically delayed in children acquiring English? And second, why would there be a tight correspondence between any given child's ability to comprehend some non-actional passives, and the same child's ability to comprehend a sentence like (2) as found by Orfitelli (2012)?

The paper is structured as follows: Section 2 will summarize experimental findings from previous work. Section 3 will describe one theoretical account that has tried to unify the acquisition of *be*-passives and RPE constructions. Section 4 will introduce a new, alternative proposal. Section 5 contains general implications of our proposal, including future directions.

## 2. Previous experimental findings

Dating back to the 1970s, studies have shown English-speaking children to be generally delayed in their acquisition of verbal *be*-passives with performance on non-actional passives being further delayed until well after 5 years of age (Bever, 1970; Borer and Wexler, 1987; de Villiers and de Villiers, 1973; Maratsos

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 *Proceedings of the 42nd annual Boston University Conference on Language Development*, ed. Anne B. Bertolini and Maxwell J. Kaplan, 598-604. Somerville, MA: Cascadilla Press.

et al., 1985).[1] Several factors have been proposed to explain the general delay in understanding (non-actional) passives (e.g., frequency: Demuth et al., 2010; lexical semantics: Maratsos et al., 1985; syntax: Borer and Wexler, 1987; pragmatic: O'Brien et al., 2006).

To the best of our knowledge, Orfitelli (2012) is the only study that has studied children's parallel acquisition of both passives and raising constructions. Orfitelli (2012) found almost a 100% correspondence between any given child's ability to comprehend the passives of *remember, see, hear,* and *love*, and the same child's ability to comprehend RPE constructions with *seem*.

In the next section, we will summarize one proposal that has connected the acquisition of passives and RPE constructions in children.

## 3. Snyder and Hyams (2015)

One analysis that has been proposed for why children have more difficulty with non-actional passives than with actional passives comes from Snyder and Hyams (2015).

Adopting an idea from Gehrke and Grillo (2009), Snyder and Hyams (2015) proposed that children have difficulty with passivizing non-actional verbs even at age 5 because they cannot yet perform a step of "semantic coercion" that is required for passivization. Because of the tight link between the acquisition of non-actional passives and RPE constructions with the verb *seem*, the authors have proposed that this semantic coercion step is also needed for these RPE constructions but leave much of the details open as to how semantic coercion (as described by Gehrke and Grillo (2009)) is involved in RPE constructions. Snyder and Hyams (2015) rely heavily on Gehrke and Grillo's (2009) account of the passive, so it is worth spelling out in detail what this account is and how it might be extended to RPE constructions.

Like Collins (2005b), Gehrke and Grillo (2009) assume that a passive cannot be derived by moving the object directly past the verb's external argument, because this would violate Relativized Minimality (Rizzi, 1990, 2004). Gehrke and Grillo (2009) proposed that passive Voice$^0$ instead attracts into its specifier a VP shell that denotes a change of state (and also contains the object). From there,

[1] We're focused on verbal *be*-passives although there is a second type of passives that is often talked about in the literature, namely the *get*-passive as in (i). *Get*-passives have been shown to have a syntax that is substantially different from *be*-passives (Alexiadou, 2005) and to have a semantic restriction that bars them from combining with non-actional verbs as in (ii). Furthermore, children's acquisition of *get*-passives does not seem to be as delayed as that of *be*-passives with good performance in comprehension (Harris and Flora, 1982; Fox and Grodzingsky, 1998) and elicited production (Harris and Flora, 1982; Crain and Fodor, 1989; Marchman et al., 1991).

For these reasons, our focus will be on *be*-passives, as it is clear that *get*-passives should be studied separately.

(i) Alex got hugged by Emma.
(ii) *Alex got liked by Emma.

the object moves into subject position without violating Relativized Minimality.[2] In cases where the verb to be passivized is stative, thus lacking the requisite change-of-state semantics, Gehrke and Grillo (2009) proposed that this can sometimes be solved by applying a form of "semantic coercion" that introduces a BECOME operator, and thereby converts a simple state into a change of state.[3] Under Gehrke and Grillo's assumptions, the resulting change-of-state VP moves to the specifier of Voice$^0$ as required.

Gehrke and Grillo's appeal to semantic coercion explains why a stative verb like *know* can passivize as in (3) but *escape* cannot as in (4). This is because it is possible for *know* to have a result state as shown in (3-b) whereas *escape* cannot as shown in (4-b).

(3) a. The solution was known by Alex.
b. Alex got to know the answer / get into a knowing state.
(4) a. *I was escaped by the solution.
b. #The solution got to escape me / get into an escaping state.

Simply extending Gehrke and Grillo's account to the verbs studied by Orfitelli (2012) fails, because at least in the cases of *see*, *hear*, and *love*, the passive forms are no less stative than the corresponding actives; no BECOME operator is present.[4] Additionally, it seems highly unlikely to us how there could be a change-of-state reading that is available for the verb *seem* in RPE constructions. Thus, it is not immediately clear how to relate the Gehrke and Grillo (2009) story to RPE constructions and the findings of Orfitelli (2012).

Yet the idea that smuggling, which is the syntactic mechanism used by Collins (2005b) and Gehrke and Grillo (2009), is somehow a critical link between passives and RPE constructions is bolstered by Collins (2005a), who argues that RPE constructions are similar to passives in that they face the same Relativized Minimality problem. Collins (2005a) proposed a modified smuggling account for

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[2] Transporting the object inside a VP shell is a version of the smuggling account proposed by Collins (2005b).

[3] Gehrke and Grillo (2009) adopt Travis's (2000) theory of event semantics where a typical actional predicate has a VP shell that is available only for predicates with a result state. Stative predicates that have a result state available to them will be able to add this VP shell in order to complete passivization.

[4] Gehrke and Grillo (2009) have reported that the verb *see*, unlike *hear*, has an available result state reading which is why *see* can be passivized as shown in (i). The authors explained that this result state reading is available for *see* because you can enter a seeing state if your eyes were closed before the seeing event. The verb *hear*, on the other hand, does not have a result reading readily available which may explain why passive sentences with *hear* has been found to be hard to test experimentally with children (Maratsos et al., 1985; O'Brien et al., 2006).

(i) Alex was seen by Emma.
(ii) Alex was heard by Emma.

RPE construction in order to solve this problem (see Figure 1 for Collins's derivation of (2)).

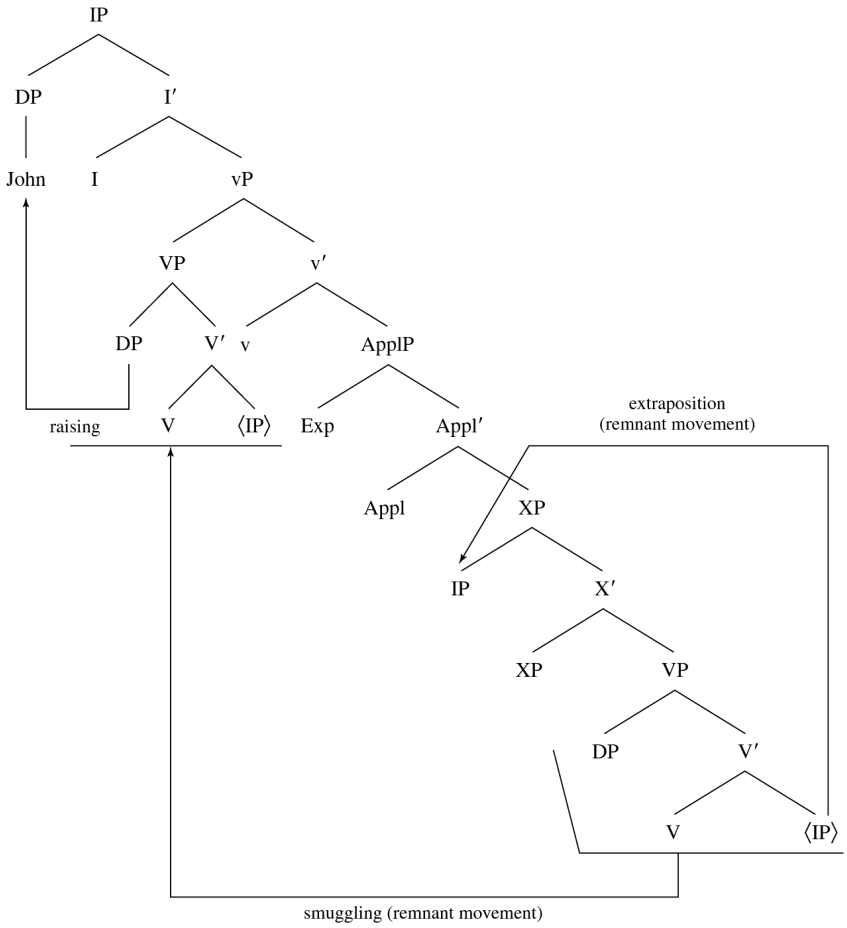


**Figure 1: How raising-past-experiencer constructions are derived according to Collins (2005a).**

In the next section, we propose an alternative version of Gehrke and Grillo's (2009) account that can be easily apply to both non-actional passives and RPE constructions.

## 4. Our proposal: semantic field extension

Our new account is based on ideas from Pinker (1989) who argued that the "core" of the English verbal passive is the verb's dyad of "Agent-Patient" theta

roles situated in the "Action" field. Following Talmy's (1985, 1988) work, these Agent-Patient theta roles have direct counterparts in other semantic fields. For example, in the Perception field, the counterpart to Agent-Patient would be the Perceiver-Percept theta roles and in the Ownership field, an equivalent counterpart would be the Possessor-Possession theta roles (see Table 1). Pinker argues that verbs in English can be passivized if and only if they are associated with a dyad of theta-roles corresponding to Agent-Patient (either Agent-Patient itself, or its direct counterpart in another semantic field).

| Field: | | |
|---|---|---|
| ***Action*** | ***Agent*** | ***Patient*** |
| Perception | Perceiver | Percept |
| Ownership | Possessor | Possession |
| Containment | Container | Content |
| (etc.) | | |

**Table 1: Agent-Patient dyad in other "field" (Pinker, 1989).**

For the passive, our proposal contains three parts: first, on the assumption that English employs an abstract Passive morpheme of some kind, we propose that the morpheme can combine with a verb only if the verb assigns an Agent theta role. Second, we propose that the qualification of "Agent theta role" can be "extended" to a theta role that is the counterpart to Agent for the verb's semantic field, through an operation of *semantic field extension*. Finally, we propose that the locus of children's developmental delay is precisely their ability to perform semantic field extension. This means that until the capacity to extend certain theta roles into a different semantic field comes online, young children (around age 3) will adhere only to the strict or literal definition of Agenthood and will be unable to passivize verbs with theta roles in non-Agent semantic fields.

Moreover, we can extend this approach to RPE constructions as follows: First, following Collins (2005a), we assume that the English RPE construction is actually a type of dative construction, and requires the presence of an abstract Applicative morpheme. Second, we propose that where the Passive morpheme requires an Agent theta role, the Applicative morpheme requires a Goal theta role. In the case of a verb like *seem*, there is no literal Goal, but we propose that the Goal theta role (in the Action field) has a counterpart of Experiencer in the semantic field of Mental States. Finally, we propose that young children are delayed in their acquisition of RPE constructions with the verb *seem* because they are already employing an Applicative morpheme in (for example) double-object datives as shown in (5). If children lack the operation to extend the Goal theta role into a different semantic field, then they will be prevented from using an Applicative morpheme for RPE constructions until a much later point in development (around age 5).

(5) Alex gave flowers to Emma.

## 5. Conclusions & Future Directions

Children's difficulty with passives (especially with non-actional verbs) has been shown cross-linguistically: German (Bartke, 2004), Dutch (Verrips, 1996), Spanish (Pierce, 1992), Russian (Babyonyshev and Brun, 2003), among others. Our proposal should extend past English regardless of whether a language has RPE constructions or not. In order to test whether younger English-speaking children have trouble with semantic field extension, we should test them on passive sentences with verbs in semantic fields other than "Action" across different age ranges (e.g. "Ownership", "Containment").

Further evidence in support of our proposal could come from looking at whether there is delayed acquisition of constructions that required a null Applicative morpheme in languages that have rich case marking (e.g. German, Russian) and thus would require semantic field extension like with RPE constructions in English.

Snyder and Hyams (2015) have proposed that children have trouble with semantic coercion until age 5. Our proposed alternative account can explain the experimental finding that the non-actional verbs whose passives are acquired the latest (Orfitelli, 2012; Maratsos et al., 1985; Messenger et al., 2012) are also the verbs that require Pinker's (1989) type of semantic field extension in order to passivize. Furthermore, on the view that a very similar type of operation is necessary when raising past an experiencer, we can explain Orfitelli's (2012) results: children are delayed in RPE constructions, and also on the passives of stubbornly stative verbs, because they are late to master semantic field extension.

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# Proceedings of the 42nd annual Boston University Conference on Language Development

edited by Anne B. Bertolini
and Maxwell J. Kaplan

Cascadilla Press Somerville, MA 2018



ISSN 1080-692X
ISBN 978-1-57473-086-9 (2 volume set, paperback)
ISBN 978-1-57473-186-6 (2 volume set, library binding)

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