On Thematically Underspecified Arguments*

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SUMMARY

This paper explores how thematically underspecified arguments are distributed and interpreted in light of Wood and Marantz's (2017) proposal. Specifically, based on the assumption that thematically underspecified arguments are introduced by the original argument-introducing category-neutral head *i**, it argues that their interpretations are determined at the C-I interface, either by the syntactic context or by the inferential procedure that serves to resolve thematic underspecification. It also argues that thematic uniqueness (Carlson 1984, Landman 2000) plays a crucial role in restricting their distribution and interpretation. Relevant empirical facts and potential counterexamples are also briefly reviewed and discussed in the paper.

RÉSUMÉ

Cet article examine la distribution et l'interprétation des arguments thématiquement non spécifiés au vu de la proposition de Wood et Marantz (2017). Plus précisément, établi sur la supposition que les arguments thématiquement non spécifiés sont introduits par la tête originale *i** introduisant l'argument et qui est de catégorie neutre, il avance que leurs interprétations sont déterminées à l'interface C-I, soit par le contexte syntaxique, soit par la procédure déductive qui sert à résoudre la sous-spécification. L'article avance également que la singularité thématique (Carlson 1984, Landman 2000) joue un rôle central dans la restriction de leur distribution et de leur interprétation. Les faits empiriques pertinents et les éventuels contre-exemples sont aussi brièvement revus et étudiés dans cet article.

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1 INTRODUCTION

1.1 THE ORIGINAL ARGUMENT INTRODUCER

The postulation of dedicated syntactic heads for introducing arguments such as Voice for external arguments (Kratzer 1996, Chomsky 1995) and Appl for external and internal arguments (Marantz 1993, Pylkkänen 2002/2008) has been standard practice in the Principles-and-Parameters framework, and, since the original proposals, various versions of such heads have been proposed (e.g., Cuervo 2003, Folli and Harley 2007, and Kim 2011).

In an attempt to derive a restricted set of argument introducers, Wood and Marantz (2017) (henceforth, W&M) have recently proposed a theory where major argument introducers in (1) all involve one single argument-introducing head *i**.

(1) a. Voice: Bare *i** that merges with vP
b. High Appl: Bare *i** that merges with a lexical root
c. Low Appl: Bare *i** that merges with DP
d. Little p: Bare *i** that merges with PP
e. (Big) P: Root-adjoined *i** that merges with DP

The original argument introducer *i** is assumed to have certain syntactic and semantic properties.[1] First, it has an unspecified categorial feature, which is valued by the first categorially specified constituent with which it merges. Second, it has the selectional feature for a constituent of category D, notated as [S:D], which need not be satisfied by the first constituent with which it merges. Third, it has the function, indicated by the * notation of *i**, of closing off the extended projection of the first constituent with which it merges. This function effectively demarcates a structural domain, barring multiple occurrences of bare *i** in that domain. Moreover, based on contextually determined interpretation rules, the argument introduced by *i** is interpreted differently from one syntactic context to another, as in (2).[2]

(2) a. $[\![i^*]\!] \leftrightarrow \lambda x \lambda e.\ \text{AGENT}(e,x)$ / ___ (agentive vP)
b. $[\![i^*]\!] \leftrightarrow \lambda x \lambda e.\ \text{FIGURE}(s,x)$ / ___ (locative PP)

The rule in (2a) says that, if vP denotes an event implying the presence of an agent, the external argument receives the agentive interpretation, reflecting the fact that the choice of an item involved in the complement vP affects the interpretation of an external argument, but not vice versa (Chomsky 1981, Marantz 1984, Kratzer 1996). This can be stated in more general terms as follows: in the structure {Y, {*i**, X}}, Y is assigned the thematic role implied by X. The same is essentially true of complex argument introducers based on *i**, which involve a lexical root as the syntactic context and the source of interpretation. For instance, the contextually dependent interpretation rule for the *i** head with the root $\sqrt{\text{FOR}}$ adjoined to it (abbreviated as i^*_{FOR}) is given in (3). As W&M assume, if this complex head merges with DP, it becomes categorized as P.

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[1] For reasons of space, the exposition is extremely brief. See W&M (2017) for details.

[2] There is an alternative rule whereby the argument introduced by *i** is not assigned any interpretation: $[\![i^*]\!] \leftrightarrow \lambda x.\ x$. This rule corresponds to expletive Voice, as opposed to thematic Voice. See Schäfer (2008, 2017), and Alexiadou, Anagnostopoulou, and Schäfer (2015).

Alternatively, if it merges with vP, it is categorized as v and functions as a high Appl head (i.e., $\text{Appl}_{\text{BEN(efactive)}}$). Either way, the argument introduced by i^*_{FOR} is interpreted as a beneficiary.

(3) $[\![i^*]\!] \leftrightarrow \lambda x \lambda e.\ \text{BENEFICIARY}(e,x) \ /\ \_\_\_\ \sqrt{\text{FOR}}$

1.2 THEMATICALLY UNDERSPECIFIED ARGUMENTS

If we seriously consider W&M's treatment of argument introducers and their interpretation rules, we are led to assume that bare *i** introduces a thematically underspecified argument. Consider again, say, the contextually determined interpretation rule in (2a) above. It appears redundant as it is because the agentive interpretation emerges within the context of an agentive vP. Taken out of this context, the interpretation rule for *i** can be stated as follows:[3]

(4) $[\![i^*]\!] \leftrightarrow \lambda x \lambda e.\ \text{PARTICIPANT}(e,x)$

Assuming (4), we can say that, when *i** introduces a thematic argument, it introduces a thematically underspecified one, whose interpretation is further specified by the syntactic context, as shown in (2) and (3) above.[4]

Given that underspecification must be resolved at the interface to meet the principle of Full Interpretation (Chomsky 1986), thematic underspecification must be resolved at the C-I interface, and a thematically underspecified participant argument cannot remain as such. Thus, if an argument is left underspecified after application of the relevant interpretation rules, it needs to be integrated into the event denoted by the vP by some other means. While there are several ways to resolve thematic underspecification (e.g., Ritter and Rosen 1993, 1997, Washio 1993, Rivero 2004), I assume in the spirit of Rivero (2004) that, when the vP involved does not serve to specify the thematic relation of an underspecified argument, an inferential procedure is invoked at the C-I interface. In a nutshell, this procedure integrates an underspecified participant into the event by construing it as being the cause(r) of an event (i.e., as a proto-agent) or as being causally affected in the event (i.e., as a proto-patient), while respecting thematic uniqueness (Carlson 1984, Landman 2000), which is reducible to the principle of Full Interpretation. For the purposes of this paper, the essence of this procedure can be informally formulated as in (5), where coarse-grained thematic relations such as PROTO-AGENT and PROTO-PATIENT are employed (Dowty 1991, Baker 1997):

(5) a. $\lambda x \lambda e.\ \text{PARTICIPANT}(e,x) \rightarrow \lambda x \lambda e.\ \text{PROTO-AGENT}(e,x)$
b. $\lambda x \lambda e.\ \text{PARTICIPANT}(e,x) \rightarrow \lambda x \lambda e.\ \text{PROTO-PATIENT}(e,x)$

Specifically, in a context where there is no proto-agent relation in the semantic representation, a participant relation can be specified either as a proto-agent relation through (5a) or as a proto-

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3 This rule corresponds to thematic Voice. See footnote 2.

4 Given the rule for participants in (4), the interpretation rules in (2a) and (2b) can be revised as context-sensitive rewriting rules, as shown in (i) and (ii), respectively. Note that the rule for beneficiaries in (3) remains as it is.

(i) $\lambda x \lambda e.\ \text{PARTICIPANT}(e,x) \rightarrow \lambda x \lambda e.\ \text{AGENT}(e,x) \ /\ \_\_\_$ (agentive vP)
(ii) $\lambda x \lambda e.\ \text{PARTICIPANT}(e,x) \rightarrow \lambda x \lambda e.\ \text{FIGURE}(e,x) \ /\ \_\_\_$ (locative PP)

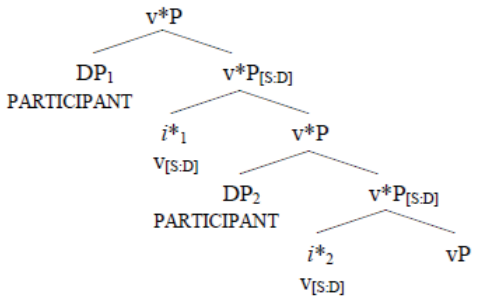
patient relation through (5b). On the other hand, in the presence of a proto-agent relation, it can only be specified as a proto-patient relation through (5b) due to thematic uniqueness. Moreover, when a proto-patient relation is chosen, the argument must be in some relation, linguistically encoded or otherwise, to an argument affected in the event in order to be construed as such.[5]

1.3 THE DISTRIBUTION OF ARGUMENT INTRODUCERS

While *i** is defined in such a way that it has the function of closing off the extended projection of the first constituent it merges with and thereby restricting the number of occurrences of bare *i** to one per domain, considerations of thematic uniqueness may be able to derive this restriction, at least partially. Specifically, thematic uniqueness, as part of the principle of Full Interpretation, requires that no more than one argument can stand in a particular thematic relation to an event in the semantic representation at the C-I interface. This means in effect that in narrow syntax, no more than one argument introducer of a particular kind is allowed in a vP domain.

Now, consider *i**. Since it does not name a particular thematic relation by definition, thematic uniqueness is irrelevant to thematically underspecified arguments until their underspecification is resolved at the C-I interface, either by contextually dependent interpretation rules or by the inferential procedure discussed above. Thus, in narrow syntax, it is possible in principle to introduce more than one underspecified argument into one vP domain, as depicted in (6) (where the * notation is shown, though it has no role in the discussion). I argue, however, that the resulting semantic representation, which has more than one underspecified participant relation, as in (7), cannot be dealt with through the above interpretive processes due to indeterminacy in application, which violates the principle of Full Interpretation.[6] In this way, it can be maintained that, as in the case of complex *i** heads introducing thematically specified arguments, only one bare *i**—and hence only one thematically underspecified argument—is allowed in a vP.

(6)



[5] This is referred to as the link requirement in the literature regarding the experiencer subject of English *have*. See Belvin and den Dikken (1997), Ritter and Rosen (1997) and McIntyre (2006).

[6] See Chomsky, Gallego, and Ott (2017) for discussion about avoiding indeterminate rule application. I thank Yoshihito Dobashi for bringing the relevance of their work to my attention.

(7) $\exists e[\text{PARTICIPANT}(e)=DP_1 \ \& \ \text{PARTICIPANT}(e)=DP_2 \ \& \ V(e) \ \& \ ...]$

To sum up the discussion thus far, we have seen that bare *i** introduces a thematically underspecified argument, while the more complex root-adjoined *i** introduces an argument thematically specified by the root involved and that thematic underspecification is resolved at the C-I interface. This process is carried out either through contextually dependent interpretation rules or through the inferential procedure whereby an underspecified participant argument is integrated into the event as a proto-agent or as a proto-patient in the semantic representation. Moreover, thematic uniqueness must be respected, and thus, in the presence of an agent argument in the semantic representation, an underspecified argument can only be converted into a proto-patient through the inferential procedure. Furthermore, no more than one occurrence of an argument introducer of a particular kind is allowed in a vP.

In the following sections, I will briefly review the relevant empirical facts, with special focus on the distribution and interpretation of thematically underspecified arguments.

2 ONLY ONE THEMATICALLY UNDERSPECIFIED ARGUMENT

2.1 AGENT/AFFECTEE AMBIGUITY

First, consider the sentence in (8), where the subject can be an agent or an affectee, but not both at the same time.[7,8,9] As (9) and (10) clearly show, the ambiguity is not illusionary.

(8) Taroo$_1$-ga {kare$_1$-no/zibun$_1$-no/Ø$_1$} ude-o or-Ø-ta [> ot-ta] AGENT
T.-NOM he-GEN/self-GEN/pro arm-ACC √break-CAUS-PST AFFECTEE
'Taroo broke his/an arm.'

(9) Taroo$_1$-ga {kare$_1$-no/zibun$_1$-no/Ø$_1$} ude-o or-Ø-ta [> ot-ta] ~~AGENT~~
T.-NOM he-GEN/self-GEN/pro arm-ACC √break-CAUS-PST AFFECTEE
kedo, zibun$_1$-de-wa or-Ø-anak-ar-ta [> -at-ta]
but self-INST-TOP √break-CAUS-NEG-DV-PST
'Taroo broke his/an arm, but he didn't break it himself.'

(10) *Taroo$_1$-niyotte {kare$_1$-no/Ø$_1$} ude-ga or-Ø-are-ta AGENT
T.-by he-GEN/pro arm-NOM √break-CAUS-PASS-PST ~~AFFECTEE~~
kedo, kare.zisin$_1$-de-wa or-Ø-anak-ar-ta [> -at-ta]
but he.self-INST-TOP √break-CAUS-NEG-DV-PST
'Taroo's arm was broken by him, but he didn't break it himself.'

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[7] The following abbreviations are used: ACC = accusative; CAUS = causative; COP = copula; DAT = dative; DV = dummy verb; GEN = genitive; INCH = inchoative; INST = instrumental; NEG = negative; NOM = nominative; PASS = passive; PST = past; TOP = topic; √ = acategorial root. Moreover, eliminated interpretations are represented by a ~~double strikethrough~~.

[8] The sentence is an example of the so-called adversity causative. W&M propose an updated version of the low applicative analysis. See Takehisa (2016) for arguments against approaches that syntactically encode possession.

[9] As pointed out by Mikinari Matsuoka (p.c.), when an overt pronoun or reflexive appears within an object, (8) and (9) degrade in acceptability with an affectee subject, though the judgments are not shown here. This can be explained from a pragmatic point of view (Ariel 1990, Hara 2001). See Takehisa (2016) for pragmatically controlled examples.

It is well known that two conditions need to be met for the subject to receive the affectee interpretation (Inoue 1976). One condition holds that a verb must be unspecified with respect to the selection of an external argument (e.g., causative/inchoative verbs), as shown in (11); the other holds that the subject argument must be in a "proximate" relation, typically, a relation of inalienable possession, to an argument affected in the event. Consider (12), where this condition is not met.

(11) Taroo-no ude-ga or-e-ta
T.-GEN arm-NOM √break-INCH-PST
'Taroo's arm broke.'

(12) *Taroo$_1$-ga {kare$_1$-no/zibun$_1$-no/Ø$_1$} tue-o or-Ø-ta [> ot-ta] AGENT
T.-NOM he-GEN/self-GEN/pro stick-ACC √break-CAUS-PST
kedo, zibun$_1$-de-wa or-Ø-anak-ar-ta [> -at-ta]
but self-INST-TOP √break-CAUS-NEG-DV-PST
'Taroo broke his/an arm, but he didn't break it himself.'

I argue that the ambiguous subjects as in (8) are left thematically underspecified due to the vP involved, and their interpretations are derived by means of the inferential procedure discussed above. Specifically, in the absence of an agent argument, an underspecified argument can be construed as a proto-agent (agent) through (5a) or as a proto-patient (affectee) through (5b), and, when the proto-patient (affectee) interpretation is chosen, the argument must be related to an argument affected in the event so as to be construed as such. Thus, the ambiguity arises at the C-I interface: one and the same argument can receive either of the two different interpretations, depending on how the inferential procedure applies. This underspecification analysis, together with the restriction on multiple occurrences of bare *i** in one vP domain, explains why an agent and an affectee do not co-occur.[10]

2.2 NO ACTIVE COUNTERPARTS TO POSSESSOR PASSIVES

The present analysis can be carried over to the so-called possessor passives (Kubo 1990), as in (13). As a kind of indirect passive, there is no corresponding active sentence where the passive subject is an object, as shown in (14).

(13) Taroo-ga Ziroo-niyotte keeki-o tabe-rare-ta
T.-NOM Z.-by cake-ACC eat-PASS-PST
'Taroo had his cake eaten by Ziroo.'

(14) *Ziroo-ga Taroo-o/-ni keeki-o tabe-ta
Z.-NOM T.-ACC/-DAT cake-ACC eat-PST

Assuming that the passive Voice head is a complex argument introducer, different from bare *i**, which introduces a suppressed agent argument,[11] I argue that the nominative subject in (13) is

[10] The approach that assumes Voice and Appl for agents and affectees, respectively, will be discussed below.

[11] Schäfer (2008, 2017) calls this type of Voice thematic passive Voice, which introduces a theta-role for an external

introduced by bare *i** as an underspecified argument and that, in the presence of the agentive adjunct *niyotte*-phrase within the projection of the passive Voice head, it receives a proto-patient interpretation at the C-I interface by means of (5b). In this case, it is construed as a possessor of the accusative theme argument. Moreover, the lack of a corresponding active sentence can be attributed to the same reason as above: no more than one occurrence of bare *i** is allowed in a vP.

3 APPARENT COUNTEREXAMPLES

3.1 COMPLEX ARGUMENT INTRODUCERS

The transitive alternants of some ditransitive causative verbs show the same kind of ambiguity in the subject interpretation as in (8) above. This is shown in (15) below, where the (b) example is a continuation of the (a) example.[12] As we saw above, the subject in (15) is an underspecified argument introduced by bare *i**, and, in the absence of an agent, it can be construed as a proto-agent (agent) or a proto-patient (affectee, recipient).

(15) a.	Taroo-ga penki-o abi-ta		AGENT
	T.-NOM paint-ACC pour-PST		AFFECTEE/RECIPIENT
	'Taroo$_1$ got paint poured over him$_1$.'		
	'Taroo poured paint over himself.'		
b.	kedo, zibun-de-wa abi-nak-ar-ta [> -at-ta]		~~AGENT~~
	but self-INST-TOP pour-NEG-COP-PST		AFFECTEE/RECIPIENT
	'but he didn't pour it over himself by himself.'		

However, the co-occurrence of an agent and a non-agent is possible with the ditransitive causative alternant, as in (16). I argue that the (structural) dative argument of the ditransitive causative in (16) is introduced by a high Appl (i^*_{TO}), as depicted in **Error! Reference source not found.** below, while the nominative is introduced by bare *i** as an underspecified argument and then construed as a proto-agent (agent) in the presence of a proto-patient (recipient) in the semantic representation.[13] To maintain a coherent morphological analysis, the lexical causative morpheme *-se* should be (re)analyzed as being a realization of (a part of) i^*_{TO}.[14]

(16)	Ziroo-ga	Taroo-ni	penki-o	abi-se-ta
	Z.-NOM	T.-DAT	paint-ACC	pour-CAUS-PST
	'Ziroo poured paint over Taroo.'			

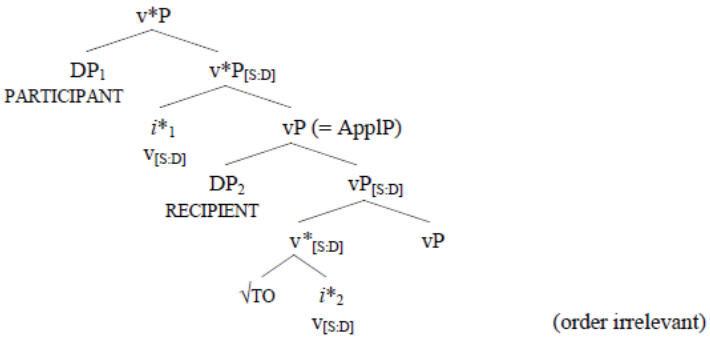
argument but lacks a D-feature. I leave open how *i** is involved in deriving this passive Voice head.

[12] The alternating verb in (15) and (16) is a *show*-type verb, as opposed to *pass*-type verbs, as described in Matsuoka (2003).

[13] I do not discuss the mechanism of morphological case marking in this paper. Suffice it to say that a dependent case theory developed by Baker (2015) is adopted with the ancillary assumption that complex *i** heads such as i^*_{TO} vary as to whether they can assign inherent Case to their argument (Takehisa 2002).

[14] Within the framework of Distributed Morphology (Halle and Marantz 1993), at least four possibilities can be discerned for an analysis of *-se*: (i) as a realization of $\sqrt{TO}$, i.e., the root responsible for the applicative semantics, (ii) as a realization of *i** in the context of $\sqrt{TO}$, (iii) as a realization of [$\sqrt{TO}$, *i**], which is derived through the post-syntactic morphological operation of fusion, or (iv) as a realization of i^*_{TO} through vocabulary insertion at a non-terminal node (e.g., Radkevich 2010). I leave the analysis open for future research.

(17)



As far as the transitive/ditransitive alternation shown in (15a) and (16) is concerned, the same conclusion can be reached based on the assumption that Voice and Appl introduce agents and affectees/recipients, respectively. However, such an approach cannot account for the non-co-occurrence of an agent and an affectee, which we observed in the last section, since nothing prevents Voice and Appl from co-occurring in the same domain unless their distribution is regulated in some way or another.[15,16] In contrast, the underspecification approach pursued here can properly account for the distribution of the relevant arguments in terms of the restriction on the distribution of argument introducers. Given this restriction, which is independently motivated by considerations of thematic uniqueness, it is predicted that co-occurrence is possible, as long as no more than one argument introducer of a particular type is involved in the same domain.

3.2 DIFFERENT DOMAINS

Another set of potential counterexamples that is immediately conceivable is the causative and experiencer *have* in English (Ritter and Rosen 1993, 1997), as in (18), where the subject of *have* can be construed either as a causer or an experiencer.

(18) John had his students walk out of class.

Taking *have* as a functor predicate, which contributes no thematic information, Ritter and Rosen propose that it takes a bare VP complement and extends the event denoted by the complement in order to include a peripheral cause or effect (i.e., experience). With our assumptions about argument introducers, the essence of their proposal might correspond to two occurrences of bare *i** in a vP domain, as in (6) above.

Although some details need to be worked out, I tentatively propose that the functor use (or possibly any use) of *have* is bare *i** categorized as v and constitutes a different verbal domain, as depicted in (19), where the * notation on *i** is omitted.[17] The fact that the complement of *have* is not restricted to vP can support the view that the categorial status of *have* as a verb is not

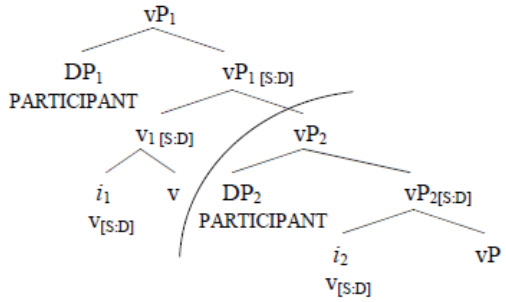
15 See Takehisa (2002, 2014) for a Case-competition account of the non-co-occurrence of an agent and an affectee.

16 Note that it is still valid to assume Voice and Appl for languages like German and Spanish, where an agent and an affectee co-occur (Takehisa 2002, Cuervo 2003, and Schäfer 2008).

17 Presumably, the same analysis can be applied to Korean morphological causatives and passives (Kim 2011, a.o.).

dependent on that of its complement.

(19)



If this analysis is on the right track, we can maintain that only one bare *i** is allowed in a vP.

4 CONCLUDING REMARKS

This paper briefly sketched the distribution and interpretation of thematically underspecified arguments in light of Wood and Marantz's (2017) recent proposal. Building on the assumption that they are introduced by the original argument introducer *i**, I hope to have shown that, as in the case of thematically specified arguments, the distribution and interpretation of thematically underspecified arguments are restricted by thematic uniqueness, which is ultimately reducible to the principle of Full Interpretation.

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