# A Case Study of Predication\*

#### 1. Introduction

In this paper, I discuss the predictions that the current Case Theory (Chomsky 2000 and later work) makes for cross-linguistic patterns of predicate case (to be discussed below) and demonstrate that, even adjusted, it cannot deal with the full range of facts. I propose a new Case Theory, based on the hypothesis that Case features are assigned by a head to its complement (cf. Stowell 1981), with the ensuing consequences that (a) a particular Case feature can be assigned to more than one terminal, and (b) more than one Case feature can be assigned to a particular terminal. I will couple this new theory of syntactic Case with certain standard Distributed Morphology assumptions about featural decomposition of morphological case. I will argue that not only does this new Case Theory allow us to account for predicate Case assignment but also that it opens a new direction of research into multiple Case assignment elsewhere.

The current Case Theory consists of two parts: Case Filter, which is the condition determining what must be assigned Case, and conditions on Case assignment, which describe under what circumstances case is assigned. Both have changed during the development of the P&P framework, but for reasons of space, I will only address here the most recent formulation, where the need to be Case-marked is a property of  $xNPs^2$  and Case-marking obtains in tandem with agreement (i.e., in the course of  $\phi$ -feature valuation). Left outside the scope of this Case Theory are such issues as Case assignment by heads outside the verbal and phrasal domain, inherent and lexical Case, and Case assignment to xNPs other than arguments – in particular to predicates.

An independent question is that of what Case is. Pesetsky and Torrego 2001, 2004, in print propose that Case is the uninterpretable counterpart of the interpretable tense features on xNPs. Unfortunately, as a result tense becomes a somewhat abstract notion – a problem that is partially remedied by the view advanced by Bailyn 2004, where Cases spell out uninterpretable functional category features (T is spelled out as nominative, Asp as accusative, Q as genitive, etc.). My proposal fits in with these reductionist views, but takes an even more radical position: for me Case is the expression of the featural

<sup>\*</sup> Acknowledgments: Many thanks to Morris Halle and Hilda Koopman for the discussion, to Eddy Ruys for many suggestions and comments, and to an anonymous FDSL reviewer for helping me to clarify the paper by offering a number of alternative hypotheses. I am also very grateful to Liina Pylkkänen and Elsi Kaiser for the discussion of Finnish and to Gabriella Tóth for the detailed discussion of Hungarian (which unfortunately didn't make it into this paper). List of case abbreviations: ACC accusative, CIT citation, DAT dative, ESS essive, GEN genitive, INSTR instrumental, NOM nominative, PART partitive, TRS translative.

<sup>&</sup>lt;sup>1</sup> The use of "Case assignment", as opposed to "Case valuation" or "Case checking", is not crucial for the theory. However, as there is no theoretical upper limit on the number of Case features assigned to a particular terminal and all terminals receive Case features, the checking approach appears to be notably less elegant in that it requires what essentially amounts to a look-ahead.

<sup>&</sup>lt;sup>2</sup> I use the abbreviations xAP (extended AP) and xNP (extended NP) in order to indicate that it is irrelevant for the discussion at hand which functional layers are projected.

makeup of a head (lexical or functional) on (some terms of) its complement. A Case feature is thus always uninterpretable and more than one Case feature can be assigned to a given term. The morphological case marking on a term reflects this combination of Case features.

The paper is structured as follows: I will first present the broad cross-linguistic picture of the various patterns of predicate Case assignment. For each pattern, I will argue that the treatment reserved for it in the current Case Theory is inadequate and show how my alternative theory accounts for them. For reasons of space, I will only touch upon the issues of parameterization of Case assignment and barriers to Case percolation, though I will provide some independent motivation for my Case Theory by showing how it easily explains multiple case assignment in Russian cardinal-containing xNPs.

# 2. The big picture

At least the following patterns of Case-marking on xNP and xAP predicates are observed:<sup>3</sup>

- Lack of case, expressed as default, nominative or zero case, as in (1), from Harar Oromo (Owens 1985 via Comrie 1997)<sup>4</sup>
- Case-agreement (the predicate is marked with the same case as the subject), as in (2)
- Dedicated predicative case(s), as in (3) and (4)
- A combination of the above, as in Georgian (not to be discussed)
- (1) hommish-níi barána gáarii. Harar Oromo: lack of case harvest NOM this.year good CIT
  The harvest is good this year.
- (2) a. Ciceronem clarum habent. Latin: Case-agreement Cicero ACC famous ACC consider/hold "They consider Cicero famous."
  - b. Cicero clarus habetur.
    Cicero NOM famous NOM consider/hold PASS
    "Cicero is considered famous."
- (3) a. Ja sčitaju ee lingvistkoj. Russian: predicative case I consider her ACC linguist INSTR
  "I consider her a linguist."
  - b. *Ona vernulas' krasavicej*. she came back beauty INSTR "She came back a beauty."
- (4) a. Toini on sairaa-na. Finnish: multiple predicative cases  $Toini_{.NOM}$  be  $_{.3SG}$  ill  $_{ESS}$  "Toini is ill."

<sup>3</sup> PP predicates are never case-marked; xNP and xAP predicates may be marked differently, as is the case in Serbo-Croatian (see Bailyn 2001) and Hungarian.

<sup>4</sup> The citation case (bare form) in Harar Oromo is also used for direct objects; nominative case is morphologically marked. Due to insufficient data I will not discuss this pattern here.

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b. Toini tul-i sairaa-ksi.

Toini<sub>.NOM</sub> become <sub>PAST.3SG</sub> ill <sub>TRS</sub>

"Toini became ill."

As the standard Case Theory is mostly concerned with argument xNPs, it has little to say about Case on predicates. The original formulation of the Case Filter (Chomsky 1981, Vergnaud 1982) only rules out xNPs that are overt and have no Case, and therefore does not account for case-marked xAP predicates (unless they are explicitly added to the Case Filter). Once the Case Filter was restated as a Visibility Condition on arguments (Case is required to render an xNP visible for theta-role assignment, see Chomsky 1986, 1993 and Chomsky and Lasnik 1993), case-marked xAP predicates become much more difficult to deal with because they are not theta-marked. Finally, in the most recent minimalist framework (Chomsky 2000 and later work): Case is an unvalued and uninterpretable Case feature, which is valued in the course of φfeature valuation of a higher head (the probe). Importantly, agreement and Case are tightly linked in this approach because what makes an xNP visible for agreement is unvalued Case features. As a result, xAP predicates become even more of a problem: they do not trigger agreement on their own (in fact, the opposite). While this issue can be fixed by somewhat extending the notion of agreement (Chomsky 2001), problems with locality and φ-features (see below) make this framework the least able to deal with predicate Case (unless it is assumed to be non-structural and left out of discussion altogether).

I believe that the main problem lies in the link established between Case and agreement. In what follows, I will detail the problems with predicate Case in the probe-goal framework and explain how they can be resolved in the theory where Case is treated as a relation between a head and its complement.

### 3. Case agreement

In a number of languages, such as Latin, Icelandic, Modern Greek, Albanian, and Serbo-Croatian, the predicate shows the same case as the subject:

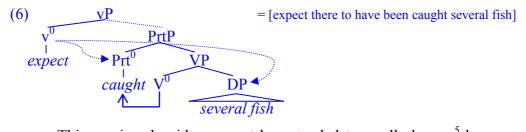
- (5) a. *Húner kennari/\*kennara*. Maling and Sprouse 1995 : Icelandic he is teacher NOM/ACC "He is a teacher."
  - b. Ég taldi hana/\*hun vera kennara/\*kennari.

    I believed her ACC/NOM to-be teacher ACC/NOM
    "I believe her to be a teacher."

The standard view on Case-agreement (also known as Case-matching or concord) is that it results from the syntactic agreement relation established between the subject and the predicate, where surface case is just one of the features that the subject and the predicate agree in. An alternative view of Case-agreement, proposed by Bailyn 2001 and Chomsky 2001, contends that no formal agreement relation is established between the subject and the predicate for Case-agreement to occur. Instead the two targets get the same Case separately as a result of independent  $\phi$ -valuation. I will first discuss the problems arising from multiple  $\phi$ -feature valuation, and then show how my proposal deals with Case agreement.

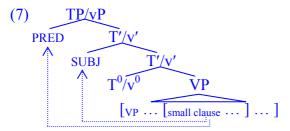
### 3.1. Case-argument as multiple feature-checking

Chomsky 2001 proposes that Case-agreement is a side-effect of sequential multiple feature-valuation. The structure in (6) schematizes Case-agreement with the participle in the Icelandic expletive construction: when the matrix  $v^0$  (or  $T^0$ ) is merged, it first probes  $Prt^0$  (which has by then agreed with the object DP and thus had its  $\phi$ -features valued) and values the Case features on  $Prt^0$  (on the assumption that two bundles of uninterpretable  $\phi$ -features can be checked against each other). Then, since  $Prt^0$  (containing no person features) is not  $\phi$ -complete,  $v^0$  probes again and values the Case of the object DP.



This precise algorithm cannot be extended to small clauses,<sup>5</sup> because the subject is higher than the predicate and being φ-complete, would not allow further probing. The issue can be circumvented, if the goal of feature valuation is the entire small clause (PredP; PrtP in (6)) rather than just the predicate.<sup>6</sup>

In the reformulation of Bailyn and Citko 1999 proposed by Bailyn 2001, Case-agreement is also a side-effect of multiple feature-valuation, but unlike in Chomsky's proposal, the valuation is simultaneous. As a result, the issue of the relative positions of the subject and the predicate does not arise.



However, for this proposal to work it is necessary to assume that the cross-linguistic default is feature checking with multiple goals (rather than a single goal). In addition, as noted by Pereltsvaig 2001a, we need to explain why such multiple feature checking is only possible for the verb *be*.

(8) \*Ivan poceloval student.

Ivan NOM kissed student NOM intended: 'Ivan kissed a/the student.'

Neither of the two proposals can account for Case-agreement in control infinitives. As noted by Cecchetto and Oniga 2004 in this context (see also Baltin 1995), a depictive secondary predicate inside a control infinitive in

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<sup>&</sup>lt;sup>5</sup> Frampton et al. 2000 identify the same problem for *there*-less variant of (6).

 $<sup>^6</sup>$  An additional potential problem comes from the fact that an xNP predicate also has a set of interpretable φ-features. This problem can be avoided if φ-feature bundle of a predicate xNP is incomplete, which is consistent with the deficient number-marking on some predicates in some languages. Further problems with xNP predicates are discussed below.

Latin is marked with the same case as the controller, as in (9). Cecchetto and Oniga 2004 attribute the case-marking on the depictive to Case-agreement with the PRO subject (see also Landau 2006, 2007) – but how does the PRO subject get its Case?

- (9) a. Ego iubeo te esse bonum. Cecchetto and Oniga 2004

  I order you ACC be INF good ACC
  "I order you to be good."
  - b. Quieto tibi licet esse. quiet DAT you DAT licit-is be INF "You are allowed to stay quiet."

Likewise, a major problem for the link between Case and agreement is caused by the  $\varphi$ -features of an xNP predicate: (at least some of) such features are interpretable and need not be the same as the  $\varphi$ -features of the subject:

The minimalist view of Case as an artifact of  $\phi$ -feature valuation is not easily compatible with there being more than one set of interpretable features to agree with. One way of handling this problem is the proposal by Frampton and Gutmann 2000, where agreement is treated as "feature coalescence": features that have agreed, whether valued or not, become the same entity and no multiple feature-valuation is then necessary. Yet even in this framework, the question of Case agreement between two xNPs remains unresolved.

### 3.2. Case agreement as concord

As demonstrated below, the problem with using multiple feature valuation as a mechanism for deriving Case agreement is the necessity of dealing with more than one set of interpretable  $\varphi$ -features and in small clause environments only. To avoid this problem, as well as some others to be detailed below, I propose that Case-agreement is an artifact of Case assignment to the constituent that contains both "agreeing" items. My proposal thus also fits in with the trend of excluding syntactic agreement (the Agree relation) from Case agreement, 7 and its formulation strongly resembles the proposal by Stowell 1981:

### (11) Case Theory, Mark II

Case features are assigned by a head to its complement

As a result, nominative is assigned by  $T^0$  to its sister (vP, AspP, ModP...) and accusative is assigned by  $v^0$  to VP. Any terminal (that can bear morphological

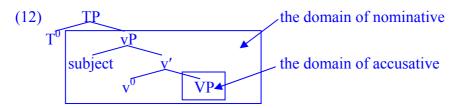
<sup>&</sup>lt;sup>7</sup> The theory is presented here in a nutshell, and does not touch upon such important issues as inherent Case (but see Koopman 2006, Svenonius to appear for arguments that Icelandic "inherent" Case reflects a dependency on a functional projection in the extended verbal phrase and therefore is structural), or default Case assignment (as in the Oromo Harar example (1)).

case) is Case-marked by each Case-assigning head that c-commands it unless Case percolation is blocked by an intervening head. This straightforwardly accounts for Case-agreement on the assumption that in languages with Case-agreement the head of the small clause  $\operatorname{Pred}^0$  does not assign Case: since it is the entire small clause that receives Case from the relevant c-commanding head (accusative if  $v^0$  can assign it, nominative if  $v^0$  is defective), the subject and the predicate are marked with the same case.

The proposal in (11) offers a principled view of Case as a redundancy-increasing method of marking the derivational history of a tree on its leaves on the assumption that Case features are the uninterpretable counterparts of the features composing a given (functional) head. The major consequence of this theory is that a single terminal may receive more than one Case-feature. I will address the question of how such a bundle of Case-features is spelled out after comparing the theory in (11) to the standard Case Theory.

## 3.3. Comparison with the standard Case Theory

Due to the relative positions of  $T^0$  and  $v^0$ , the predictions of the new Case Theory with respect to structural Case assignment are nearly the same as those of the standard Case Theory:



If a Case-assigning  $v^0$  is present, nominative cannot be assigned below it. Or rather, while it may be assigned, the resulting bundle of Case-features will always be more complex than just the nominative and can be reasonably assumed to correspond to accusative, which would derive the dependence of accusative on the presence of the nominative. If  $v^0$  assigns no Case (as with passives or raising verbs), the object receives nominative.

The Case Filter plays no role in this theory: since any xNP is merged in the domain of some head, it necessarily receives some Case (which may give us a handle on the phenomenon of default Case). As a result, I reject the Null Case or no case approach to PRO; instead, I suggest that control infinitives are merged in the same Case domain as their controllers and therefore receive the same Case (for alternative theories of PRO-licensing see Sigurðsson 1991, Hornstein 1999, Landau 2003, among others).

Finally, on the issue of expletive choice (which in the standard Case Theory is derived from the hypothesis that *there* requires an NP associate because it is not Case-marked, while *it* is only compatible with CP associates

<sup>&</sup>lt;sup>8</sup> I leave aside here the question of what heads block Case-percolation to their complements (work in progress). For my purposes here it is enough to assume that non-verbal lexical heads block Case percolation to their complements.

<sup>&</sup>lt;sup>9</sup> Due to the lack of space I cannot discuss this assumption in depth here; see Pesetsky and Torrego 2001, 2004, in print and Bailyn 2004 for similar proposals, albeit couched in the terms of the standard Case Theory and employing one feature per functional head.

<sup>&</sup>lt;sup>10</sup> The predicted difference in morphological complexity is confirmed by the cross-linguistic frequency of the use of the (featurally simpler) nominative case as default.

because it is), I have little to say. On the assumption that  $T^0$  must value its  $\varphi$ -features and that both the expletive and the associate trigger agreement, *it* cannot combine with an xNP ( $\varphi$ -feature conflict). It could be hypothesized that the combination of *there* with a CP associate would not provide  $T^0$  with a full set of  $\varphi$ -features, as long as we assume (following Koster 1978) that a CP by itself cannot be a subject. A deeper study of the issue would be desirable.

Additional advantages derived from viewing Case as being assigned to a complement include a straightforward analysis of multiple assignment of the same morphological case (e.g., in Korean or Japanese, see also Maling 1989) and obliteration of the need for functional heads in order to account for Case-assignment by non-verbal lexical heads or by prepositions.

I therefore contend that the new Case Theory accounts for the same facts as the old one in addition to being able to deal with predicate Case.

### 3.4. Summary

I proposed a new Case Theory based on the assumption that Case features are assigned by a head to its complement. A natural extension of this hypothesis is that Case features are just the uninterpretable counterparts of the interpretable features composing a given head. As a result, not only can predicate Case be easily dealt with, but several other issues receive an immediate explanation.

Though it seems that Case agreement can be partially accounted for the standard Case Theory if multiple feature-valuation and Case-assignment to the entire small clause are permitted (or if Frampton and Gutmann's approach to agreement is adopted), I will now show that the standard Case Theory cannot deal with languages where more than one Case can be assigned to a predicate.

## 4. Russian: the Case of the copula

Languages with a dedicated case appearing on predicates would seem to be the easiest to treat in the standard Case Theory on the assumption that a head can assign (or value) Case to its complement (which is somewhat controversial in the standard minimalism). However, I have so far been unable to find an "ideal" predicate Case language, where a particular case would appear on any predicate in any position. In this section I will discuss one of the simpler patterns of predicate Case marking found in Russian and in Classical Arabic. Finnish, with its more complex pattern of predicate Case marking, is discussed in section 5. Hungarian and Georgian, which involve even more complicated predicate Case patterns, will not be discussed here due to lack of space.

In a nutshell, Russian predicates are marked with the instrumental case, except in the present tense copular sentences, where no overt *be* is present and the predicate must be nominative.<sup>11, 12</sup> The same pattern obtains in Arabic: while the default predicate case is accusative, nominative is the only option in the present tense copular sentences (Maling and Sprouse 1995, fn.4). This

<sup>&</sup>lt;sup>11</sup> I leave aside the question of whether Russian long-form adjectives in the predicate position are xAPs or xNPs (see Babby 1973, 1975, Bailyn 1994, Siegel 1976, Pereltsvaig 2001a, 2001b, among others) as irrelevant here.

<sup>&</sup>lt;sup>12</sup> It is standardly assumed that Russian depictives appear with both Case-agreement and Case-assignment, depending on their semantics (Filip 2001 and Richardson 2001). However, Pereltsvaig 2001a provides evidence that "Case-agreeing" depictives are actually extraposed reduced relatives, as I will assume here.

pattern, where the small clause predicate is marked with the default predicate case in the presence of an overt verb and with nominative otherwise, cannot be dealt with by the standard Case Theory.

#### 4.1. The head of the small clause

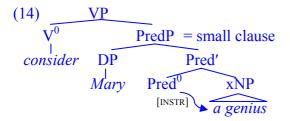
With an overt *be*, the post-copular xNP can be marked with either nominative or instrumental, as shown in (13).<sup>13</sup> However, only instrumental corresponds to true predication; nominative indicates an identity copula (Rothstein 1986, Bailyn and Rubin 1991, Bailyn and Citko 1999, Pereltsvaig 2001a, etc.).

- (13) a. *Puškin byl velikij poèt.* identity Pushkin was great poet <sub>NOM</sub>
  - b. *Puškin byl velikim poètom*. predication

    Pushkin was great poet <sub>INSTR</sub>

    "Pushkin was a great poet."

The standard view, starting with Bowers 1993, is that small clauses are headed by a functional head that makes it possible in some way or another for a predication relation to be established (which is why it is generally called Pred<sup>0</sup>). The majority of the arguments in favor of Pred<sup>0</sup> (see Bowers 1993, Sportiche 1995, Starke 1995, Svenonius 1996, Baker 2003, den Dikken 2006, among many others), come from the syntax of the small clause.<sup>14</sup>



Bailyn and Rubin 1991, Bailyn and Citko 1999 and Bailyn 2001, 2002 propose that Pred<sup>0</sup> assigns the instrumental case to its complement, and thus incorrectly predict that small clauses without instrumental case-marking on the predicate should be impossible.

#### 4.2. Predication without instrumental

In the present tense in Russian the copula is null and instrumental marking is impossible. Since with any overt verb including the copula the predicate must

- (i) a. They regarded the proposal **as** foolish.
  - b. The little girl was treated **like** a VIP.
  - c. Abby was promoted **to** chairman.
  - d. Claire took Diana **for** an idiot.

The argument is based on the assumption that the small clauses in (i) have overt heads, while in others, the same functional head is covert. I will discuss this assumption in section 5.2.

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<sup>&</sup>lt;sup>13</sup> It must be noted that for post-copular xNPs instrumental is preferred (Wierzbicka 1980, Geist 1998, 1999, Matushansky 2000, Madariaga in progress, etc.). For post-copular xAPs, on the other hand, nominative seems the preferred option (Madariaga in progress).

<sup>&</sup>lt;sup>14</sup> One such argument (Aarts 1992, Bowers 1993, Bailyn 2001, 2002, den Dikken 2006, etc.) comes from the elements marked with bold in (i):

be marked instrumental, the question arises why instrumental is disallowed (15b) and nominative is forced (15a) with the covert copula (or in the absence of the copula).<sup>15</sup>

- (15) a. *Vera assistent*. Vera assistant NOM "Vera is an assistant."
  - b. \* Vera assistentom.

    Vera assistant INSTR

One possible but implausible theory is that the predication structure is not available in the present tense, and what we see in (15a) is an identity *be*, which requires nominative, as in (13a). Besides the obvious complication of the mechanism needed to exclude predication in the present tense, the theory is not supported empirically: once the identity reading of the copular sentence is excluded pragmatically, it can be demonstrated to have a predicative reading in the present tense:

(16) a. Context: And how did they earn their living?

*Iisus byl plotnik\*(om), a Magomet byl \*kupec/√kupcom.*Jesus was carpenter NOM/INSTR and Mohammed was merchant NOM/INSTR
"Jesus was a carpenter and Mohammed was a merchant."

b. Context: And how do they earn their living?

Magdalina prostitutka, a Iisus plotnik.

Magdalen prostitute and Jesus carpenter

"Magdalen is a prostitute and Jesus is a carpenter."

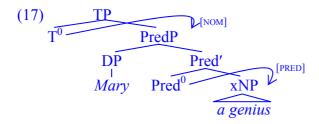
Since a predicative reading is available in (16b), PredP must be present even in absence of an overt copula, where instrumental may not be assigned. I conclude that Pred<sup>0</sup> cannot be the assigner of instrumental, <sup>16</sup> and the question arises as to how instrumental is assigned.

### 4.3. The syntax/morphology interface in Case assignment

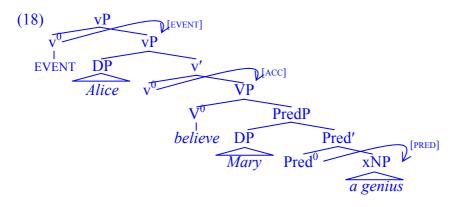
If the Case Theory in (11) is correct, then Pred<sup>0</sup> can assign *some* Case feature to its sister. For the sake of simplicity the Case feature assigned by Pred<sup>0</sup> will be referred to as [predicative]. Assuming that in the absence of an overt copula the small clause merges as the complement of T (see Bailyn and Rubin 1991, among others, for Russian), we obtain (17) as the underlying structure of (15a) and (16b). Note that the small clause subject is in the domain of T only, while the small clause predicate is in the domain of both T<sup>0</sup> and Pred<sup>0</sup>.

<sup>16</sup> An alternative view (Bailyn 2001, 2002) is that more than one Pred<sup>0</sup> is available, one that assigns instrumental and the other one that doesn't. In absence of independent evidence for the distinction (see also section 5.2), such an analysis amounts to a stipulation.

<sup>&</sup>lt;sup>15</sup> Instrumental is marginally possible without an overt verb if the xNP predicate is interpreted as a temporary capacity and a locative is present, as well as on the few NP predicates with the meaning of 'cause, reason' and in a particular tautological construction (Nichols 1981, Bailyn and Rubin 1991). These are probably irrelevant.



As a result, in the present tense copular sentence the predicate receives two Case features: [nominative] (from  $T^0$ ) and [predicative] (from  $Pred^0$ ). In a clause containing a verb, the Case-featural bundle becomes more complex, since verbal heads can introduce Case features. The head that I am concerned with here is the one introducing the eventuality argument of the verb, on the assumption that it is projected above the vP introducing the subject. The Case feature introduced by this  $v^0$  (or perhaps  $Asp^0$ ) will be dubbed [eventive].



How does a complex Case-feature bundle receive a morphonological realization? To answer this question I rely on the following (fairly standard) morphological assumptions:

# (19) The Morphology of Case

- a. The underlying morphological case is a combination of (privative) features rather than a single feature.
- b. The PF realization of a given bundle of Case features (the surface case) is resolved by language-specific vocabulary insertion rules, whose key properties are impoverishment and underspecification.

Decomposition of morphological case has been independently proposed by Jakobson 1936/1971, Neidle 1982, Halle 1994, Halle and Vaux 1997, etc., and is considerably more compatible with the new Case Theory in (11) than with the standard Case Theory. <sup>18</sup> The notions of impoverishment and

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<sup>&</sup>lt;sup>17</sup> For semantic reasons, subject-oriented depictives, as in (i), have to merge higher than  $v^0$ . Since they still receive the instrumental case, this means that  $v^0$  cannot assign instrumental. I will not discuss independent motivation for the structure in (18) here due to lack of space.

<sup>(</sup>i) Liza vernulas' krasavicej. Liza returned beauty INSTRR "Liza returned a beauty."

<sup>&</sup>lt;sup>18</sup> Maling and Sprouse 1995 also suggest that (19a) applies in syntax, but the details of their proposal are completely different. The hypothesis that Case corresponds to an uninterpretable

underspecification in (19b), on the other hand, are specific to the Distributed Morphology approach (Halle and Marantz 1993, 1994) and permit us to account for the fact that not all features assigned to a given terminal affect its surface representation. As a result, once Case is viewed as complex not only morphologically but also syntactically, the predicate case pattern in Russian can be resolved by the following vocabulary insertion rules:<sup>19</sup>

## (20) Vocabulary insertion rules (a fragment):

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[predicative, eventive] → INSTR
[nominative] → NOM
[accusative] → ACC
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To restate the obvious, the [predicative] Case feature can result in the instrumental case-marking only in the scope of a verb; otherwise it surfaces as nominative (in the present tense copular sentences). Conversely, the [eventive] Case feature has a morpho-syntactic effect only on predicates. An immediate advantage of this analysis is that underspecification can also be used for an alternative treatment of languages with Case agreement if in these languages the relevant case features ([predicative] and [eventive]) are not mentioned in vocabulary insertion rules (i.e., the rules are underspecified for it). In addition, since the identity *be* has no eventuality argument, it cannot assign the Case feature [eventive] to its complement, be it a small clause or a DP, which correctly derives the double nominative in identity sentences, such as (13a).

# 5. Finnish: the Case of change-of-state

As discussed by Fong 2003, Finnish has semantically determined predicate Case-marking: in resultative small clauses and in small-clause complements of change-of-state verbs (*become*, *remain*, *make*, and naming/nomination verbs) the translative case is used instead of the default essive.<sup>20</sup> (In order to simplify the exposition, I disregard the fact that the identity *be* assigns nominative, just like in Russian, since the predicative *be* uniformly assigns essive.)

Finnish

- (21) a. Toini on sairaa-na.

  Toini NOM be 3SG ill ESS

  "Toini is ill."
  - b. *Me maalas-i-mme seinä-n keltaise-ksi.* we paint PAST-1PL wall ACC yellow TRS "We painted a/the wall yellow."

counterpart of a functional feature is also found in Pesetsky and Torrego 2001, 2004, in print and Bailyn 2004.

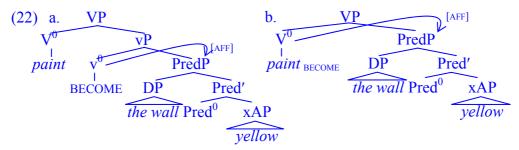
<sup>&</sup>lt;sup>19</sup> Two points should be made clear here: (1) underspecification in vocabulary insertion rules for Case is independently required for dealing with syncretism; (2) the labels ACC, NOM, etc., should be taken as referring to the actual lexical entries – since vocabulary insertion rules for those are considerably more complex due to the interaction with gender and number, and also subject to impoverishment, I use simplified representations here.

<sup>&</sup>lt;sup>20</sup> In Hungarian, predicate case marking is considerably more complicated than in Finnish and varies not only with the argument status of the small clause (depictives vs. others), but also under the influence of such factors as intensionality, change-of-state semantics and the lexical category of the predicate, to say nothing of quirky predicate case assignment (Gabriella Tóth, p.c.). I leave Hungarian aside here due to lack of space for an adequate discussion.

Under the standard Case Theory, the sources of the two cases must be in the small clause. Two structures can be envisaged: (1) change-of-state small clauses are headed by a Pred<sup>0</sup> whose semantics invokes a change-of-state (i.e., the aspectual BECOME component or a directional preposition), (2) the change-of-state Pred<sup>0</sup> is semantically (and phonologically) identical to the "static" Pred<sup>0</sup>, but has different Case-assigning properties. I will first demonstrate how the Case Theory in (11) deals with the issue, and then argue that making Pred<sup>0</sup> responsible for Finnish predicate Case patterns leads to incorrect predictions.

## 5.1. The morpho-syntax of change of state

As argued by Fong 2003, translative case on predicates is not a semantic or inherent case, but depends on the semantics of the embedding verb. This can be implemented by the assumption that the complement of a change-of-state verb contains an aspectual  $v^0$  head BECOME (22a) or that a change-of-state verb bears an aspectual feature [BECOME] (22b). The BECOME component, wherever it resides, is responsible for the assignment of the [affected] Case feature. (To simplify the representations, the causative component of such structures is set aside here.)



Under the assumption that Pred<sup>0</sup> assigns the Case feature [predicative] as before, the relevant fragment of vocabulary insertion rules for Finnish could look as follows:

#### (23) Vocabulary insertion rules (a fragment):

[predicative, affected] → TRS [predicative] → ESS [nominative] → NOM [accusative] → ACC

Once again it is underspecification that is responsible for the fact that the presence of the [affected] Case feature on the small clause subject does not affect its surface case (accusative or nominative); conversely, the choice of the surface case of the predicate is not affected by the assignment of [nominative] or [accusative] by a higher head. Another immediate result of this approach is that translative is more marked than essive for the same reason that accusative is more marked than nominative: the feature matrix that surfaces as translative always contains the Case feature that surfaces as essive.

The advantage of such an analysis is twofold: On the one hand, it allows us to maintain a single Pred<sup>0</sup> approach to all small clauses. On the other hand, since the Case feature [affected] corresponds to one of the interpretable features that make up the embedding verb, this analysis permits for a uniform treatment of potentially different syntactic structures: whereas in resultatives,

the BECOME component may be projected as  $v^0$ , such is probably not the case for verbs like *become*, where BECOME is probably part of  $V^0$ .

## **5.2.** More than one Pred<sup>0</sup>

In the standard Case Theory, only one Case can be assigned to an xNP. Thus if in "static" small clauses Pred<sup>0</sup> assigns essive, in change-of-state small clauses a different Pred<sup>0</sup> is required.

Supposing that the change-of-state  $\operatorname{Pred}^0$  is semantically vacuous is an obvious stipulation, since it requires the existence of two heads distinguishable only by their Case-assigning properties. To implement the syntactic difference between the two Pred heads, a diacritic feature would need to be used, which seems incompatible with the minimalist assumption that Case is an artifact of  $\phi$ -feature valuation.

The assumption that the translative-assigning Pred<sup>0</sup> has the semantics of the aspectual head BECOME is also problematic. For the verb *become* itself projecting the BECOME component inside its small clause complement entails that *become* has no semantics at all and cannot be differentiated from *be*.<sup>21</sup> For the resultative construction, it means encoding the change-of-state semantics twice: once in lexical entry for the embedding verb and once inside the small clause. In essence, it would mean replicating on Pred<sup>0</sup> the intuitive distinction between the "dynamic" verbs in the *elect*, *nominate*, *make*, etc., class and the "static" verbs in *seem*, *consider*, etc., class.

A possible objection to this consideration can be drawn from the fact that certain change-of-state verbs taking a small clause complement require a particular preposition (see also the examples in fn. 14):

- (24) a. The magician turned the princess \*(into) a frog.
  - b. Abby was taken \*(**for**) an expert.

It could be argued that translative is assigned by the null variant of the directional prepositions in (24), while the default essive case is linked to non-directional, complementizer-like functional heads, like those in (25). Such an analysis provides a natural explanation of the original locative meaning of the translative case. The bold elements in (24) and (25) have been assumed to be the overt counterparts of the null Pred<sup>0</sup> (Aarts 1992, Bowers 1993, etc.).

- (25) a. They regarded the proposal **as** foolish.
  - b. The little girl was treated **like** a VIP.

The main reason to believe that the "overt predicators" in (24) and (25) play an active semantic role is the fact that in English a directional preposition is used only if the meaning of the main verb is not itself compatible with propositional content – as illustrated in (26), with true change-of-state verbs a directional preposition is impossible.<sup>22</sup> Therefore, it can be reasonably argued

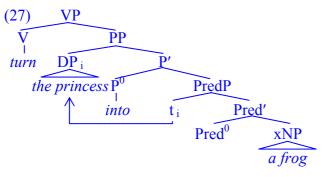
<sup>&</sup>lt;sup>21</sup> A possible objection involves the incorporation of the change-of-state Pred<sup>0</sup> into a (light) matrix verb, with the resulting complex spelled out as *become* (or *make*). The problem with such a view is extending it to *remain* and naming verbs, and to the resultative construction.

<sup>&</sup>lt;sup>22</sup> Such is not the case with *as* or *like*, which obviously contribute a particular meaning loosely viewed as that of a comparison. Even when *as* is used with *consider*, a subtle difference in meaning can nonetheless be detected, particularly clear in (ib).

that a directional preposition enables a non-propositional verb to combine with its propositional complement.

- (26) a. The queen made her lover (#into/\*to) a treasurer.
  - b. Lou became (\*into/\*to) a professor.

Whatever the semantic effect of the directional preposition, it provides no reason to believe that the directional preposition is the head of the small clause. Instead, if the hypothesis above is correct, it is much more likely that it takes the small clause as a complement (denoting the final state of affairs, for change-of-state constructions), with subsequent movement of the subject:



Starke 1995 provides further evidence for this view. First of all, if the preposition were the head of the small clause with no further functional heads, the constituent containing the preposition and the predicate would correspond to an intermediate X' level or a segment. It would be then unexpected that it can move stranding the subject (see Williams 1983, Kitagawa 1985 and Svenonius 1996) or combine with negation (Cardinaletti and Guasti 1993). The behavior of floated quantifiers in small clauses also seems to suggest the structure in (27) (Sportiche 1995, Starke 1995). We conclude that not only do "overt predicators" provide no evidence for a "dynamic" Pred<sup>0</sup>, in fact they provide further support for a single Pred<sup>0</sup> in all small clauses. Therefore, even if Finnish translative corresponds to or is assigned by a null counterpart of the directional preposition, this counterpart, being external to the small clause and thus higher than the small clause subject, does not resolve the issue of multiple case assignment and is furthermore subject to the locality concerns discussed in section 3.1.

### 6. Independent motivation: Russian cardinals

Cross-linguistically, there exists a plethora of environments where more than one Case can be argued, both on syntactic and morphological grounds, to be assigned to a particular constituent even when this constituent is marked with one morphological case only. One example is the Slavic Genitive of Negation

- (i) a. Do you consider cribbing (as) a form of cheating?
  - b. Would you consider newspapers (as) a potential source of data?

Conversely, (iia) does not involve a small clause structure at all, as shown by the availability of (iib), where the xNP following *to* is not a predicate (the fact demonstrated by iic):

- (ii) a. Betsy was promoted \*(to) chairman.
  - b. Betsy was promoted to the position of chairman.
  - c. Betsy was (\*to) the position of chairman.

(Babby 1980, Pesetsky 1982); another is the partitive/accusative alternation (Kiparsky 2001) in Finnish. Due to the of space, I will only discuss casemarking with Russian cardinals here; the same pattern obtains in Finnish.

As is well-known (see Mel'čuk 1985, Babby 1987, Franks 1994, among others), Case marking in a Russian xNP containing a cardinal depends on the case assigned to that xNP. If the xNP is assigned a direct/structural case (nominative or accusative), the lexical noun (and its xAP modifiers) are casemarked by the cardinal (usually genitive);<sup>23</sup> if the xNP is assigned an oblique case (genitive, dative, locative or instrumental), the lexical noun is marked with that case. The cardinal itself is marked with the case assigned to the entire xNP. The pattern is obviously different for a partitive or possessive genitive, which persists no matter what case is assigned to the entire xNP:

- (28) a. *tridcat'* šagov thirty NOM/ACC steps GEN
  - b. *tridcat'ju šagami* thirty <sub>INSTR</sub> steps <sub>INSTR</sub>
  - c. v tridcati šagax in thirty LOC steps LOC
- (29) a. *bol'šinstvo šagov* majority <sub>NOM/ACC</sub> steps <sub>GEN</sub>
  - b. bol'šinstvom šagov majority <sub>INSTR</sub> steps <sub>GEN</sub>

Whatever the internal structure of a cardinal-containing xNP may be (see Franks 1994, Ionin and Matushansky 2006, among others), it does not affect the main point: whatever head it is that assigns genitive, why does it fail to do so when the entire xNP is assigned an oblique case – and if it doesn't, how is multiple case assignment resolved?

In the system I propose, the answer is straightforward: case is assigned to the totality of the xNP, and oblique cases, being more marked, are ordered before the direct cases in vocabulary insertion rules, and thus override them.<sup>24</sup>

#### 7. Conclusion

The standard Case Theory is extremely restricted in its scope and has nothing to say about the vast majority of Case phenomena. The new Case Theory that I proposed here can account not only for the standard facts but also for predicate Case-marking.

<sup>&</sup>lt;sup>23</sup> Not all cardinals assign the same case. See Hurford 1975, Mel'čuk 1985, Babby 1987, Franks 1994 and Ionin and Matushansky 2006, etc., for the exact patterns involved.

<sup>&</sup>lt;sup>24</sup> The difference between the genitive assigned with a cardinal and the genitive assigned with a regular noun also requires an explanation, in any Case Theory. One possible explanation relies on the unexplored topic of what constitutes a barrier to Case assignment: it could be that a cardinal, being "more functional" than a lexical noun, does not introduce such a barrier. An alternative proposal would be to assume that the genitive assigned by a cardinal corresponds to a different underlying feature bundle than other xNP-internal genitives, and is therefore not treated the same by the vocabulary insertion rules for oblique cases.

On the assumption that surface case is determined by language-specific vocabulary insertion rules and may not reflect all the case-features assigned to the term (syncretism), Case-agreement (e.g., in Latin) results from Case-assignment by  $v^0$  or  $T^0$  to its complement on the assumption that  $Pred^0$  assigns no Case features. Russian instrumental case is the spellout of the Case feature bundle assigned by  $Pred^0$  and by an event-related  $v^0$ . Finally, the translative case in Finnish is the spellout of the Case feature bundle assigned by  $Pred^0$  and by the BECOME  $v^0$  or [BECOME] feature of the verb.

The proposal that syntactic Case can be decomposed permits us to reconnect the syntactic Case Theory to morphological case feature systems (see Blake 1994(section 2.3) for an overview), while also providing a clearer definition of the syntactic notion of abstract Case. Combined with standard Distributed Morphology assumptions about vocabulary insertion, it yields a morphosyntactic account of how multiple case assignment is resolved and where (part of) cross-linguistic variation in Case assignment to predicates resides: (a) the ability of a given head to assign Case, and (b) language-specific vocabulary insertion rules. As a result, we can deal with multiple Case assignment in environments other than predicate Case, and we also obtain a principled view of Case as a redundancy-increasing method of marking the derivational history of a tree on its leaves, which makes it clearer why case-marking may be underspecified or absent.

Several issues are left open by this article, including such problems as expletive choice, PRO licensing, the nature of EPP and the interaction of overt Case with movement, all of which have frequently been viewed as part of the domain of Case Theory. Among the many research topics which I believe can be adequately treated by the new Case Theory are default and inherent Case, and ergative/absolutive and mixed Case systems. Barriers to Case percolation have also been left aside, as has been the variation between Case agreement and predicate Case assignment determined by the argument/adjunct distinction (Serbo-Croatian; see Bailyn 2001) or by finer details of the lexical semantics of the verb (as in Georgian or Hungarian). These omissions notwithstanding, I hope to have demonstrated that the new Case Theory can account for the facts that the standard Case Theory has treated as well as deal with phenomena that it has not.

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