NON-SELECTED ARGUMENTS AND THE ETHICAL STRATEGY[*]

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1. Introduction

Languages have strategies to introduce an argument to a predicate which does not select it as an event participant. Such an extra argument typically appears with an adposition or case marker specifying how it participates in the event, but there are also cases in which a non-selected argument introduced does not have its interpretation fully specified, thereby allowing a variety of interpretations.[1] Presumably, the variable interpretation is possible because the argument is not selected by the main predicate in the first place, and moreover, the syntactic head introducing it leaves unspecified what relation it has to the event described by the main predicate.

For instance, as is well known, verbs displaying the causative/inchoative alternation are underspecified with respect to external argument selection, allowing a variety of external arguments to appear. As Schäfer (2012) argues, in languages like German, these arguments can be grouped into two: canonical external arguments, which are introduced by Voice (Kratzer 1996), and non-canonical external arguments, which are introduced by Appl (Cuervo 2003, Pylkkänen 2002, 2008, Rivero 2004, Rivero and Savchenko 2005). These two kinds of arguments are associated with different case markings and interpretations, as shown in (1):[2]

(1) a. Der   Mann zerbrach die   Vase
      the.NOM man   broke   the.ACC vase
      'The man broke the vase.'

   b. Dem   Mann zerbrach die   Vase
      the.DAT man   broke   the.NOM vase
      'The man unintentionally caused the vase to break.'
      'The vase broke and the man is affected by this.'   (Schäfer 2012)

Although there is no visible difference in case marking, a variety of external arguments can appear with the causative alternants of Japanese causative/inchoative verbs as well, as shown in (2). The subject in (2)a can be construed as an agent (labelled

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[1] I assume, following Kratzer (1996), that the agent argument is introduced by Voice. Thus, it is a non-selected argument with its interpretation specified.
[2] The abbreviations used are ACC(usative), CAUS(ative), COP(ula), DAT(ive), D(ummy)V(erb), GEN(itive), INCH(oative), INST(rumental), NEG(ative), N(on)P(a)ST, POT(ential), P(a)ST, √V(erbal root).

as [A]), but, depending on the verb phrase involved, the subject can be construed as a higher, indirect cause of the event (labelled as [IC]), as in (2)b, or a possessor (labelled as [P]), as in (2)d, or both (labelled as [P/IC]), as in (2)c. Note that, in (2)b–(2)d, the second conjunct serves to eliminate the agentive reading, which is always available.[3, 4]

(2) a.   Taro-ga koi-ni   koppu-o war-Ø-ta (>wat-ta)   [A]
          T-NOM   intention-COP cup-ACC √break-CAUS-PST
          (*kedo zibun-de-wa   war-Ø-anak-at-ta)
            but   self-INST-TOP √break-CAUS-NEG-DV-PST
          'Taro broke a cup (*but he didn't break it himself).'

     b.   Taro-ga ie-o   tat-e-ta   ~~[A]~~
          T-NOM   house-ACC √build-CAUS-PST   [IC]
          kedo zibun-de-wa tat-e-nak-at-ta
          but   self-INST-TOP √build-CAUS-NEG-DV-PST
          Lit.: 'Taro built a house, but he didn't build it himself.' (* in English)

     c.   Taro-ga [Ø   kami]-o kir-Ø-ta (>kit-ta)   ~~[A]~~
          T_1-NOM pro_1 hair-ACC √cut-CAUS-PST   [P/IC]
          (kedo zibun-de-wa kir-Ø-anak-at-ta)
            but   self-INST-TOP √cut-CAUS-NEG-DV-PST
          Lit.: 'Taro cut his (own) hair, but he didn't cut it himself.' (* in English)

     d.   Taro-ga [Ø   ude]-o   or-Ø-ta (>ot-ta)   ~~[A]~~
          T_1-NOM pro_1 arm-ACC √break-CAUS-PST   [P]
          (kedo zibun-de-wa or-Ø-anak-at-ta)
            but   self-INST-TOP √break-CAUS-NEG-DV-PST
          'Taro broke his (own) arm, but he didn't break it himself.'

This paper investigates non-selected arguments with special focus on those displaying the interpretational variability in an attempt to argue for the following three points: first, Japanese has the same distinction between external arguments as in German and the nominative subjects in (2) can be classified into arguments introduced by Voice and by Appl; second, non-agentive, non-selected arguments are introduced by the most underspecified Appl head as a mere event participant; and third, the post-syntactic inferential procedure, a modified version of the Ethical Strategy (Rivero 2004), is at work in deriving various readings associated with thematically underspecified arguments.

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[3] Eliminated readings are represented by a double strikethrough.
[4] Non-volitional agents, which will be discussed in section 4, fail to pass the conjunction test, as shown in (i), since they are the direct causer of the event.

(i) Taro-ga ukkari   koppu-o war-Ø-ta (>wat-ta)(*kedo zibun-de-wa   war-Ø-anak-at-ta)
     T-NOM inadvertently cup-ACC √break-CAUS-PST   but self-INST-TOP √break-CAUS-NEG-DV-PST
     'Taro inadvertently broke a cup (*but he didn't break it himself).'

The paper is organized as follows: in section 2, I will show that, despite no difference in case marking, Japanese has two types of external arguments, as German does. In section 3, I will argue that the Appl head involved is the most underspecified kind and introduces a thematically underspecified argument, and that the difference in the licensing property of the Appl head involved derives the cross-linguistic difference in the distribution of thematically underspecified arguments. In section 4, an analysis will be presented in which Rivero's (2004) Ethical Strategy, in conjunction with Dowty's (1991) proto-role theory, plays a crucial role in resolving the thematic underspecification.

Before going into discussion, it should be noted that I assume that the indirect causer reading in (2)b is a case of metonymy, where the subject is the identified higher cause in command of an unidentified direct cause of the event, and the argument with this reading is syntactically no different from the agent argument, introduced by Voice. Thus, it will not be discussed in the following.

2. Two Types of External Arguments in Japanese

This section demonstrates that Japanese has two types of external arguments just as German does. Specifically, the nominative subjects as in (2)a are introduced by Voice, while those as in (2)c and (2)d are introduced by Appl.

2.1 Direct Passivization

A first piece of evidence comes from direct passivization. The so-called passive morpheme *(r)are* in Japanese is polyfunctional and adequate care must be taken to rule out confounding factors. In this respect, I assume that the distinction between *ni* passives and *niyotte* passives is real (Kuroda 1976), with the latter being direct passives, where *(r)are* is a realization of Voice$_{PASS(ive)}$ and the suppressed agent argument can be realized as a phrase headed by *niyotte*. This is in contrast to the malefactive *(r)are*, which I take to be a realization of Appl$_{MAL(efactive)}$ introducing an argument negatively affected by the embedded event. Once such care is taken, a split emerges between the subjects in (2), as shown in (3). While the agentive reading survives through passivization as expected, the non-agentive readings are eliminated.

(3) a. Taro-niyotte   koppu-ga   war-Ø-are-ta   [A]
         T-by   cup-NOM   √break-CAUS-PASS-PST
         'A cup was broken by Taro.'

     b. Taro-niyotte [Ø   kami]-ga   kir-Ø-are-ta   [A]
         T$_1$-by   pro$_1$ hair-NOM   √cut-CAUS-PASS-PST   [P/IC]
         'Taro's hair was cut by him.'

     c. Taro-niyotte [Ø   ude]-ga   or-Ø-are-ta   [A]
         T$_1$-by   pro$_1$ arm-NOM   √break-CAUS-PASS-PST   [P]
         'Taro's arm was broken by him.'

2.2 Formation of Potential Constructions

A second piece of evidence involves potential constructions. Fukuda (2013) argues that two different morphemes for potential constructions should be recognized, which he calls POT$_1$ (*e/(ra)re*) and POT$_2$ (*u/e*) and that POT$_1$ is a realization of Voice$_{(Active)}$ and Modal$_{Root}$ bundled together (i.e., Voice/Modal$_{Root}$) and POT$_2$ is that of Modal$_{Alethic}$, which is higher than Voice/Modal$_{Root}$. Moreover, POT$_1$ is used to mark dynamic root modality in the sense of ability and situational possibility.

    This said, the same split as we saw above can be observed with a particular type of potential constructions with the dative-nominative case marking pattern. Specifically, when a potential construction of this type is negated with the topicalized dative subject, the ability reading is forced on the subject. Since this reading involves Voice/Modal$_{Root}$, the dative subject is necessarily an agent and the non-agentive readings are eliminated, as shown in (4):

(4) a. Taro-ni-wa koppu-ga war-Ø-e-nak-Ø (>-nai)   [A]
           T-DAT-TOP cup-NOM   √break-CAUS-POT$_1$-NEG-NPST
           'Taro isn't able to break cups.'

      b. Taro-ni-wa [Ø   kami]-ga kir-Ø-e-nak-Ø (>-nai)   [A]
           T$_1$-DAT-TOP pro$_1$ hair-NOM √cut-CAUS-POT$_1$-NEG-NPST ~~[P/IC]~~
           'Taro isn't able to cut his (own) hair.'

      c. Taro-ni-wa [Ø   ude]-ga   or-Ø-e-nak-Ø (>-nai)   [A]
           T$_1$-DAT-TOP pro$_1$ arm-NOM √break-CAUS-POT$_1$-NEG-NPST ~~[P]~~
           'Taro isn't able to break his (own) arm.'

    Perhaps the same point can be made more clearly from potential constructions in dialects spoken in the northern Kyushu region, where different morphemes are employed for ability and situational possibility (*kir* and *(ra)re*, respectively). As shown in (5), the non-agentive readings are not available with *kir* because they are not interpretations associated with Voice, which is necessarily involved in the ability reading of potential constructions.

(5) a. Taro-wa koppu-ba war-Ø-kir-n-Ø (>wari-kir-an)   [A]
           T-TOP   cup-ACC √break-CAUS-POT-NEG-NPST
           'Taro isn't able to break cups.'

      b. Taro-wa [Ø   kami]-ba   kir-Ø-kir-n-Ø (>kiri-kir-an)   [A]
           T$_1$-TOP   pro$_1$ hair-ACC √cut-CAUS-POT-NEG-NPST ~~[P/IC]~~
           'Taro isn't able to cut his (own) hair.'

      c. Taro-wa [Ø   ude]-ba   or-Ø-kir-n-Ø (>ori-kir-an)   [A]
           T$_1$-TOP   pro$_1$ arm-ACC √break-CAUS-POT-NEG-NPST ~~[P]~~
           'Taro isn't able to break his (own) arm.'

2.3 Culmination Cancellation

Finally, the defeasibility of event culmination interpretation also points to the same distinction as above. Firstly pointed out by Ikegami (1981) and later discussed in detail by Tsujimura (2003), accomplishment verbs, typically causative/inchoative verbs, in Japanese do not entail but implicate the end point. While the phenomenon may have several different sources such as incremental themes and the lack or paucity of determiners in Japanese, a descriptive generalization is that, for the culmination implicature to be cancelled, the subject must be an agent (with volition).

For the purposes of this paper, I propose in the spirit of Bar-el et al. (2005) that the cancellation reading involves Voice/Modal$_{\text{Inertia World}}$, an active Voice head bundled with a modal head introducing inertia modality (Dowty 1979). [5] Consider the following examples:

(6) a. Taro-ga koppu-o war-Ø-ta (>wat-ta) kedo war-e-nak-at-ta   [A]
          T-NOM cup-ACC √break-CAUS-PST   but   √break-INCH-NEG-DV-PST
          Lit.: 'Taro broke a cup, but it didn't break.' (* in English)

     b. Taro-ga [Ø kami]-o kir-Ø-ta (>kit-ta) kedo kir-e-nak-at-ta   [A]
          T$_1$-NOM pro$_1$ hair-ACC √cut-CAUS-PST   but   √cut-INCH-NEG-DV-PST ~~[P/IC]~~
          Lit.: 'Taro cut his (own) hair, but it wasn't cut.' (* in English)

     c. Taro-ga [Ø ude]-o   or-Ø-ta (>ot-ta)   kedo or-e-nak-ar-ta   [A]
          T$_1$-NOM pro$_1$ arm-ACC √break-CAUS-PST but   √break-INCH-NEG-DV-PST ~~[P]~~
          Lit.: 'Taro broke his (own) arm, but it didn't break.' (* in English)

Note that culmination cancellation is impossible when a *niyotte* passive is involved, as shown in (7) below (cf. (6)a). This sensitivity to voice lends support to a bundling analysis of Voice$_{\text{(Active)}}$ and Modal$_{\text{Inertia World}}$, which excludes Voice$_{\text{PASS}}$ from allowing culmination cancellation.

(7) Taro-niyotte koppu-ga war-Ø-are-ta   (*kedo war-e-nak-at-ta)
      T-by   cup-NOM √break-CAUS-PASS-PST but   √break-INCH-NEG-DV-PST
      'A cup was broken by Taro(, *but it didn't break).'

Summing up so far, external arguments appearing in the causative alternants of Japanese causative/inchoative verbs are classified into two types, agents and non-agents. Specifically, the possessor/indirect causer and the possessor subjects cannot be treated as agents, since they fail to pass the tests for agentivity. Thus, it is safe to conclude that they are not introduced by Voice. Rather, they are introduced by Appl.

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[5] Modal$_{\text{Inertia World}}$ serves to create non-culminating accomplishments by removing the requirement that the change of state event culminate in the actual world. As a result, the agent's activity is in the actual world but the rest of the eventuality is in inertia worlds. That is, an agent does something which in the normal course of events would bring about the result denoted by the predicate. See Bar-el et al. (2005) and Lyutikova and Tatevosov (2010) for precise formal implementations.

2.4   Further Differences between Arguments Introduced by Appl

At this point, I would like to point out further differences between two types of arguments introduced by Appl. Specifically, the possessor/indirect causer and the possessor subjects behave differently in the following tests: the availability of the verbal pro-form *soo su-ru* ('do so') and embedding under syntactic causatives.

First, in Japanese, the use of the verbal pro-form has a constraint to the effect that the "replaced" verb phrase must involve a volitional activity (Shibatani 1978). possessor/indirect causer and possessor subjects present a crucial difference as to whether or not they allow the verbal pro-form: only the former is fine, as shown by (8)b and (8)c, respectively.

(8)   a.   Taro-ga   koppu-o   war-Ø-ta (>wat-ta).   Ziro-mo   soo   si-ta   [A]
           T-NOM   cup-ACC   √break-CAUS-PST   Z-also   so   do-PST
           'Taro broke a cup. Ziro did so, too.'

      b.   Taro-ga   [Ø   kami]-o   kir-Ø-ta (>kit-ta).   Ziro-mo   soo   si-ta   [A]
           T$_1$-NOM   pro$_1$ hair-ACC   √cut-CAUS-PST   Z-also   so   do-PST   [P/IC]
           'Taro cut his (own) hair. Ziro did so, too.'
           'Taro had his (own) hair cut. Ziro did so, too.'

      c.   Taro-ga   [Ø   ude]-o   or-Ø-ta (>ot-ta).   Ziro-mo   soo   si-ta   [A]
           T$_1$-NOM   pro$_1$ arm-ACC   √break-CAUS-PST   Z-also   so   do-PST   ~~[P]~~
           'Taro broke his (own) arm. Ziro did so, too.'

One might wonder if the fact that possessor/indirect causer subjects are fine with the verbal pro-form, as in (8)b, contradicts with the results of the three tests for agentivity discussed above. However, what it shows is that non-agentive subjects can be construed as volitional, or responsible, with respect to the event described. Although volition is frequently employed as a diagnostic for agentivity and thus this "replacement" test serves to detect agent arguments quite well, the notion of volition is not inherent to the meaning of agent (Dowty 1979, Demirdache 1997). Thus, I assume crucially that the presence of Voice is not required for the replacement. In terms of Dowty's (1991) theory of proto-roles, the subject in (8)b can be taken to bear a proto-agent *property* of volition but not a proto-agent *role*.

Then, what is different between (8)b and (8)c? Put differently, why is it the case that the subject in (8)c cannot be construed as volitional? The answer, I argue, lies in the nature of the event described: it must be an externally caused event, not an internally caused one.[6] Specifically, although the subject in (8)b, being an argument of Appl, is not a direct agent/causer, the event described is an externally caused one, thus implicating the existence of some external cause, which is not syntactically encoded but conceptually understood. On the other hand, the event described in (8)c can be internally caused as well, and once this option is available, it seems very hard to construe the subject as

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[6] See Levin and Rappaport Hovav (1995) for the distinction between internal and external causation.

volitional without identifying it with the direct external cause of the event. Whatever turns out to be the correct answer to the question, I believe that reference to the internal/external distinction in causation is necessary.

Another difference emerges between the possessor/indirect causer and the possessor arguments when they appear as the dative-marked causee of a syntactic causative. Syntactic causatives in Japanese are ambiguous between the coercive reading, and the permissive reading, where the causee is required to be volitional (Shibatani 1976); and the dative-marked causee argument must be animate or agentive in a syntactic causative embedding a transitive predicate (Inoue 1976). With these in mind, consider the following:

(9)   a.   Ziro-ga Taro-ni   koppu-o   war-Ø-ase-ta   [A]
               Z-NOM   T-DAT   cup-ACC   √break-CAUS-CAUS-PST
               'Ziro made/let Taro break a cup.'

          b.   Ziro-ga Taro-ni   [Ø   kami]-o   kir-Ø-ase-ta   [A]
               Z-NOM T_1-DAT pro_1 hair-ACC   √cut-CAUS-CAUS-PST   [P/IC]
               'Ziro made/let Taro cut his (own) hair.'
               'Ziro made/let Taro have his (own) hair cut.'

          c.   Ziro-ga Taro-ni   [Ø   ude]-o   or-Ø-ase-ta   [A]
               Z-NOM T_1-DAT pro_1 arm-ACC   √break-CAUS-CAUS-PST   [P̶]
               'Ziro made/let Taro break his (own) arm.'

As shown in (9)b, the possessor/indirect causer reading is available under both the coercive and the permissive readings as expected. Moreover, the fact that the permissive reading is possible is consistent with the availability of the verbal pro-form in (8)b. However, given that a causee argument is not necessarily agentive and an animate causee argument can appear in a syntactic causative embedding a transitive predicate, the question arises as to why the possessor subject in (9)c is not available under the coercive reading, which does not require the dative causee argument to be volitional. Since there is nothing wrong to have an argument of Appl as the dative-marked causee, as shown in (9)b, a different explanation must be sought to account for the unavailability of the possessor reading of the dative causee argument in (9)c.

Though I do not have a satisfactory answer at this stage of investigation, I would like to suggest that pragmatic considerations such as Horn's (1984) division of pragmatic labor help explain this puzzle. Specifically, there is a better, simpler alternative form than (9)c with the dative argument as a possessor, in order to describe the same situation. However, I leave the issue open for future research.

Summarizing, the possessor/causer argument and the possessor argument show clear differences as to whether or not they can be construed as volitional, and the difference in this respect can be elucidated by the tests involving the verbal pro-form and syntactic causatives. Moreover, the difference between them is related to another difference in the event described by the verb phrase: internal and external causation.

3.   Types of Appl Heads

In the last section, we saw that the possessor/indirect causer and the possessor arguments are introduced by Appl in syntax. I will briefly clarify what I assume about this argument-introducing functional head in the following.

First, I assume that Appl heads come in "flavors," as Folli and Harley (2007) proposed for the light verb *v*, and that the Appl head we are concerned with is the most underspecified kind, merely relating an argument to the event denoted by its verbal complement.[7] The argument introduced is construed as a participant of the event but it is underspecified with respect to how it participates in it.[8] For concreteness, I propose that such an argument bears the underspecified thematic relation of participant and that the interpretation of an argument bearing that relation is subject to enrichment by means of the post-syntactic inferential procedure, which we will turn to in the next section.[9] Thus, it is different from, say, $Appl_{BEN(efactive)}$ and $Appl_{MAL(efactive)}$, which are more specified and introduce arguments construed as participants positively or negatively affected by the event, respectively.

Moreover, I assume that Appl heads can vary within and across languages as to whether or not they can license an argument and that the difference in this respect brings about further differences in the distribution of their arguments. Specifically, if an Appl head licenses its own argument by means of inherent Case assignment, as in German, then it can appear freely, irrespective of the transitivity of the main predicate. If an Appl head does not do so, as in Japanese, the argument needs to be licensed structurally by a licensing head such as T, and thus, it cannot appear when an agent argument, which needs to be structurally licensed, is obligatorily present. Consequently, its distribution is restricted to the contexts where an agent argument need not be realized, as with verbs displaying the causative/inchoative alternation (e.g., (2)d), or suppressed, as in passives as given in (10)a below:

(10) a.   Taro-ga   Ziro-niyotte okasi-o   tabe-rare-ta
            T-NOM   Z-by   sweets-ACC   eat-PASS-PST
            'Taro had his sweets eaten by Ziro.'

     b.   Ziro-ga { *Taro-o/*Taro-ni } okasi-o   tabe-ta
            Z-NOM   T-ACC/T-DAT   sweets-ACC   eat-PASS-PST
            'Ziro ate Taro's sweets.'

(10)a is a so-called possessor passive (Kubo 1990), which is a kind of indirect passive, where the passive subject does not correspond to an object in the active, as shown in

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[7] This is a kind of High Appl in the sense of Pylkkänen (2002, 2008).

[8] I identify this underspecified Appl head with the verbal counterpart to the Saxon genitive, which introduces a contextually determined relation between two entities, possessor and possessum (Barker 1995).

[9] The participant relation is quite similar to, but ultimately different from Van Valin and Wilkins' (1996) effector relation. While the latter encompasses participants doing something in an event such as agent, cause and instrument, the former is more underspecified, encompassing participants like undergoer as well.

(10)b.[10] This suggests that the "extra" argument introduced by Appl cannot appear in the active (10)b because it cannot be licensed by Appl, or T, which licenses an (obligatorily present) agent. On the other hand, the same argument can appear in the passive (10)a because an agent is suppressed and realized as an adjunct *niyotte* phrase, and therefore, it can be licensed by T and marked nominative. Thus, reference to the licensing ability of Appl can capture the restricted distribution of non-selected arguments in Japanese, in effect achieving a unified account of possessor subjects in lexical causatives (i.e., adversity causatives) and possessor passives.

4. The Post-syntactic Inferential Procedure: The Ethical Strategy

Given the discussion to this point, non-canonical external arguments are introduced by the underspecified Appl head in syntax as a mere participant to the event. This amounts to saying that their associated readings such as possessor/indirect causer and possessor are not directly encoded as part of linguistic representation, and hence, they should be derived by some other mechanism. Following Rivero (2004), I propose that the post-syntactic inferential procedure, which she calls the Ethical Strategy, is at work in deriving these readings. Rivero proposes her strategy to account for dative arguments in anticausatives displaying various readings such as "possessor, benefactive/malefactive, or indirect cause/involuntary agent" in Balkan and Slavic languages, as in German (1)b. Since these arguments are non-canonical external arguments in the sense of Schäfer (2012), the strategy can be justifiably applied to the non-agentive readings we have considered so far.

In an attempt to give more substance to the procedure, I propose that inferences are made at the C-I interface on the basis of the following sources: the linguistic representation, the contextual information, and the conceptual knowledge of higher-order generalizations about events, which I take to be Dowty's (1991) proto-role properties, as given in (11) and (12).[11] In particular, the properties (11)c and (12)c play a crucial role in

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[10] In this paper, I do not discuss the issues concerning the base position of the possessor argument, simply assuming the base generation approach and that it is a verbal argument introduced by Appl (Pylkkänen 2002, 2008). Yet it should be noted that advocates of the possessor raising approach would argue that (10)a has an active counterpart, as in (i), where the base position of the possessor argument is inside the accusative object:

(i) Ziro-ga Taro-no okasi-o   tabe-ta
     Z-NOM   T-GEN   sweets-ACC   eat-PST
     'Ziro ate Taro's sweets.'

See Landau (1999) and Lee-Schoenfeld (2006), among many others, for approaches invoking possessor raising and multiple theta-marking, respectively.

[11] I thus assume, in the spirit of Reinhart (2006), that the C-I systems are the concept/context/inference systems. However, I depart from Reinhart (2006) in that the concept system is post-syntactic as in the framework of Distributed Morphology (Halle and Marantz 1993). On a related note, it remains to be seen whether the present proposal can be restated in terms of a feature decomposition approach to thematic roles, as in the theta system of Reinhart (2002).

resolving the thematic underspecification associated with the event participant introduced by Appl.

(11) Contributing properties for the agent proto-role
    a.   volitional involvement in the event or state
    b.   sentience (and/or perception)
    c.   causing an event or change of state in another participant
    d.   movement (relative to the position of another participant
    (e.   exists independently of the event named by the verb)

(12) Contributing properties for the patient proto-role
    a.   undergoes change of state
    b.   incremental theme
    c.   causally affected by another participant
    d.   stationary relative to movement of another participant
    (e.   does not exist independently of the event, or not at all)

In a nutshell, when a thematically underspecified argument is introduced by Appl in syntax, its interpretation is enriched through inferences based on the aforementioned sources. Specifically, I propose that the underspecified argument, formally encoded as a participant to an event, can be construed either as causing the event (i.e., having the property (11)c), or as being (causally) affected in the event (i.e., having the property (12)c).[12] Note, however, that the underspecified argument introduced by Appl can be construed as having either (11)a or (11)c, but not both at the same time (but see the discussion on the possessor/indirect causer reading below). Voice, rather than Appl, should be responsible for introducing arguments with both (11)a and (11)b.

Moreover, the interpretation of a thematically underspecified argument hinges on the syntactic representation involved, which restricts possible inferences. Specifically, consider the case where Voice is present in the syntactic representation. Since Voice is present, an agent is present in the event. Given that an event can have only one agent/causer, the underspecified argument can only be construed like a proto-patient (i.e., being affected in the event), and to be construed as such, it must be construed as having a (contextually determined) relation to another affected entity in the event. Hence, the possessor reading results, as in the possessor passive (10)a.

If there is no syntactically encoded agent, the underspecified argument can be construed either like a proto-agent or a proto-patient. If it is construed like a proto-agent, the resulting reading corresponds to that of non-volitional agent/causer, as in (13) below, where the adverbial *ukkari* 'inadvertently' forces the non-volitional reading:

(13) Taro-ga ukkari   koppu-o war-Ø-ta (>wat-ta) (*kedo war-e-nak-at-ta)
      T-NOM   inadvertently cup-ACC √break-CAUS-PST   but √break-INCH-NEG-DV-PST
      'Taro inadvertently broke a cup(, *but it didn't break).'

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[12] This is quite reminiscent of Ritter and Rosen (1993). Yet the present proposal takes a different tack in adopting the proto-role theory in its implementation.

Note that, even though the subject in (13) is construed as agentive in that it is the direct cause of the event, it never behaves as an argument of Voice: the impossibility of culmination cancellation in (13) strongly suggests that the subject is introduced by Appl.[13] On the other hand, if the underspecified argument is construed like a proto-patient, then the possessor reading results, as in (2)d, repeated here as (14):

(14) Taro-ga [Ø   ude]-o   or-Ø-ta (>ot-ta)
     T$_1$-NOM   pro$_1$ arm-ACC √break-CAUS-PST
     (kedo zibun-de-wa   or-Ø-anak-at-ta)
      but   self-INST-TOP √break-CAUS-NEG-DV-PST
     'Taro broke his (own) arm, but he didn't break it himself.'

(14) is an adversity causative (Shibatani 1976, Pyllkänen 2002, 2008), and, as is well known, one of the conditions on this construction is a "proximate" relation, typically a relation of inalienable possession, holding between the subject and the object (Inoue 1976). Under the present proposal, such a proximate relation is not formally encoded but it is imposed as a result of the inference that a thematically underspecified argument is affected in the event. Specifically, to be construed as affected in the event, the underspecified argument must have a contextually determined relation, typically a relation of possession, to an affected entity in the event.[14]

    The fact that the presence of Voice restricts possible inferences can be observed in other languages as well. Consider the following German examples from Schäfer (2012):

(15) a.   Dem   Mann zerbrach die   Vase
           the.DAT man broke   the.NOM vase
           'The man unintentionally caused the vase to break.'
           'The vase broke and the man is affected by this.'

     b.   Die   Katze zerbrach dem   Mann die   Vase
           the.NOM cat   broke   the.DAT man   the.ACC vase
           'The cat broke the vase and the man is (negatively) affected by this.'
           '*The cat broke the vase and the man caused the vase to break.'

(15)b is the transitive counterpart of (15)a, and its underspecified argument receives inherent dative case due to the Appl head involved, thus co-occurring with the

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[13] Volitional agents cannot be introduced by Appl in German either, as shown in the following:

(i) a.   Der   Mann zerbrach die   Vase (absichtlish / ais Versehen)
           the.NOM man broke   the.ACC vase (on.purpose / by mistake)
           'I broke the vase (on purpose / by mistake).
     b.   Dem   Mann zerbrach die   Vase (*absichtlish / ais Versehen)
           the.DAT man broke   the.NOM vase (on.purpose / by mistake)
           'I broke the vase (*on purpose / by mistake)'

[14] This is different from analyses encoding a possession relation in syntax, e.g., with Low Appl (Pylkkänen 2002, 2008; Takehisa 2001).

nominative agent argument. The dative argument in (15)b can be construed like a proto-patient, but not like a proto-agent, while the same argument in (15)a can be construed in either way. In (15)b, the nominative agent argument, introduced by Voice, blocks the inference that the dative argument is like a proto-agent.

Moreover, the German reflexive marker *sich*, which signals the presence of Voice, brings about the same effect as above.[15] The following examples, again from Schäfer (2012), show the contrast displayed by two types of anticausatives, marked and unmarked.

(16) a.   Das   Badewasser ist ihm   (versehentlich)   abgekühlt
          the.NOM bathwater   is him.DAT (unintentionally) cooled.down
          'The bathwater cooled and he is affected by this.'
          'The bathwater cooled and he unintentionally caused this to happen.'

     b.   Das   Badewasser hat sich ihm   (*versehentilich) abgekühlt
          the.NOM bathwater   has REFL him.DAT (unintentionally) cooled.down
          'The bathwater cooled and he is affected by this.'
          '*The bathwater cooled and he unintentionally caused this to happen.'

While the same verb root is involved in both the examples, the proto-agent-like construal is impossible with an anticausative marked with *sich*, as in (16)b. This is in contrast with an unmarked anticausative, as in (16)a.

So far, we have considered whether an argument is construed like a proto-agent or a proto-patient. The inferential procedure proposed here covers in its scope the interpretational variability among arguments construed like a proto-patient. As we saw in section 2, the difference between the possessor/indirect causer and the possessor arguments can be attributed to whether or not they can be construed as volitional. Under the present proposal exploiting proto-role properties, the former can be inferred as having the property (11)a, as well as the property (12)c, which forces the possessor reading. Recall, as I argued above, that the availability of the possessor/indirect causer reading can be attributed to the nature of the event described: it must be an externally caused one, implicating some external cause. Thus, the indirect causer reading results because there is some other external cause implicated conceptually by the event described and the underspecified argument, which is construed as affected, is volitionally involved in the event. Alternatively, the indirect causer reading can be derived by assuming that the underspecified argument can be construed as having the property (11)c, as well as (11)a and (12)c, on the condition that the property (11)c pertains to causes, direct or otherwise. As we saw above, the direct causer reading is ruled out in this case because the underspecified argument introduced by Appl cannot be construed as a direct cause and a volitional participant at the same time.

The interpretational variability observed with proto-patient-like arguments also hinges on the surrounding syntactic context. As we saw above, when the event described is an externally caused one, the underspecified argument construed as a possessor can

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[15] While they also signal the presence of Voice, reflexive clitics in Romance and Slavic languages do not bring about this effect. See Schäfer (2008) for an analysis that accounts for the difference.

also be construed as an indirect causer. Recall also that the proto-agent-like interpretation is possible only in the absence of a syntactically encoded agent. Given these, when the underspecified argument is inferred as a possessor, it can receive the indirect causer reading only in the absence of a syntactically encoded agent, but not in its presence, as illustrated in (17)a and (17)b, respectively. This fact can receive a natural explanation if we assume that the post-syntactic inferential procedure proposed here is at work.

(17) a.   Taro-ga [Ø   kami]-o kir-Ø-ta (>kit-ta). (Ziro-mo soo si-ta)   [P/IC]
          T$_1$-NOM   pro$_1$ hair-ACC √cut-CAUS-PST   Z-also   so   do-PST
          'Taro had his (own) hair cut. (Ziro did so, too.)'

     b.   Taro-ga Hana-niyotte [Ø   kami]-o kir-Ø-are-ta.   [P]
          T$_1$-NOM H-by   pro$_1$ hair-ACC √cut-CAUS-PASS-PST
          (*Ziro-mo soo s-are-ta)
            Z-also   so   DV-PASS-PST
          'Taro had his (own) hair cut by Hana. (*Ziro did so, too.)'

To sum up the discussion so far, thematically underspecified arguments introduced by Appl can be construed in various ways at the C-I interface as a result of the workings of the post-syntactic inferential procedure. Thus, the non-volitional agent reading results from the inference that the underspecified argument has the proto-role property (11)c (i.e., causing an event); the possessor reading results from the inference that the argument has the proto-role property (12)c (i.e., being affected in the event) and the subsequent inference that it is related to another affected entity in the event; and the possessor/indirect causer reading results from the inferences that the argument has the properties (11)a (i.e., volitional involvement in the event) and (12)c, and possibly (11)c as well. Moreover, these inferences are restricted by the syntactic context. Specifically, if Voice is present in the syntactic representation, it blocks the inference that the underspecified argument is like a proto-agent, thereby forcing it to be construed as a possessor; if it is not present, the underspecified argument can be construed like a proto-agent or like a proto-patient. Therefore, although non-selected arguments introduced by Appl allow a variety of readings, ranging from a non-volitional agent to a possessor, the present approach can derive these readings and predict their distributional patterns by post-syntactic inference.

5.   Summary and Concluding Remarks

We have investigated non-selected arguments introduced by Appl, in particular, thematically underspecified ones that allow a variety of readings. We have argued that the readings associated with them are derived at the C-I interface by the workings of the post-syntactic inferential procedure, which takes into account the linguistic representation, the contextual information, and the conceptual knowledge. In particular, we have seen that the syntactic representation restricts possible interpretations inferred for thematically underspecified arguments. To the extent that this analysis is successful, it lends further

support to the view that syntax, the computational system, comes before the C-I systems, the concept/context/inference systems.

We have also seen that the distribution of non-agentive, non-selected arguments hinges on whether or not the Appl head involved can license its own argument. The difference in this respect is directly reflected in the case marking of non-selected arguments. Thus, in languages like German, where Appl licenses its argument, canonical external arguments (i.e., agents) and non-canonical external arguments (i.e., other non-agentive arguments) are marked differently, and in languages like Japanese, where Appl does not license its argument, the two types of external arguments receive the same marking. However, while they are masked with the same case marking, the two types of external arguments should be distinguished in Japanese, as can be shown by the tests for agentivity such as direct passivization, potential construction formation and culmination cancellation. Although further research is required, this may constitute an argument against an approach subsuming agents and (some of) non-agentive arguments under the category of effector (Van Valin and Wilkins 1996).

By making recourse to the post-syntactic inferential procedure, a modified version of the Ethical Strategy (Rivero 2004), the present approach avoids postulating particular syntactic heads dedicated to a variety of interpretations that can be observed with non-selected arguments. Although there are cases where different syntactic heads are responsible for different interpretations, as can be found in analyses of variable behavior verbs (e.g., Borer 2005), this approach provides a novel way to explain arguments displaying variability in interpretation, but not in syntactic behavior.

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