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The determinations of a phonological exponent of agentive v in the Oromo morphological causatives

The Determinations of a Phonological Exponent of Agentive ν in the Oromo Morphological Causatives

Tomoyuki Yabe*

1 Introduction

A morpho-syntactic puzzle has been observed in the verbal complex of the morphological causative/transitive constructions (MCC) in Oromo, a Lowland East Cushitic language spoken mainly in Ethiopia. It is a mismatch between the number of verbal morphemes introducing external arguments and the external arguments that are actually present in the structure. There are approaches suggested for the puzzle in the literature (cf. especially Hayward 1976 and Dubinsky et al. 1988). The present paper gives a new look at the puzzle while it also provides an overall picture of the morpho-syntactic affairs of the Oromo MCC from a perspective based on some basic ideas from Distributed Morphology (DM): a phonological exponent is inserted into a morpheme after syntax or syntactic composition is complete and its phonological exponent varies based on the environment in which a morpheme is placed. The paper gives an account for the determinations of the phonological spell-out of, or a phonological exponent for, the agentive light verb, ν_{AG} , in Oromo. Following Embick (2003) and Bhatt and Embick (2004), the paper adopts the idea that a functional head, ν , can be realized with different phonological exponents based on some structural factors in its morpho-syntactic environment: (i) ν_{AG} 's structural approximation to its root, (ii) what dominates it directly, and (iii) what type of a root it selects. The verbal suffixes introducing external arguments, transitivity and causativity, in Oromo are a realization of the agentive light verb, ν_{AG} . It has a set of allomorphs that includes a phonetically null member, \emptyset . Thus, from a DM perspective, the mismatch is viewed not really as a mismatch. It is just a consequence of the fact that ν_{AG} in Oromo cannot be audible in a certain structural environment. The presence of such a null occurrence of ν_{AG} delivers a distorted picture on the surface that can be seen as a puzzle.

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2 Oromo Morphological Causatives and Transitives

Hayward (1976) is the first work that closely studies the morphological causativization and transitivity in Oromo. Related work is found in Owens (1985), Lloret (1987), and Dubinsky et al. (1988). In this section, I provide an overview of the basic morpho-syntactic affairs of the Oromo morphological causative/transitive constructions. We will look at the transitive and causative expressions that are derived by an application or applications of a suffix, *-s*.

2.1 The Derived Transitive and the Causative of Derived Transitives

Unaccusative verb stems in Oromo can be morphologically derived into transitive by an application of a suffix, *-s*, as in (1, 2).^{1,2} For the sake of description, let us call this morphological type of transitive expressions *derived* transitives.

- (1) a. bišaan-i damf-e
water-Nom boil-Pst.3MS
'the water boiled' (Baye Yimam 1986:129)
- b. tulluu-n bišaan damf-(i)s-e
Tulluu-Nom water boil-*Trs*-Pst.3MS
'Tulluu boiled the water' (Baye Yimam 1986:129)
- (2) a. muk-ni gog-e
wood-Nom dry-Pst.3MS
'the wood dried' (Lloret 1987:141)
- b. terfaa-n muka gog-s-e
Terfa-Nom wood dry-*Trs*-Pst.3MS
'Terfa dried the wood' (Lloret 1987:141)

The morphological causative of derived transitives as in (1, 2) is derived by another application of *-s* to the already formed verbal complex, [stem-*s*], as in (3, 4).³

¹Following Hayward (1976), I will take, *-i-* and *-ii-* as epenthetic elements. For discussions of the phonology of the Oromo MCC, see Hayward (1976) and Lloret (1987). All data used in the paper are adapted from the previous studies.

²Abbreviations: Acc=accusative; Cs=causative; F=feminine; M=masculine; Nom=nominative; Pst=past; S=singular; Trs=transitive; Unacc=unaccusative; Unerg=unergative.

³The second occurrence of a suffix, *-s*, can also derive intensification of the event whose agent is added by the first application of *-s*, instead of the causativization of

- (3) tulluu-n fayyiisaa bišaan damf-(i)s-(ii)s-e
 Tulluu-Nom Fayysaa water boil-*Trs-CS*-Pst.3MS
 'Tulluu made Fayysaa boil the water' (Baye Yimam 1986:129)
- (4) terfaa-n toltuu muka gog-s-(ii)s-e
 Terfa-Nom Toltuu wood dry-*Trs-Cs*-Pst.3MS
 'Terfa made Toltuu dry the wood' (Lloret 1987:144)

In Oromo, the morphological derivation of a transitive expression from an unaccusative stem and the causative of such a *derived* transitive expression are constructed by incremental applications of a suffix, *-s*: stem, stem-*s*, stem-*s-s*.

2.2 The Causative of Underived Transitives and Unergatives

The formations of the morphological causative of the *underived* transitive, i.e., transitive verbal expressions that are not morphologically derived from an unaccusative base as opposed to *derived* transitive expressions as above, and unergative stems seem to involve two applications of *-s* as in (5, 6).

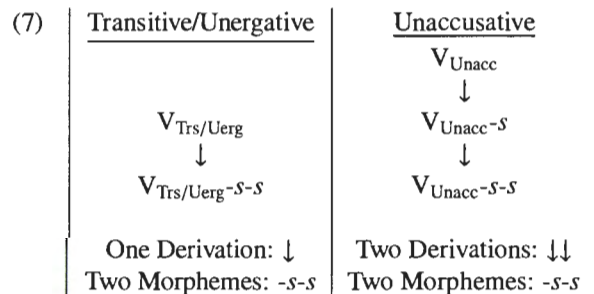
- (5) a. terfaa-n aannan dug-e
 Terfa-Nom milk drink-Pst.3MS
 'Terfa drank the milk' (Baye Yimam 1986:486)
- b. terfaa-n gamteesaa aannan dug-s-(ii)s-e
 Terfa-Nom Gamtesa milk drink-*s-s*-Pst.3MS
 'Terfa made Gamtesa drink the milk' (Dubinsky et al. 1988:486)
- (6) a. terfaa-n fiig-e
 Terfa-Nom run-Pst.3MS
 'Terfa ran' (Dubinsky et al. 1988:486)
- b. terfaa-n gamtessa fiig-s-(i)s-e
 Terfa-Nom Gamteessaa run-*s-s*-Pst.3MS
 'Terfa made Gamtesa run' (Dubinsky et al. 1988:486)

2.3 The Puzzle

When we compare the formation of the causative of *underived* transitive and unergative expressions (cf. 5b&6b) and that of *derived* transitive expressions (cf. 3, 4), we can notice a difference between the verbal morphologies of the two types. Each addition of an external argument during the derivations of

the same event. I will only discuss the occurrences of *-s* that introduce an external argument.

transitive form an unaccusative stem and the causative of *derived* transitives is accompanied by the addition of *-s* in the verbal complexes while there is a mismatch between the number of the derivations and the morphemes in the structure of the causative of *underived* transitives and unergatives. The addition of a causer, the external argument of causation, seems to be accompanied by two applications of *-s*. The contrast is depicted in the chart in (7).



Hayward (1976) describes the distributions of *-s* in terms of the number of the agentive noun phrases present in the resultant structures after the application(s) of *-s* in their verbal complex: "the numbers of *s* affixes introduced will correspond to the number of agentive noun phrases appearing in the [structure]." Hayward's description does capture the basic distributional nature of the suffix; it is related to the addition of an agent noun phrase. However, Hayward's description would not have anything to say about the presence of an agent noun phrase that is not accompanied by suffixation of *-s* in the structures of *underived* transitives and unergatives that are schematically represented in (8d,f) along with the structures already accounted for (cf. 8).

- | | | | | | | |
|-----|----|--------------|--------------|--------------------|--------------------------------|------------|
| (8) | a. | water | | boil... | (Unacc) | |
| | b. | <u>Agent</u> | water | boil- <u>s</u> ... | (Derived Trs) | |
| | c. | <u>Agent</u> | <u>Agent</u> | water | boil- <u>s</u> - <u>s</u> ... | (Cs of 8b) |
| | d. | <u>Agent</u> | milk | drink... | (Underived Trs) | |
| | e. | <u>Agent</u> | <u>Agent</u> | milk | drink- <u>s</u> - <u>s</u> ... | (Cs of 8d) |
| | f. | <u>Agent</u> | | run... | (Unerg) | |
| | g. | <u>Agent</u> | <u>Agent</u> | | run- <u>s</u> - <u>s</u> ... | (Cs of 8f) |

If *-s* marks an agentive noun phrase, why are the agent noun phrases of sentences as in (8d,f) not marked by *-s*? Our puzzle in (7) also seems to be induced by the presence of structures like the ones in (8d,f) in which an agent-introducing morpheme, *-s*, does not appear to accompany an agent noun phrase but it somehow seems to manifest itself when the structure is causativized

by another application of a suffix, *-s* (cf. 8e,g). Dubinsky et al. (1988) also touch upon Hayward's puzzle and give an alternative account from a Relational Grammar perspective by saying that: "the correlation is really between *-s* morphemes and grammatical subjects rather than between *-s* morphemes and thematic agent." This paper gives a new look at the puzzle that retains Hayward's insight that there is a close connection between a verbal suffix, *-s*, and the presence of an agent noun phrase by saying *-s* is a phonological realization of the agent-introducing functional head, v_{AG} , while it attempts to give a total account for the morphological affairs regarding the transitivity and causativization by a suffixation of *-s* in Oromo with a perspective from a DM viewpoint.

3 Assumptions and Claims

In this section, I will make some theoretical claims and assumptions that will be fundamental for the analyses proposed for the morphological affairs of the Oromo MCC in the next section. We will identify a verbal suffix, *-s*, as a phonological realization of an agent-introducing functional element that verbalizes a root: namely, v_{AG} . Also, based on a morphological pattern from Oromo and Kashmiri, where the same element, *-s* in Oromo and *-Ina:v* in Kashmiri, appears as a transitivity and a causativizer, I will claim that the causative of transitive construction has an underlying structure in which two v_{AG} 's are layered over a root. I will also adopt the hypothesis that the external argument of all verbs is introduced via the mediation of v_{AG} . Thus, in the underived transitive constructions in Oromo that do not realize a suffix *-s*, v_{AG} remains null. It follows then that *-s* and \emptyset are allomorphs for v_{AG} in Oromo.

3.1 The Syntactic Identity of *-s*

The very first question we should perhaps ask is: What is the syntactic identification of the verbal morpheme *-s*? We have seen that *-s* is realized as a transitivity and a causativizer in Oromo. Interestingly, it also appears with denominal and deajektival verbal expressions as in (9).

(9) (Temesgen Neggasa 1995:16)

- a. malaa → malaa-(i)s...
- pus pus-s
- 'to discharge pus'

- b. gudaā → gudaā-(i)s...
 big big-s
 'to make something big'

One important point for us to remark upon is that the denominal and de-jectival verbs that appear with *-s* are interpreted only as a transitive expression even when an unaccusative interpretation is quite natural to be read off from nouns and adjectives as in (9), e.g., 'to become big' and 'to ooze pus'. Judging from the data in (9) and the fact that *-s* appears as a transitivizer, it is natural for us to treat a verbal suffix, *-s*, in Oromo as a phonological realization of the agentive verbalizing element, namely, v_{AG} , which always introduces an external argument.⁴

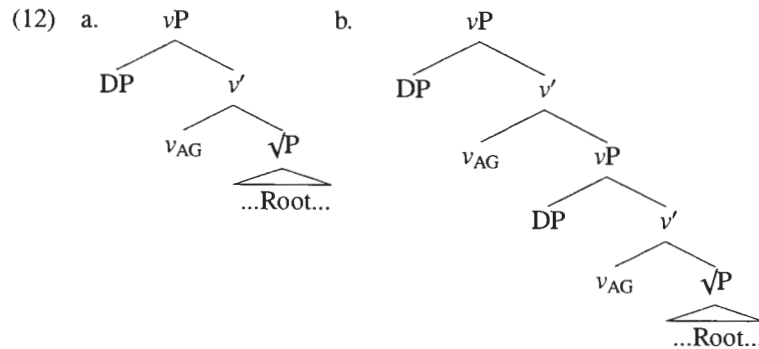
- (10) *-s* is a phonological realization of v_{AG}

A question follows immediately after the statement in (10): Is the causative occurrence of *-s* also a phonological realization of v_{AG} ? This paper pursues an approach in which the question is answered positively based on a morphological phenomenon in Oromo: namely there are incremental applications of the same morpheme, *-s*, for the stepwise derivations of the transitive of unaccusatives and the causative of the *derived* transitives (cf. 11). The morphological phenomenon is not an isolated one in Oromo. Bhatt and Embick (2004) also mention a similar morphological phenomenon from Kashmiri. Kashmiri has parallel morphological derivations to those of Oromo. They are juxtaposed in (11) (11b is from Hook and Koul 1984 that is adopted in Bhatt and Embick 2004).

- (11) a. danf... danf-(i)s... danf-(i)s-(ii)s... (Oromo)
 b. grak grak-*Ina*:*v* grak-*Ina*:*v*-*Ina*:*v* (Kashmiri)
 boil_{Unacc} boil_{Trs} 'A to make B boil C'

Based on the presence of this type of verbal morphology in Oromo and Kashmiri, I claim a syntactic structure as in (12b) for the causative of transitives in which a layer of two v_{AG} 's selects a root. It is given along with the structure of a transitive construction as in (12).

⁴For the sake of discussion, I take a term "agentive" and a function, "introducing an external argument" to be equivalent.



Besides the straightforward account it delivers for the morphological identity between the transitive and causative morphemes in Oromo and Kashmiri (cf. 11), the present approach also gives an account for the difference between the two verbal derivations, transitivization and causativization, that are accompanied by the same morpheme that introduces an external argument. The two derivations both add v_{AG} to a structure. However, the two are minimally different in that the v_{AG} that is added for the transitivization is the one that merges locally to its root (cf. 12a) while the causativizing v_{AG} merges away from its root or is separated by the local v_{AG} (cf. 12b) from its root. This approach explains that their shared function, external argument introduction, is due to their categorial identity: being v_{AG} . They are only different with respect to what they select syntactically. The transitive v_{AG} selects a root. The causative v_{AG} selects another v_{AG} and a root. They are the same syntactic element at different syntactic locations.

3.2 The Allomorphs

The next set of questions we will tackle is those regarding the causative of *underived* transitives and unergatives where two *-s*'s seem to be applied while there is only one derivation in the argument structure, namely causativization, as depicted in (13) (cf. also 5, 6).

- (13) a. dug... → c. dug-s-(ii)s...
 'A to drink B' 'A to make B drink C'
- b. fiig... → d. fiig-s-(ii)s...
 'A to run' A to make B run

Let us assume the hypothesis that the external arguments of all verbs are introduced by v_{AG} . Then it has to be the case that, in Oromo, v_{AG} is present

even in structures where *-s* is not observed in the verbal complex as the ones in (13a,b). Instead of being realized as *-s* as in the structure of *derived* transitives (cf. 1b, 2b), the transitive v_{AG} in these structures is phonetically null. Thus we are led to assume that the transitivizer v_{AG} in Oromo has two allomorphs: *-s* or \emptyset . With this allomorphy approach, we can have a possible perspective on the presence of two *-s*'s in the verbal complex of the causative structures in question (cf. 13c,d); the transitive v_{AG} that remains null gets realized as *-s* in the morphological causative constructions in which it is doubled with the causative *-s*. This is depicted in (14).

- (14) a. dug- \emptyset → dug-*s*-(ii)-*s*..
 drink- v_{Trs} drink- v_{Trs} - v_{Cs}
- b. fiig- \emptyset → fiig-*s*-(ii)-*s*..
 run- v_{Trs} drink- v_{Trs} - v_{Cs}

Based on this line of thinking, I claim that v_{AG} in Oromo can be phonetically realized either as *-s* or \emptyset .

- (15) v_{AG} in Oromo: *-s* or \emptyset

In the next section, we will build a complete set of morpho-syntactic analyses of the different phonological realizations of v_{AG} in the Oromo MCC based on the allomorphic pair in (15), the syntactic structures in (12) and some ideas from Distributed Morphology regarding the phonological realizations of abstract morphemes.

4 The Selections of a Phonological Exponent of v_{AG}

Let us adopt a basic idea from Distributed Morphology, *Late Insertion*: phonological content for a morpheme or a word is inserted after syntax. The phonological spell-out, or vocabulary insertion of v_{AG} , along with those of all other morphemes and words, awaits the completion of syntactic composition. We will also adopt the idea from Embick (2003) and Bhatt and Embick (2004) that a functional element, v , may have different phonological exponents based on the morpho-syntactic environments around it (for similar approaches, see Embick 1996, Miyagawa 1998, Lidz 1998). Thus, in a DM perspective, allomorphs are members of a set of different phonological exponents realized for the same morpheme. Dimensions on which morpho-syntactic environments can be shaped differently for v_{AG} in structures as in (12) are two-fold: (i) its structural approximations to its root (cf. 16ii), and (ii) whether it is selected

by another v_{AG} or not (cf. 16i). v 's approximation to its root is either local, directly selecting its root, or not local, being separated by another v_{AG} from its root. Let us call the former approximation *inner* v and the latter *outer* v :

	... X	[_{VP} v	[_{VP} v	... Root ...
(16)	(i) Selected by:	X	v	
	(ii) Position:	<i>outer</i>	<i>inner</i>	

In Oromo, v_{AG} has two different phonological exponents, $-s$ and \emptyset , that are realized in different morpho-syntactic environments. Therefore, the puzzle that is an apparent morpho-syntax mismatch observed in the Oromo MCC is not a mismatch at all. It is an illusion on the surface caused by the fact that \emptyset is selected for v_{AG} in a certain structural environment. In the following section, we will see how different structural environments created by the factors in (16) induce the selections of the different phonological exponents of v_{AG} in Oromo.

4.1 The Phonological Spell-out of v_{AG} as a Causativizer

The causative occurrence of v_{AG} seems to be always realized as $-s$. We have seen that the derivations of *derived* transitives from unaccusative stems and the causative of such *derived* transitives in turn involve the incremental applications of $-s$ (cf. 1–4). Thus, the causative v_{AG} in this type of causative structure is realized as $-s$ as in (17a,c).

(17)	<u>The Base</u>		<u>The Causative</u>
	a. stem _{Unacc} - s	→	c. stem _{Unacc} - s - s
	b. stem _{Trs/Unerg} - \emptyset	→	d. stem _{Trs/Unerg} - s - s

As for the causative of *underived* transitives and unergatives, we have assumed that the string of two $-s$'s that appears in their verbal complex is composed of the causative v_{AG} and the transitive v_{AG} , and that the transitive one is realized as $-s$ along with the causative $-s$ while the former is not realized without the occurrence of the latter (cf. 17b,d).

The causative v_{AG} is realized as $-s$ in both types of causative structure in (17). We can generalize the realization rule for the causative v_{AG} by using the morpho-syntactic structural description in (16ii), i.e., v 's structural approximation to its root, as in (18). The causative v_{AG} is the *outer* v_{AG} .

(18)	<u>The Outer:</u> $v_{AG} \leftrightarrow -s$
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This means that v_{AG} is always spelled-out as $-s$ when it occurs not local to its root.

4.2 The Phonological Spell-out of v_{AG} as a Transitivity Marker

The next step is the determination of a phonological exponent for the v_{AG} that occurs as a transitivity marker. We have adopted the idea that subjects of all transitive verbs, no matter whether morphologically derived or underived, are always introduced into the argument structure by the aid of v_{AG} . It means that v_{AG} is present in the argument structure of all transitive verbs. However, in Oromo, a phonological realization of v_{AG} , *-s*, occurs only with a certain type of transitive verbs, namely, morphologically derived transitives. Let us call the derived type *boil* type (cf. 18a). This would mean that, with underived transitive or unergative stems, it is not phonologically realized. Instead, \emptyset is selected. Let us call the underived type the *drink* type (cf. 18b). The two types are shown as schematic structures in (19).

- (19) a. The Boil Type b. The Drink Type
 stem_{Unacc-S} stem_{Trs/Unerg}-(**s*/ \emptyset)

The same type of differentiation is also made between the two English words, *destroy* and *grow*. It is a pair of English verbs that Chomsky (1970) discusses. Marantz (1997) claims that a root can come with a specification for agentivity: “[T]he agent of *destroy* is somewhat implied by the root” while the agent of *grow* is not. Consider the difference between the nominalizations of the two expressions in (20, 21):

- (20) a. that John destroys the city
 b. John’s destruction of the city
 c. the city’s destruction
- (21) a. that John grows tomatoes
 b. *John’s growth of tomatoes
 c. the tomatoes’ growth

Both the agent and patient arguments of *destroy* can become the genitive possessor of its nominalized counterpart, *destruction*, while only the patient argument of *grow* can be the possessor of nominalized *growth*. This is because the agent of *destroy* is implied by its root even before the process of verbalization of the root. On the other hand, the agent of *grow* is not implied by the root. Assuming the process of nominalization to be a direct syntactic process applied to a root, the nominalized expression of *destroy* would include agent implication while that of *grow* would not. The difference between the two expressions is reflected in the fact that the agent subject of *destroy* that is also an implied agent of its root before the verbalization can be realized as the

possessor of the nominal expression (cf. 20) while the agent subject of *grow*, which is not an implied agent of its root before the verbalization, cannot be the possessor of its nominal version, *growth* (cf. 21).

I take the presence/absence of the agentivity implication to be also the factor in Oromo that differentiates the two types of transitive verbs as in (19). With this said, we are now in a place to describe the regulations on the determinations of a phonological exponent for v_{AG} as a transitivity marker as in (22).

(22) The Inner:

- a. $v_{AG} \leftrightarrow \emptyset$ / with an agentive root
- b. $v_{AG} \leftrightarrow -s$ / with a non-agentive root

Recall that there is another environment in which v_{AG} is realized, as *-s*, independently from the rules in (22). It is the transitive v_{AG} that co-occurs with the occurrence of the causative v_{AG} in the causative of underived transitive and unergative structures (cf. 5, 6, 14). We have just described that the v_{AG} of the underived transitives and unergatives is the v_{AG} of an agentive root and that it always remains null (cf. 22b). Thus, the occurrence of the causative v_{AG} seems to be the sole reason for the phonetic realization of the transitive v_{AG} as *-s* and overwrites the rule in (22a). This phenomenon can be related to the structural relationship between the two v_{AG} 's. We can formalize the present case of the spell-out of the v_{AG} as in (23).

(23) The Inner:

- $v_{AG} \leftrightarrow -s$ / dominated by v_{AG}

Simply adding (22) and (23), we will get a complete set of the rules for the selections of a phonological exponent for the transitive v_{AG} in Oromo as in (24).

(24) The Inner:

- a. $v_{AG} \leftrightarrow \emptyset$ / with an agentive root
- b. $v_{AG} \leftrightarrow -s$ / with a non-agentive root
- c. $v_{AG} \leftrightarrow -s$ / dominated by v_{AG}

The organization of the rules in (24) indicates that there are two structural environments that induce the selection of *-s* (cf. 23i,ii). There is a disjunctive condition for the selection of *-s* for v_{AG} . There also has to be a hierarchy between the two rules (24a) and (24c). The latter has to overwrite the former in the verbal complex of the causative of underived transitive and unergative structures. The story is complicated. There is an alternate way to capture the morphological situation without having the two exponent rules for *-s* and the rule hierarchy. (24) is revised as in (25).

(25) The Inner:a. $v_{AG} \leftrightarrow -s$ b. $v_{AG} \leftrightarrow -\emptyset$ with an agentive root and not dominated by v_{AG}

The reformulation in (25) indicates that the selection of \emptyset is induced only in one marked morpho-syntactic environment. (25) takes $-s$ as the unmarked or default exponent for v_{AG} in Oromo. Also, there is no need of a hierarchy between rules. With (25), we can avoid the undesired complication.

4.3 The Phonological Spell-out of v_{AG} in Oromo and Solving the Puzzle

Combining the exponent rule for the *outer* v_{AG} in (18) and the ones for the *inner* in (25) together, we can describe the determinations of a phonological exponent of v_{AG} in Oromo entirely as in (26).

(26) The Inner: $v_{AG} \leftrightarrow -s$ $v_{AG} \leftrightarrow -\emptyset$ with an agentive root and not dominated by v_{AG} The Outer: $v_{AG} \leftrightarrow -s$

The total picture given in (26) confirms that the reformulation of the rules in (25) is on the right track. The *outer* v_{AG} is uniformly realized as $-s$. It is a realization of the default exponent, $-s$, of v_{AG} . If the exponent rule for the *outer* v_{AG} is added to the set of the rules in (24), the situation only gets more complicated. There would be three different realizations of $-s$ altogether.

Now, with the rules in (26), let us go back to the puzzle. It is an apparent mismatch between the numbers of a process that adds an agent to the argument structure and the morpheme that derives such a process (cf. 7). In a perspective based on the set of the exponent rules in (26), the puzzle is nonexistent. When there is an agent noun in the argument structure, there is always an element introducing the agent noun: v_{AG} . Thus, even in the problematic cases for Hayward's observation as in (8d, f), the transitive v_{AG} in the structures of underived transitive and unergative, where there seems to be no accompanying agent marking element $-s$, there actually is v_{AG} . However, it is not pronounced due to its morpho-syntactic environment. The presence of the transitive v_{AG} seems to be confirmed because the same element is phonetically realized when it is causativized by another application of $-s$ in the verbal complex. It is realized as $-s$ along with the causative v_{AG} , the *outer* v_{AG} . Thus, the apparent puzzle is just a consequence of the fact that the argument-introducing v_{AG}

in Oromo can be either null or realized as *-s* based on its different morpho-syntactic environments. The puzzle disappears.

5 Conclusion

The puzzle: There is a mismatch between the number of verbal morphemes, *-s*, that introduce agent noun phrases and the agent noun phrases that are actually present in the structures in the Oromo MCC. Taking the puzzle as a probe into the whole system, the present paper attempts to provide a total account for the morphological affairs of the verbal complex of the Oromo morphological causatives with a perspective based on ideas from Distributed Morphology. We operate under the idea that a phonological content is inserted into a morpheme after syntax (Late Insertion). We also adopted the idea from Embick (2003) and Bhatt and Embick (2004) that a functional element, v , can have allomorphs. It can have various phonological exponents based on different morpho-syntactic environments in which v is placed. Couching it in terms of different phonetic exponents that form an allomorphic set, we claimed that an agent-introducing verbal morpheme in Oromo, *-s*, is a phonological exponent for agentive v that has a null counterpart. It is tantamount to saying that v_{AG} in Oromo has two allomorphs: *-s* and \emptyset . Based on the presence of the incremental applications of the identical morpheme for transitivity and causativization observed in Oromo and Kashmiri, we claimed that the syntactic structure of the morphological causative of transitives realizes a layer of two agentive vP 's over a single root. Dimensions on which morpho-syntactic environments for v_{AG} can be shaped differently in such a syntactic structure are two-fold: (i) v_{AG} 's structural approximations to its root, whether local to its root or not local, i.e., separated by the *inner* v_{AG} or not, and (ii) whether it is selected by another v_{AG} or not. Taking v_{AG} 's sensitivity to the agent implication of its root into account, we claimed that *-s* is the default phonological exponent for v_{AG} in Oromo, and there is one instance in which v_{AG} is realized as \emptyset . From our DM perspective, the puzzle is not really a puzzle. It is simply a distorted image on the surface. It is a consequence of the fact that, in Oromo, the transitive v_{AG} is not phonologically realized in the structure with an agentive root unless it is causativized by another application of v_{AG} that is also realized as *-s*.

References

- Baye Yimam. 1986. Phrase Structure in Ethiopian Oromo. Doctoral Dissertation, University of London.
- Bhatt, Rajesh, and David Embick. 2004. Causative derivations in Hindi. Ms., University of Texas at Austin and University of Pennsylvania.
- Chomsky, Noam. 1970. Remarks on nominalization. In *Studies on Semantics in Generative Grammar*, 11–61. The Hague: Mouton.
- Dubinsky, Stanley, Maria-Rosa Lloret, and Paul Newman. 1988. Lexical and syntactic causatives in Oromo. *Language* 64:485–500.
- Embick, David. 1996. Causativization in Hupa. *Proceedings of the BLS* 22:83–94.
- Embick, David. 2003. Locality, listedness and morphological information. *Studia Linguistica* 57:3:143–169.
- Hayward, Richard J. 1976. A questions in Oromo morphophonology. *Folia Orientalia* 17:29–40.
- Hook, Peter, and Omkar Koul. 1984. On the grammar of derived transitives and causatives in Kashmiri. In *Aspects of Kashmiri Linguistics, Series in Indian Languages and Linguistics*, ed. Peter Hook and Omkar Koul, 90–122. New Delhi, India: Bahri Publications.
- Lidz, Jeffery. 1998. Valency in Kannada: evidence for interpretive morphology. *Penn Working Papers in Linguistics* 5:37–63.
- Lloret, Maria-Rosa. 1987. The morphophonology of the causative in Oromo. *Journal of African Languages and Linguistics* 9:141–156.
- Marantz, Alec. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. *Proceedings of the 21st Annual Penn Linguistics Colloquium, Penn Working Papers in Linguistics* 4:201–225.
- Miyagawa, Shigeru. 1998. *Sase* as an elsewhere causative and the syntactic nature of words. *Journal of Japanese Linguistics* 16:201–225.
- Owens, Jonathan. 1985. *The Oromo Causatives: Lexical Grammar without Lexical Rules*. Bloomington, Indiana: Indiana University Linguistics Club.
- Temesgen Neggasa. 1995. Word formation in Oromo. *Ethiopian Journal of Languages and Literature* 5:1–56.

Department of Linguistics
 CUNY Graduate Center
 365 Fifth Avenue, Room 7407
 New York, NY 10016-4309
 tyabe@gc.cuny.edu