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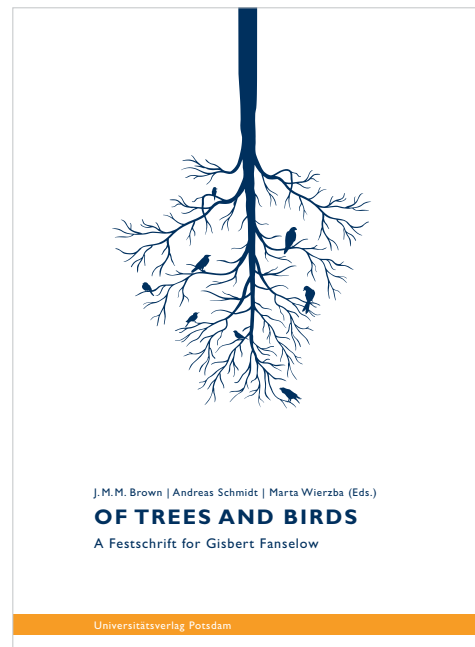
**OF TREES AND BIRDS**
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# Why is a predicate inversion analysis problematic? Insights from existential, locative and possessive constructions[1]

Joanna Błaszczak, University of Wrocław

## 1 The issue

It is a well-known fact that cross-linguistically, locative, existential and possessive sentences show close affinities (Clark 1970, 2004). In many languages the only difference between locative and existential sentences seems to be a different arrangement of the locative and the nominal phrases: while in locative sentences the nominal phrase precedes the locative phrase, in existential sentences the opposite is the case, i.e., it is the locative PP that precedes the NP; cf. (1a, b). In addition, in many languages also possessive sentences closely resemble existential/locative sentences in that the possessor is realized by means of a prepositional (locative) phrase; cf. (1c) (see Jung 2011; Myler 2014; Stassen 2009 for an overview).
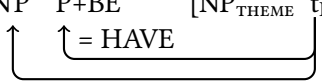
(1) Russian (Freeze 1992: 553–4)

    a. *Kniga* byla <u>na stole</u>.           *locative*
       book.NOM was on table
       'The book is on the table.'

    b. <u>Na stole</u> byla *kniga*.           *existential*
       on table was book.NOM
       'There was a book on the table.'

    c. <u>U menja</u> byla *kniga*.           *possessive*
       at me     was book.NOM
       'I had a book.'

In view of the above facts, it is often assumed that existential, locative and possessive constructions are all derived from the same underlying structure in (2a) (Hoekstra & Mulder 1990; Freeze 1992; den Dikken 1997, 2006; Moro 1977; Witkoś 2000; Harves 2002). The different types of constructions arise as the result of moving either the NPTHEME (locative sentences) (cf. (2b)) or the PPLOC (existential/possessive sentences) (cf. (2c)) into a sentence-initial position (mostly understood as SpecIP):

(2) a. BE [$_{SC}$ NP$_{THEME}$ PP$_{LOCATION}$]

    b. NP$_{THEME}$ BE [ t$_{NP}$ PP$_{LOCATION}$]         *locative*

    c. PP$_{LOCATION}$ BE [NP$_{THEME}$ t$_{PP}$ ]        *existential/possessive*

However, in many languages possessive sentences have a nominal possessor instead of a prepositional one, and HAVE as the predicate; see (3a). In order to account for these differences, it is usually assumed that BE and HAVE are not lexical verbs, but rather spell-outs of (various) functional heads in syntax (see den Dikken 2006). More precisely, HAVE is a result of syntactic incorporation of a(n abstract) prepositional locative head into BE, giving rise to an NP possessor; cf. (3b) (see Myler 2014 for another version of this view going back to Benveniste 1966).

(3)   Polish

    a.  Jan        miał  dwie  papużki faliste.        *possessive*
        John.NOM had   two   budgerigars.ACC
        'John had two budgerigars.'

    b.  "NP"  P+BE     [NP$_{\text{THEME}}$ t$_{\text{PP}}$]        *possessive*
              = HAVE

Such a unified analysis based on predicate inversion might seem appealing and attractive at first glance, but on a closer inspection it turns out to be "too simple". There are a number of problems which a predicate inversion analysis must face even in its modified version proposed by den Dikken (2007a,b). The goal of this short contribution is to point out some particularly problematic aspects of this analysis.[2]

## 2  A "predicate inversion + phase extension" analysis (den Dikken 2007a,b)

### 2.1  The basic idea

Den Dikken assumes that all predication relationships are syntactically represented as in (4a). The relationship between a predicate and its subject in the base representation of predication structures is mediated by a RELATOR, an abstract functional head. In Predicate Inversion constructions there is a need for linkers. They connect the raised predicate to the small clause harbouring its subject; cf. (4b). Importantly, both relators and linkers are meaningless elements (in the sense of having no semantic load). In addition, den Dikken's (2007a, 2007b) analysis is based on the following premises, summarized below in (5).

(4)   a.  [$_{\text{RP}}$ SUBJECT [RELATOR [PREDICATE]]]    *canonical*

    b.  [$_{\text{FP}}$ PREDICATE$_i$ [**F** [$_{\text{RP}}$ SUBJECT [RELATOR t$_i$]]]]    *inverse*

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2. The reader is referred to Błaszczak (2007, 2018) for a more detailed discussion.

(5) a. *Phase Impenetrability*
Syntactic relationships (Agree) and processes (Move) are constrained by the Phase Impenetrability Condition (PIC) of Chomsky (2000 et passim): in phase $\alpha$ with head H, the domain is not accessible to operations outside $\alpha$, only H and its edge are accessible to such operations.

b. *Inherent Phase*
An inherent phase is a predication (subject-predicate structure).

c. *Phase Extension*
Syntactic movement of the *head* H of a phase $\alpha$ up to the head X of the node $\beta$ dominating $\alpha$ *extends* the phase up from $\alpha$ to $\beta$; $\alpha$ loses its phasehood in the process, and any constituent on the edge of $\alpha$ ends up in the domain of the derived phase $\beta$ as a result of Phase Extension.[3]

The structure in (4b) raises two questions: (i) How can F establish an *Agree* relationship with the predicate from its vantage point outside the RP, which (in light of (5b)) is a phase?, and (ii) How can the predicate *Move* to a higher A-specifier position across the A-specifier position in which its subject is base-generated? Den Dikken answers these questions as follows: (i) in order for F to establish an Agree relationship with the predicate, there must be no phase boundary in between F and the predicate, and (ii) for raising of the predicate across its subject to be allowed, the two phrases must be equidistant. How can this be established? Den Dikken proposes two options, given in (6), as to how the predicate can be made visible to F and equidistance can be ensured.

(6) a. Option 1: The head of the small-clause predicate is raised up to the RELATOR:
[RP DP [RELATOR+X$_j$ [XP t$_j$ ...]]]

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3. Note that den Dikken's system reintroduces the dynamicity of barrierhood that Barriers was known for: the idea that constituents can inherit barrierhood (or phasehood) from categories they dominate (see den Dikken 2007b: 2).

    b.   Option 2: The RELATOR raises to a functional head introduced outside the small clause:
        [$_{FP}$ Spec [**F+RELATOR$_i$** [$_{RP}$ DP [t$_i$ [XP PREDICATE]]]]]

Regarding Option 1, it is assumed that movement of the head H of a phrase HP embedded inside a phase $\phi$ to the head of the phase makes both H and its maximal projection visible to probes outside the phase. However, it should be noticed that given the definition of 'closeness' in Chomsky (1995 and later works), closeness is satisfied even without head movement (cf. also den Dikken 2007a, Surányi 2007). As far as Option 2 is concerned, it is assumed that movement of the RELATOR up to F extends the RP phase to FP; cf. (7). The predicate is no longer separated from the attracting head F by a phase boundary, the inherent small-clause phase RP is extended up to FP. Both the probe (F) and the goal (the predicate) are within this extended phase. As a result of phase-extending head movement of the RELATOR to F, it is also ensured that the predicate's landing site and the base position of the subject are in the same minimal domain, hence equidistant: $\beta$ (the base position of the subject, SpecRP) in (7c) is not closer to the predicate's base position than $\alpha$ (the predicate's landing site, SpecFP) because $\beta$ is in the same minimal domain as $\alpha$ (but see the comment above).

(7)   a.   [$_{RP}$ SUBJECT [RELATOR [PREDICATE]]]
          $\phi$

      b.   [$_{FP}$ F+R$_i$ [$_{RP}$ SUBJECT [t$_i$ [PREDICATE]]]]
          $\phi \longleftarrow$ ( $\phi$ )

      c.   [$_{FP}$ PREDICATE$_j$ [F+R$_i$ [$_{RP}$ SUBJECT [t$_i$ t$_j$]]]]
          $\phi$

Another important consequence of the phase-extending movement is that the subject of RP, while originally on the edge of the RP phase (cf. (7a)), ends up being embedded within the domain of the extended phase (FP) as a result of movement of the RELATOR up to F (cf. (7c)). Thus, in (7) the subject will be invisible to any outside probes, and hence unable to establish any Agree relationships with outside probes.

## 2.2 Conceptual problems

At first glance, the analysis seems plausible. It gives rise to several questions, though, which are not clearly answered in den Dikken's account. For instance, what is this enigmatic RELATOR? What properties make it be a phase head? Similarly, it is not clear what the F-head is. Den Dikken's suggestion is that it is "a radically empty and meaningless place-holder whose sole purpose is to provide a landing-site for phase-extending movement of the RELATOR" (den Dikken 2007a: 154). Does it mean a return to radically empty, meaningless categories, like Agr-heads (contra Chomsky 1995 et sub.)?[4] Besides, notice that the presence of such categories would seem to involve a Look-ahead.

Another issue is the question of the motivation behind the Predicate Inversion. Why does the predicate move instead of the subject? Given that this movement is an A-movement, it should be a phi-features and case-related movement. But given den Dikken's analysis, this would be a "revitalization", hence back to a "Move"-perspective (instead of the "Attract"-perspective), Greed instead of "Suicidal Greed" and consequently a case of Look-ahead.

In a similar vein, one wonders why Phase Impenetrability should hold in den Dikken's system or how Spell-Out works in this system and how Spell-Out can be delayed. It is also completely unclear why head-movement should extend phasal domains. Why should inherent phases lose their phasal character under head-movement?[5] Den Dikken (2007a: 154) suggests that "movement of the RELATOR up to F is typically (though perhaps not systematically) a case of substitution rather than adjunction […] with R-to-F movement being substitution, and with FP = RP upon substitution of the RELATOR for F, Phase Extension is an automatic result of movement of the RELATOR: the boundaries of the original RP phase are simply stretched up to FP, with the original FP (which is re-

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4. Den Dikken points out that "F is not an Agr-type head" and "agreement is a relationship, not a head" (den Dikken 2007a: 154, fn. 24).

5. These questions are discussed in Boeckx (2007: 46). He points out that it is not clear how something like phasehood can be inherited in a framework that assumes Inclusiveness (Chomsky 1995). Is phasehood a lexical property? How can it be transferred upon head-movement? How can it be lost under head-movement, since movement is copying?

duced to a segment of the new, bigger RP) automatically losing its status as a phase in the process." See (8).

(8)  a.  [$_{FP}$ Spec [F [$_{RP}$ SUBJECT [RELATOR [PREDICATE]]]]]

  b.  [$_{FP=RP}$ Spec [F=RELATOR$_i$ [$_{RP}$ SUBJECT [t$_i$ [PREDICATE]]]]]

One can be sceptical though whether this really helps. Does RP really cease to be a phase? (cf. Pesetsky 2007 for a notion of "property delay"). Another question is why R-to-F movement is necessary for Predicate Inversion. Why can't a predicate simply move to the edge of RP to be visible to an outside probe? Den Dikken's suggestion is that this would lead to improper movement (adjunction to RP (A-bar) would be followed by an A-movement (SpecFP)).[6] And finally, the reason for why the subject could not move to the edge of FP to avoid PIC is—according to den Dikken—the assumption that adjunction to meaningless categories is disallowed. Matushansky (2007: 96f.) notices a potential problem here. If the impossibility of extracting the small clause subject out of inverted copular constructions is due to the Phase Impenetrability Condition, agreement with this subject should also be impossible, which—as she noticed referring to Heycock & Kroch (1998)—is empirically incorrect; cf. (9).

(9)  Delinquency is a menace to our society.
  Also a menace are / *is factory closings and fascist propaganda.

Potentially, to solve this problem, one could assume that F+R raises further to T, thus extending the phase to TP. However, Matushansky (2007: 97) observes this solution would be problematic: Lexical verbs also license copular inversion, as shown in (10), but lexical verbs do not raise to T in English (according to a standard assumption).

(10)  The best solution remains instant retreat.

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6. One might be skeptical though why this should be the case. Notice that "A- and A'-movement have no status in the present framework; the terms are used only for convenience. It follows that no principles can be formulated in terms of the A-/A'-distinction […]" (Chomsky 2004: 125, fn. 30).

## 2.3 Polish-specific problems

If the derivation of existential and possessive sentences proceeds in a parallel way (via a "PP preposing" / "Predicate Inversion") and HAVE arises as the result of the incorporation of a prepositional head into BE, then we would expect that (11) is true. What is not expected are examples of the type (11c), in which the verb HAVE is used and there is still a (locative) preposition present, contrary to fact, as shown in (12c).[7]

(11)  a.   ✓"NP" HAVE NP

     b.   ✓PP BE NP

     c.   **\*PP HAVE NP**

(12)   Polish

     a.   Samochód **ma**  silnik.           cf. "NP" HAVE NP (11a)
          car.NOM  **has**  motor.ACC
          'A/The car has an engine.'

     b.   **W**  samochodzie **jest**  silnik.       cf. PP BE NP (11b)
          **in**  car.LOC      **is**  motor.NOM
          'There is an engine in the car.'

     c.   But:

          **W**  samochodzie nie  **ma**  silnika.  cf. **\*PP HAVE NP (11c)**
          **in**  car.LOC      NEG **has** motor.GEN
          'There is no engine in the car.'

     d.   But:

          W  samochodzie nie  **było**  silnika.     cf. PP BE NP (11b)
          in  car.LOC      NEG **was**  motor.GEN
          'There was no engine in the car.'

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7. Notice that Polish is not isolated in this respect; similar facts can be found, e.g., in Croatian and Bulgarian. See Błaszczak (2007, 2008) for details; cf. also Broekhuis & Cornips (1997) for a similar objection made on the basis of Dutch data.

To account for the cooccurrence of P(P) and HAVE, one could assume, for example, that there is an incorporation of some element into BE but such incorporation does not automatically give rise to a BE→HAVE switch (cf., e.g., Muromatsu 1997 for an idea along such lines). The effects of this incorporation might be different in different languages depending on the prepositional status of the incorporating element. Or one could assume, following a suggestion by Belvin & den Dikken (1997) and den Dikken (2006), that there is in fact a P-into-BE incorporation but the underlying structure is much more complex. Neither of these options is satisfactory. If the result of the incorporation (BE or HAVE) depends on the prepositional status of the incorporating element or similarly, if we follow Belvin & den Dikken's (1997)/den Dikken's (2006) suggestion that the 'have' form in (12c) is indeed due to the P-into-BE incorporation but the examples in question actually have a more complex structure, as indicated in (13), why should there be a difference between (12c) and (12d) or between (12c) and (12b)? Myler (2014: 214) suggests in reference to example (11c)/(12c), his (135c)/(136), that PPs possibly have an articulated adpositional functional sequence and "if it is one of these higher heads that incorporates into BE to yield HAVE, then [(11c)] becomes a possible surface form." Even if one assumes such a possibility, this does not explain yet why there is a difference between (12c) and (12d) or between (12c) and (12b). Why would the incorporation of such a higher head (in the adpositional functional sequence in a PP) into BE give rise to HAVE in (12c) but not in (12b) and (12d)? If in the latter cases, there is no incorporation (to explain the BE form of the verb), how to account for that? What would make the incorporation obligatory in one case but not in the other analogous cases?[8]

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8. Myler (2014) assumes that BE is a copula—a dummy verb needed to "'sentencify' fundamentally non-sentency meanings" (p. 61). In Myler's account both the existential copula (used in existential constructions) and a predicative copula (i.e., a copular verb used with nominal predicates) are instantiations of the same v. The special existential interpretation of an existential sentence is thus argued not to come from the copula itself, but from "a separate syntactic piece", namely an expletive "which (sometimes silently, sometimes overtly) is present in the structure of such sentences" and "introduces simple existential closure" (p. 55). See also Hartmann & Milićević (2008) for a related discussion.

(13)   PP$_{\text{LOCATIONi}}$ BE [$_{\text{SC}}$ NP [$_{\text{PP}}$ P *pro*$_i$]]

base-generated in a topic position and co-indexed with a *pro*-predicate

Another problem is that, in the light of the discussion above, long-distance agreement with the subject (in inverted structures) should be expected to be impossible, given that there is arguably no V-to-T raising in Polish (cf. Witkoś 1998), but see (14).

(14)   W  ogrodzie *często* były       [jakieś ptaki].
       in  garden    often be.3.PL.PST [some   birds].NOM.PL
       'There were often (some) birds in the garden.'

(14')  a.   [$_{\text{RP}}$ NP-SUBJECT [RELATOR [PP-PREDICATE]]]
            $\phi$

       b.   [$_{\text{FP}}$ F+R$_i$ [$_{\text{RP}}$  SUBJECT [t$_i$ [PREDICATE]]]]
            $\phi \longleftarrow ( \phi )$

       c.   [$_{\text{FP}}$ PP-PREDICATE$_j$ [F+R$_i$ [$_{\text{RP}}$ NP-SUBJECT [t$_i$ t$_j$]]]]
            $\phi$

       d.   PROBE-T [$_{\text{FP}}$ PP-PREDICATE$_j$ [F+R$_i$ [$_{\text{RP}}$ *NP-SUBJECT* [t$_i$ t$_j$]]]]
            $\underbrace{\hspace{5cm}}_{\text{X}}$
            PIC!

Furthermore, it is not clear how ACC/GEN assignment would work in possessive sentences; cf. (15) and (16). Which element/elements is/are here the assigner of ACC case?

(15)   a.   Jan       ma papugę.
            John.NOM  has parrot.ACC
            'John has a parrot.'

       b.   Jan       nie ma papugi.
            John.NOM  NEG has parrot.GEN
            'John does not have a parrot.'

(16)  a.    $[_{RP} [_{NP}$ SUBJECT [RELATOR = $\varnothing$ $[_{PP}$ $P_{\varnothing}$ NP]]]]

a'.   $[_{RP} [_{NP}$ parrot [RELATOR = $\varnothing$ $[_{PP}$ $P_{\varnothing}$ John]]]]

b.    $[_{FP} [_{PP}$ $t_i$ John]$_j$ [F $[_{RP} [_{NP}$ parrot] [RELATOR = $\varnothing+P_i$ $t_j$ ]]]]]

Given Belvin & den Dikken's (1997: 155) assumption that "[t]he complex F-head resulting from P-to-Agr-to-F-movement is realised on the surface as *have*, not *be*, due to the fact that the Agr-head that incorporates into F has come in the possession of the dative preposition's case-feature"[9] (cf. (17)), we would expect R+P to raise further to F (which would result in 'have').

(17)  a.    $[_{FP}$ Spec $[_{F'}$ F $[_{AgrP}$ DP$_{subj}$ $[_{Agr'}$ Agr $[_{PP}$ P DP]]]]]

b.    $[_{FP}$ **$[_{PP}$ $t_j$ DP]$_i$** $[_{F'}$ F+$[_{Agr}$ Agr+P$_j]_k$ $[_{AgrP}$ DP$_{subj}$ $[_{Agr'}$ $t_k$ $[_{PP}$ $t_i$]]]]]

However, following den Dikken (2007b: 11), as a result of the raising of the head of the small clause predicate up to the RELATOR, (i) the features of the predicate head are transferred up to RP and thereby made visible to the outside probe F that seeks to attract the predicate, and (ii) the base position of the predicate and the base position of its subject are made equidistant. This in turn has the beneficial effect of rendering the predicate inversion into SpecFP grammatical without the need for movement of the RELATOR up to F ever arising: such movement is literally redundant; the derivation in (16b) is grammatical without it. Let us assume for the sake of argumentation that there is some ACC-assigning V-head higher up in the structure, as indicated in (18). Notice, however, if 'John' also needs case (it surfaces as NOM), it will prevent 'parrot' from being assigned ACC. But then, 'John' should surface as ACC; see (19).

(18)    $V_{ACC}$ $[_{FP} [_{PP}$ $t_i$ John]$_j$ [F $[_{RP} [_{NP}$ parrot] [RELATOR = $\varnothing+P_i$ $t_j$ ]]]]]

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9.  According to Belvin & den Dikken (1997: 155), "in a language like English, the incorporating dative P is phonologically null and must incorporate into Agr in order to be licensed (…)".

(19)

                X
             ACC

a.  V [$_{FP}$ [$_{PP}$ t$_i$ John$_{[uCASE]}$]$_j$ [F [$_{RP}$ [$_{NP}$ parrot$_{[uCASE]}$] [RELATOR = ∅+P$_i$ t$_j$ ]]]]

           ACC

b.  V [$_{FP}$ [$_{PP}$ t$_i$ John$_{[uCASE]}$]$_j$ [F [$_{RP}$ [$_{NP}$ parrot$_{[uCASE]}$] [RELATOR = ∅+P$_i$ t$_j$ ]]]]

c.  *John$_{ACC}$ has parrot$_{??}$.

On the other hand, if 'John' has already been assigned structural case, it should cause Defective Intervention Effects, as indicated in (20). In contrast, if 'John' does not have any structural case feature (just a lexical/inherent case feature), it will not cause Defective Intervention Effects, but the question will still be what happens to the NOM case and agreement (of T). Compare (21).

(20)

               X
            ACC

V [$_{FP}$ [$_{PP}$ t$_i$ John$_{[\text{uCASE}]}$]$_j$ [F [$_{RP}$ [$_{NP}$ parrot$_{[uCASE]}$] [RELATOR = ∅+P$_i$ t$_j$ ]]]]

(21)

           ACC

a.  V [$_{FP}$ [$_{PP}$ t$_i$ John]$_j$ [F [$_{RP}$ [$_{NP}$ parrot$_{[uCASE]}$] [RELATOR = ∅+P$_i$ t$_j$ ]]]]

           → agreement / NOM?

b.  T V [$_{FP}$ [$_{PP}$ t$_i$ John]$_j$ [F [$_{RP}$ [$_{NP}$ parrot$_{[\text{uCASE}]}$] [RELATOR = ∅+P$_i$ t$_j$ ]]]]

## 3 Concluding remarks

To sum up the preceding discussion, though there are certainly similarities between locatives, existentials and possessives, the idea that they all derive from the same underlying small clause structure seems to be too simple to account for all the different properties of the respective constructions. Such a uniform analysis would require assuming that there are two different BEs: BE incorporating the P-head (thus accounting

for the change from BE to HAVE) and BE not incorporating the P-head (thus not changing to HAVE). But even if one made such an assumption, it would still not be clear what accounts for the use of a HAVE form in (some) existential sentences. Similarly, it is not clear what accounts for different interpretations given that locatives, existentials and possessives have underlyingly the same argument structure. What decides which element (NP$_{\text{THEME}}$ or PP$_{\text{LOCATION}}$) has to move? If BE is not a lexical item with its own meaning but just a spell-out of functional heads in syntax, how do the different interpretations (existence vs. location etc.) arise? Błaszczak (2007, 2018) put forward an analysis which differentiates between different verbs BE (with different argument structures). More specifically, the difference between existential and locative sentences is syntactically encoded in terms of what (LOC or THING) is the subject of inner predication (at the vP/VP level). Definitely more research is needed to decide what the best analysis of such constructions is.

# Bibliography

Belvin, Robert & Marcel den Dikken. 1997. *There*, happens, *to*, *be*, *have*. *Lingua* 101(3–4). 151–183.

Benveniste, Émile. 1966. *Problèmes de linguistique générale*. Paris, France: Gallimard.

Błaszczak, Joanna. 2007. *Phase syntax: The Polish genitive of negation*. Potsdam, Germany: Universität Potsdam, Habilitation.

Błaszczak, Joanna. 2008. What HAS to BE used? Existential, locative, and possessive sentences in Polish. In Andrei Antonenko, John F. Bailyn & Christina Y. Bethin (eds.), *Formal approaches to Slavic linguistics 16: The Stony Brook 2006 Meeting*, 31–47. Ann Arbor, MI: Michigan Slavic Publications.

Błaszczak, Joanna. 2018. Clause structure, case and agreement in Polish existential, possessive and locative sentences: a phase-based account. *Poznań Studies in Contemporary Linguistics* 54(4). 637–696.

Boeckx, Cedric. 2007. Phases and explanatory adequacy: Contrasting two programs. *Theoretical Linguistics* 33(1). 43–48.

Broekhuis, Hans & Leonie Cornips. 1997. Inalienable possession in locational constructions. *Lingua* 101(3–4). 185–209.

Chomsky, Noam. 1995. *The minimalist program.* Cambridge, MA: MIT Press.

Chomsky, Noam. 2000. Minimalist inquiries: The framework. In Roger Martin, David Michaels & Juan Uriagereka (eds.), *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, 89–155. Cambridge, MA: MIT Press.

Chomsky, Noam. 2004. Beyond explanatory adequacy. In Adriana Belletti (ed.), *Structures and beyond: The cartography of syntactic structures*, vol. 3, 104–131. Oxford, England: Oxford University Press.

Clark, Eve V. 1970. Locationals: a study of 'existential', 'locative', and 'possessive' sentences. *Stanford University Working Papers in Language Universals* 3. 1–36.

Clark, Eve V. 2004. Locationals: Existential, locative and possessive constructions. In Joseph H. Greenberg (ed.), *Universals of human language*, vol. 4, 85–126. Stanford, CA: Stanford University Press.

den Dikken, Marcel. 1997. The syntax of possession and the verb 'have'. *Lingua* 101(3–4). 129–150.

den Dikken, Marcel. 2006. *Relators and linkers: The syntax of predication, predicate inversion, and copulas.* Cambridge, MA: MIT Press.

den Dikken, Marcel. 2007a. Phase extension: a reply. *Theoretical Linguistics* 33(1). 133–163.

den Dikken, Marcel. 2007b. Phase extension: Contours of a theory of the role of head movement in phrasal extraction. *Theoretical Linguistics* 33(1). 1–41.

Freeze, Ray. 1992. Existentials and other locatives. *Language* 68(3). 553–595.

Hartmann, Jutta M. & Nataša Milićević. 2008. The syntax of existential sentences in Serbian. In Andrei Antonenko, John F. Bailyn & Christina Y. Bethin (eds.), *Formal approaches to Slavic linguistics 16: The Stony Brook 2006 Meeting*, 168–184. Ann Arbor, MI: Michigan Slavic Publications.

Harves, Stephanie. 2002. *Unaccusative syntax in Russian.* Princeton, NJ: Princeton University, dissertation.

Heycock, Caroline & Anthony Kroch. 1998. Inversion and equation in copular sentences. In Artemis Alexiadou, Nanna Fuhrhop, Paul Law & Ursula Kleinhenz (eds.), *ZAS Papers in Linguistics 10*, 71–87. Berlin, Germany: Leibniz-Zentrum Allgemeine Sprachwissenschaft.

Hoekstra, Teun & Rene Mulder. 1990. Unergatives as copular verbs: Locational and existential predication. *The Linguistic Review* 7(1). 1–79.

Jung, Hakyung. 2011. *The syntax of the be-possessive*. Amsterdam, Netherlands: John Benjamins.

Matushansky, Ora. 2007. Predication and escape hatches in phase extension theory. *Theoretical Linguistics* 33(1). 93–104.

Moro, Andrea. 1977. *The raising of predicates*. Cambridge, England: Cambridge University Press.

Muromatsu, Keiko. 1997. Two types of existentials: Evidence from Japanese. *Lingua* 101(3–4). 245–269.

Myler, Neil Joseph. 2014. *Building and interpreting possession sentences*. New York City, NY: New York University, dissertation.

Pesetsky, David. 2007. Property delay (remarks on "Phase Extension" by Marcel den Dikken. *Theoretical Linguistics* 33(1). 105–120.

Stassen, Leon. 2009. *Predicative possession*. Cambridge, England: Cambridge University Press.

Surányi, Balázs. 2007. On phase extension and head movement. *Theoretical Linguistics* 33(1). 121–132.

Witkoś, Jacek. 1998. *The syntax of clitics: Steps towards a Minimalist account*. Poznań, Poland: Motivex.

Witkoś, Jacek. 2000. Nominative-to-genitive shift and the negative copula *nie ma*: Implications for checking theory. *Journal of Slavic Linguistics* 8(1–2). 295–327.