

David Pesetsky. *Russian case morphology and the syntactic categories*. Cambridge, MA: MIT Press: 2013. 192 pp. ISBN 9780262525022.

Reviewed by Jacek Witkoś*

1. Introduction

In his *Russian case morphology and the syntactic categories*, David Pesetsky addresses core questions of Case Theory and proposes an entirely new program of research into the grammar of case. The program rests on two pivots: first, one should treat case as a signature property of a given grammatical category rather than its descriptive feature, and, second, one should build the theory of case on the basis of grammars that show a lot of morphological case rather than on those where case morphology has undergone substantial attrition (e.g., Russian and Lardil rather than English and French). In the process of forming his novel approach, Pesetsky was able to cover numerous major topics in the grammar of Russian and solved a number of outstanding problems, including the Paucal Genitive and the Genitive of Quantification. Only a fraction of these problem areas can be touched upon in a brief review.¹

I insist on using the term “program” with reference to *Russian case morphology and the syntactic categories*, as I see this publication as a promising beginning of a watertight theory of case. Below, I will try to explore both certain ready-made solutions as well as certain less-welcome consequences of this proposal. Thus I believe that the general idea of this New Program for Case Theory (henceforth NPCT) is a captivating one and set in a truly reductionist spirit, yet its application to many grammatical phenomena in Russian and closely related languages (e.g., Polish) still requires clarification and further development.

* I am grateful to Wayles Browne for a careful discussion of a preliminary version of this review. This research was partly sponsored by grant no. 2012/07/B/HS2/02308 issued by the Polish Science Centre.

¹ The interested reader is referred to Bailyn (2014) for another perspective on Pesetsky’s book, with extensive focus on such issues as the paucal construction in Russian, the hypothesis of case overwriting, and the general status of the nominative case in Slavic. Although these problem areas are central to the book and solutions proposed by Pesetsky deserve merit, as duly acknowledge by Bailyn, below I shall concentrate on other aspects of *Russian case morphology and the syntactic categories*.

2. The System

The core assumption of the radical system in Pesetsky's monograph is that particular grammatical categories bear certain cases as their signature property:²

- (1) a. N = GEN
- b. D = NOM
- c. V = ACC
- d. P = OBL(ique)

These categories assign their case feature to all dependents they subcategorize for and merge with in line with the following principle:³

- (2) Feature assignment (p. 99):⁴
 - a. Copying: when α merges with β , forming $[\alpha \alpha, \beta]$, if β has satisfied its complementation requirements and α is designated as a feature assigner for β , its prototype α^* is immediately merged with β , forming $[\alpha \alpha [\beta \alpha^* \beta]]$.
 - b. Realization: A prototype x^* is realized adjacent to the smallest element dominated by its sister.

In the oblique-case environment, the relevant structure and history of derivation look as follows:

- (3) o pjati xorošix devušakax
 about five_{LOC} good_{LOC} girls_{LOC}

- (4) a. $[NP_{GEN} Q_{GEN} AP_{GEN} [NP_{GEN}]]$
- b. $[DP_{NOM} [Q_{NOM} - D_{NOM}] [NP_{GEN} Q AP_{GEN} [NP_{GEN}]]$
- c. $P_{OBL} \rightarrow [D_{OBL} [Q_{OBL} - D_{OBL}] [NP_{OBL} Q AP_{OBL} [NP_{OBL}]]$

² The notion of case as a signature property of a grammatical category has been part of Pesetsky's research agenda for a while; suffice it to mention the concept of nominative case being the equivalent of the [T(ense)] feature in Pesetsky and Torrego (2001). Interestingly, this particular aspect of the treatment of nominative does not find any application in *Russian case morphology and the syntactic categories*, as (1) shows.

³ I use the phrase "assign a case feature" in a theory-neutral manner, so it stands for check the case feature, value the case feature, and assign case.

⁴ Pesetsky notes a close affinity between his proposal and Emonds's concept of alternative realization (cf. Emonds 2006).

In examples (3–4) locative is a concrete spell-out of the more general oblique case, and it applies to the entire nominal sister constituent to P. In the process it overwrites previous cases resulting from both internal and external merge: nominative on D (cf. 4b) and genitive on NP (cf. 4a). The case on every constituent that was merged earlier is overwritten by subsequent applications of Feature Assignment (FA) unless a given constituent undergoes Spell-Out and is transferred out of the narrow syntax.

Part (b) of the definition in (2) is particularly inspiring and elegant, as it captures the extent to which case morphology spreads over the complement domain to the feature-assigning head. The morphological realization of case is subject to parametric conditions of PF set differently in individual grammars. Thus in French and English the realization stops at the XP level of the complement introduced by *of* or *de* for genitive, whereas in Russian (and Polish) the realization of case consists in spreading it across the entire nominal dependent down to the phase boundary.⁵

Pesetsky endorses the notion of the derivational phase as a constituent within which particular features have been checked and valued, so that this constituent can be transferred out of narrow syntax to the interfaces. The author recognizes the fact that the point of Spell-Out is flexible (pp. 88–89):

(5) Timing of operations relevant to Spell-Out of a phase Φ

Step 1: the syntax constructs Φ .

Step 2: merge (α , Φ).

Step 3: Spell-Out applies to Φ (freezing it for further applications of FA).

This approach stresses the functional aspect of the phase: a constituent of a given category does not undergo transfer unless all relevant features within it have been checked and valued, which depends on the wider syntactic context in which this constituent is placed. Pesetsky (p. 89) defines the phase as follows:

(6) DP undergoes Spell-Out only after it is Vergnaud-licensed [case-marked, J. W.]

Pesetsky (p. 89) allows for a delay in the application of Spell-Out, which does not have to take place immediately (i.e., as soon as an appropriate configuration is formed). For instance, in the following construction involving a small clause, its DP-subject needs to wait to receive case for quite a few derivational steps:

⁵ But see (13b) for an exception and an example of phrasal case in Russian.

- (7) Ja sčitaju [[ètu lampu] krasivoj]
 I consider this_{F.ACC.SG} lamp_{ACC.SG} beautiful_{F.INST.SG}
 'I consider this lamp beautiful.'

The definitions in (5–6) of the application of Spell-Out which recognize its arbitrary point of execution are similar in spirit to the one in Svenonius 2004 and quite distinct from the rigid definition of the application of Spell-Out in Chomsky 2000, 2001, 2008, 2013, 2014.⁶

- (8) A straightforward assumption is that a phase is spelled out when all uninterpretable features on its head are checked. (Svenonius 2004: 264).

In fact, Pesetsky's system must be even more liberal than (8): here the transfer does not apply as soon as the case features are checked/valued, as case overwriting implies multiple case-feature satisfaction. The transfer cannot apply either too soon or too late, as examples (9–10) show:

- (9) o pjati xorošix devušakax
 about five_{LOC} good_{LOC} girls_{LOC}

- (10) $P_{OBL} \rightarrow [DP_{OBL} Q_{OBL} [NP_{OBL} AP_{OBL} [NP_{OBL}]]]$

In this construction both genitive on the NP-complement and the Nominative on the DP are overwritten by an oblique case (here locative), despite the fact that these domains have already been licensed for case(s). If Spell-Out were to apply to the NP or DP earlier, then the oblique case could not spread over these domains. On the other hand, Spell-Out must apply relatively early in instances of adnominal genitive constructions:

- (11) [PP k [DP D [NP krasivomu stolu [DP molodogo
 to beautiful_{M.DAT.SG} table_{M.DAT.SG} young_{M.GEN.SG}
 aktera]]]]
 actor_{M.GEN.SG}
 'to the young actor's beautiful table'

⁶ The Phase-Impenetrability Condition: (i) The domain of H is not accessible to operations at ZP (with ZP the smallest strong phase), only H and its edge are accessible to such operations (Chomsky 2001: 14), (ii) [ZP Z... [HP α [H YP]]] with ZP and HP as strong phases (Chomsky 2001: 14). Interpretation/evaluation of phase α takes place uniformly at the next higher phrase, i.e., Ph₁ is interpreted/evaluated at the next relevant phase Ph₂ (Chomsky 2001: 13).

If it had not applied, then the adnominal genitive should have been overwritten by the case signature of the external category the containing DP is merged with, contrary to fact. Both examples (3–4) and (9–11) show case overwriting, a phenomenon which constitutes one of the pillars of NPCT. As is easy to guess, for all languages to involve intraderivational case overwriting they must differ with respect to the spell-out of case suffixes stacked during the derivation. While some languages overtly show all the stacked suffixes (Lardil), others show only the outermost one (Russian). This spell-out optionality is captured by the following postulate:

- (12) The One-Suffix Rule: Delete all but the outermost case suffix.

Pesetsky (pp. 111–13) provides a discussion of possible instances of overt examples of case overwriting in Russian, where the workings of the One-Suffix Rule are apparently suspended:

- (13) a. tet-in-a knig-a
 aunt-suffix_{F,NOM.SG} book_{NOM.SG}
 ‘auntie’s book’
- b. Tet-i Maš-in-y det-i žili družno.
 aunt_{GEN.SG} Masha-suffix_{NOM.PL} child_{NOM.PL} lived harmoniously
 ‘Aunt Masha’s children lived harmoniously.’

The suffix *-(a/i)n-* (*-ow-* with masculine family terms in Polish) appended to nominal stems is traditionally taken to be an adjectivizer. Pesetsky proposes an alternative analysis, where *-(a/i)n-* is treated as genitive nominal morphology. From this point of view (13a–b) show Lardil-style case stacking. The second example is particularly telling, as it involves a complex phrasal “adjectivized” possessor. These examples show that the outer case has a phrasal nature, as the inner genitive is not turned into nominative. However, the scope of this phenomenon (in Russian and Upper Sorbian) is rather limited, as the author admits.

Still, a more traditional analysis is not undermined by (13), as the phrasal use of the adjectival possessive is very restricted and the adjectival possessive itself is no longer very productive, at least in closely related Polish, where the example below sounds quite archaic, rural, or marked:

- (14) Cioc-in-a torba spadła ze stołu.
 aunt_{GEN-n-suffix}_{NOM} bag_{F,NOM} fell_{F.SG} from table
 ‘Aunt’s bag fell off the table.’

The traditional analysis holds that *-(a/i)n-* is (among other things) an adjectivizer and attaches to the genitive form of the noun to turn it into an adjective (morphological derivation), which subsequently agrees in case with the noun when used attributively (morphological inflection):

- (15) a. [cioci_{GEN} N] + -n_A → [cioc-i-n A]
 b. [cioc-i-n A] + -a_{NOM} → [cioc-i-n-a A]_{NOM}

Thus the form [cioc-i-n-a A]_{NOM} in the traditional analysis is not case stacking but shows a single case suffix attached to a denominal adjective.⁷

It must be admitted that the concept of case overwriting shown in (3–4) and (9–11) produces a very welcome consequence in the form of a relatively equal treatment of higher numerals. Descriptively speaking, a key property of declension paradigms for these numerals is that they behave like adjectives in oblique-case contexts and like nominals in structural-case contexts (by forcing genitive on their NP complements; cf. 16). Consider the declension paradigm for low and high numerals in Polish and an exemplary structural representation from Bošković (2006: 102–03) in (17) below, where F(P) is a nominal functional projection:

(16)

Case	Low numeral	High numeral
NOMINATIVE	trzy tancerki	pięć tancerek ⁸
GENITIVE	trzech tancerek	pięciu tancerek
DATIVE	trzem tancerkom	pięciu tancerkom
ACCUSATIVE	trzy tancerki	pięć tancerek
INSTRUMENTAL	trzema tancerkami	pięcioma tancerkami
LOCATIVE	trzech tancerkach	pięciu tancerkach

- (17) a. [FP [F' F [NP AP [N' NP]]]]
 b. [FP QP [F' F NP]]

⁷ I am grateful to an anonymous *JSL* reviewer for pointing out more complex morphological derivations of adjective possessive forms in Polish such as [matki_{GEN} N] + [(a/i)n] → [mat-czy-n A], which seem equally challenging for both the derivational and inflectional treatments of the *(a/i)n* morpheme.

⁸ As discussed further in this review, higher numerals do not show a nominative form in Polish. This function is taken over by accusative. The difference between the two is indicated by the form of the demonstrative pronoun.

In the literature this dichotomy has typically been captured via structural means, namely, these numerals were conveniently treated as A(djectives) in the former context (cf. 17a) and as Q/N in the latter (cf. 17b).⁹ The dichotomy was, however, problematic for the minimalist taste, as it smacks of considerable ‘look-ahead’: the internal structure of the nominal projection (formed early on) matches the case it is about to receive later in the derivation. This issue becomes even more acute from the point of view of the derivation in current phase theory, where backtracking is strictly prohibited and label/structure changing in the middle of the derivation violates the No Tampering condition (cf. Chomsky 2000, 2001; Stepanov 2001, 2007). The overwriting option avoids this complication, as all higher numerals behave alike. In every derivation they pass through a stage of behaving like Q/N, receiving structural case (nominative from D under NPCT) and forcing genitive on the NP complement (leaving it in the primeval genitive in Pesetsky’s terms) and then, potentially, have their case and the case of the NP complement overwritten by the subsequent feature-assignment operation(s).¹⁰

3. The Paucal Genitive and the Genitive of Quantification

The key strength of NPCT shows itself in the extensive discussion of the puzzling pattern of case marking found in nominal constructions with the paucal numerals and higher numerals (five and above); in the former instance the NP complement to the numeral in structural case contexts appears in the genitive singular, whereas in the latter it appears in the genitive plural. In these instances the procedure of case feature assignment is somewhat more complex:

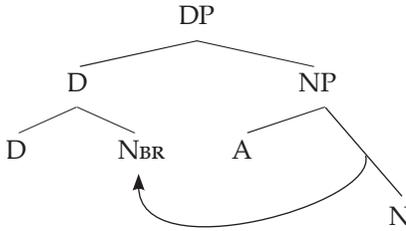
- (18) dva novyx stola
 two_{NOM} new_{GEN.PL} table_{GEN.SG}
 ‘two new tables’

⁹ See Pesetsky 1982, Babby 1987, Franks 1994, 1995, Bošković 2006, etc. Bailyn 2004 is a notable exception, as here the higher numerals are uniformly treated as Qs, though they either occupy the head (oblique cases) or the specifier position (structural cases) of QP.

¹⁰ A common element for all analyses of GoQ and paucals is that both categories, number (NBR *dva* ‘two’) and quantifier (QUANT *pjat* ‘five’), must be able to absorb case and thus satisfy some property of the case licenser. In minimalist terms they must be equipped with a full set of ϕ -features ([_person], [_number], [_gender]). There is little discussion of this point in Pesetsky’s monograph.

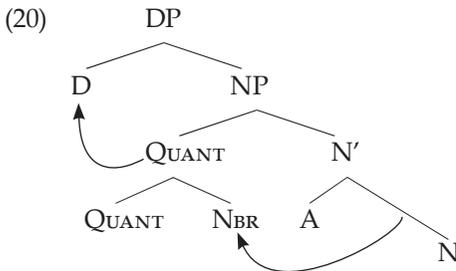
(19) N_{BR}-to-D movement:

(p. 26)



N_{BR} is defined as a number feature that can be attached to the nominal stem N in two ways: (a) synthetically when both N and N_{BR} are fused in the lexicon and their combination enters the syntax, or (b) periphrastically, when they both enter syntax as independent nodes and merge very early in the derivation. Initially D and NP merge but D bears a feature forcing the movement of N_{BR} to remerge with it. Thus, N_{BR} moves from within NP and merges with D to satisfy this requirement. This form of movement is called undermerge. The numeral merges with D and satisfies its complementation requirements on the strength of (2), which results in feature copying. The numeral receives nominative, the signature property of D, while the (former complement) NP remains in its primary case (genitive) because, upon merger with D, it does not satisfy the D's complementation requirements and so feature copying does not apply.

A strategy similar to the one in (19) is proposed for the derivation of the GoQ in Russian, where the numeral itself is nominative, while its complement is genitive. In view of the discussion of the paucal, GoQ is a derivative of it; the paucal marker moves to QUANT and they both move to D (p. 54):



It must be observed straight away that undermerge shows peculiar transfer-like consequences. The complex structure resulting from the movement of N_{BR}/QUANT to D raises the same question as before. A technical consequence of forming the complex object [D D [QUANT QUANT N_{BR}]] is to place the first-merged constituent (NP) in limbo, out of the reach of Feature Application of D without spelling it out, though for all intents and purposes it is as spelled-out and beyond the reach of D. But it is certainly not spelled-out in the

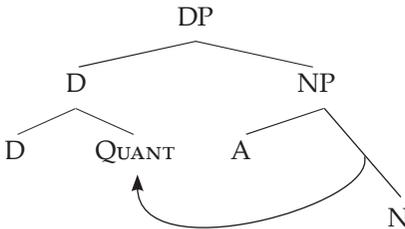
standard sense, as examples (3–4) and (9–11) above show; Feature Application from P, a source of an oblique case, does indeed access both D and its NP-complement and overwrites the previous genitive case as oblique (here locative). We are then looking at a fairly uncommon syntactic context, where a given domain becomes opaque (island-like) with respect to a closer, more minimal Probe (NP is opaque to the complex [D D [QUANT QUANT NBR]]) but opens up and becomes transparent to a more distant one (here P_{OBL}):

- (21) o pjati xorošix devuškaX
 about five_{LOC} good_{LOC} girls_{LOC}

- (22) P_{OBL} → [D_{OBL} Q_{OBL} [N_{OBL} AP_{OBL} [NP_{OBL}]]]

As Polish does not show the paucal genitive, I assume that the analysis of the Polish GoQ modeled on Pesetsky's solution would be similar to (19) above:

- (23) QUANT-to-D movement in Polish GoQ modelled on Pesetsky (p. 26):



D merges with an NP complement but this does not satisfy its selection requirements (cf. 24a), and it attracts a higher numeral (Q_H) to (under)merge with it (cf. 24b):

- (24) a. [DP D [NP A QUANT N]]
 b. [DP [D D QUANT] [NP A QUANT N]]

As a result, Feature Assignment affects QUANT and returns nominative, as this is the “decisive” complement, while the NP complement is left on its own in primary genitive.

Pesetsky observes that his proposal has the advantage of ultimately explaining the workings of the adnominal genitive. As NPs do naturally come with genitive and are born with it, there is no adnominal genitive to assign. It comes out naturally as a result of Feature Assignment in (2), as genitive should overwrite other cases visible on nominal complements (probably nominative if the complement is a DP and D = NOM). However, there are bare nominal complements to nominals that do not appear in the expected genitive, though

here it could be possible to devise a silent adnominal Preposition. Here are some relevant Polish examples:

- (25) a. zagrożenie pożarem
 threat fire_{INST}
 ‘a threat of fire’
- b. obrót aktywami
 circulation assets_{INST.PL}
 ‘a circulation of assets’

This Preposition should, however, demarcate a Spell-Out domain, just like genitive-marked complements, which remain impervious to further applications of case overwriting; cf. Rozwadowska 1997.

The mechanics of undermerge lead to a few interesting consequences, including an explanation for the case form of the adjective in the modified cardinal construction (cf. Corbett 1979, Ionin and Matushansky 2006, and Wilim 2015). Both in Russian and Polish the case form of a small set of adjectives modifying the numeral can sometimes either be accusative or genitive. Pesetsky proposes an account based on the timing of the movements/external merge of A and QUANT to the D domain. The Polish examples below are modeled on Pesetsky (p. 57, ex. 66; 58, ex. 67):

- (26) a. dobrych pięć ładnych stołów
 good_{GEN} five_{ACC} nice_{GEN} tables_{GEN}
 ‘a good five nice tables’ or ‘five good nice tables’
- b. [DP A [D D] [NP A A QUANT N]]
- c. [DP A [D D QUANT] [NP A A QUANT N]]
- (27) a. dobre pięć ładnych stołów
 good_{ACC} five_{ACC} nice_{GEN} tables_{GEN}
 ‘a good five nice tables’
- b. [DP [D D QUANT] [NP A A QUANT N]]
- c. [DP A [D D QUANT] [NP A A QUANT N]]

The relative timing of both movements is critical for case marking. On the strength of (2) D assigns the nominative case feature to the adjectival modifier only after a prior attraction of QUANT, as the movement of QUANT to D fully satisfies D’s subcategorization requirements and turns it into a nominative case licenser (cf. 27). If the adjective is moved into the minimal domain of D

prior to the movement of QUANT, it retains its original genitive as a case obtained within the maximal projection of N.

4. Challenges to Undermerge

One challenge concerns the nature of merge operations and the complementation structure involving D and its NP complement. Obviously, the residue of the former troublesome dichotomy is left in the form of low numerals in Polish, which morphologically behave like adjectival modifiers all along, so probably they would not be subcategorized for by D. In turn, D would subcategorize for NP and assign its case feature (nominative) to it, to have it overwritten further in the course of the derivation.

Another issue concerns the very nature of the undermerge operation since it is at odds with the Extension Condition of Chomsky (1995): the representations in (19–20) and (23) do not show the top constituent growing at the root by sprouting another specifier but “thickening” the tree diagram within.¹¹

Another question is why D and NP merge. Certainly, this operation meets the selection requirements of D (or both). It is, however, not enough to copy nominative onto NP, as not all complementation requirements of D are met.

¹¹ Cases of undermerge constitute an exception to the rule that later merge obliterates the effects of earlier merges up to the application of Spell-Out (transfer out of narrow syntax). As Pesetsky himself notes, undermerge is a very specific and controversial operation. He also points out that most of its effects outside the realm of case relations (for instance, the ECM construction in English) can be accounted for by more standard means compatible with the Extension Condition (No Tampering), typically a regular set-merge followed by head movement:

- (i) The DA proved [the two men to have been at the scene] during each other’s trials.
- (ii) The DA proved [no one to be at the scene] during any of the trials.

The fact that the reciprocal (in (i)) and the NPI (in (ii)) are bound under c-command shows that the subject of the embedded clause occupies a position in the main clause. Lasnik (1999) argues for overt movement of the subject DP to the main clause (Subject to Object raising), seen not as a movement to a thematic position but rather to the case position typical of the object, possible in a number of technical guises, (cf. 16a–b, Chomsky 1993, 1995; c, Pesetsky and Torrego 2002, developing ideas of Koizumi 1996):

- (iii) [_{AgroP} the two men _{Agro} [_{VP} the DA [_{V'} V [_{TP} ~~the two men~~ _{T_{def}} ...]]]]
- (iv) [_{loP} the two men [_{v'} the DA *v* [_{VP} V [_{TP} ~~the two men~~ _{T_{def}} ...]]]]
- (v) [_{loP} the DA *v* [_{ToP} the two men _{T_o} [_{VP} V [_{TP} ~~the two men~~ _{T_{def}} ...]]]]

The effect of object raising and complementation/subcategorization are met without undermerge, though clearly head movement must apply to cause the pronunciation of the verb to the left of the raised object. For a novel approach to this construction based on the labeling algorithm, see Chomsky 2013, 2014.

But now the question is: is NP still the sister to and a complement of D? Pesetsky remains unclear about the nature of undermerge and seems to restrict the source of undermerge only to the immediate complement, here of D, mentioning Travis's (1984) Head Movement Constraint in this context. So it seems that undermerge is largely limited to heads, at least in *Russian case morphology and the syntactic categories*. As NBR and QUANT are supposed to move D (pp. 52–54), a head, it is safe to assume that both undergo head movement. If so, the complex [D D NBR] does have a sister in the form of the NP phrase. Technically, on the definition of c-command in Kayne (1994), D still c-commands its NP-complement. With the full complementation requirements of D met, why can it not copy case onto NP?

Another challenge comes from the general movement scenario within the nominal projection. One property of the movement of the numeral in (19–20) is that it constitutes an alternative to the assumptions in Cinque (2005, 2010) concerning the derivation of different word orders within nominal phrases. Cinque develops a rather elegant “roll-up” system of movements within the extended projection of the noun that result in deriving basic word orders within nominals crosslinguistically with reference to four elements:

(28) Demonstrative – Numeral – Adjective – Noun

An interesting property of this proposal, which limits its capacity to overgenerate, is that no element is allowed to move independently, and specifically, every moved constituent must include the head noun. Pesetsky's proposal dispenses with this provision.

5. Empirical Expectations and Consequences

Pesetsky creates a particular expectation for the extended projection of the noun in the Q_{HP} construction: they should be nominative by default. In line with (19–20) above, Q moves to D, fully satisfies its complementation requirement, and is assigned the case typical of D, which is nominative. Nominative is the case assigned/copied onto the selected sister constituent of D, in line with Feature Copying as defined in (2), as in the examples below:

(29) èt-i posledn-ie krasiv-ye stol-y (Russian)
 these_{NOM.PL} last_{NOM.PL} beautiful_{NOM.PL} table_{NOM.PL}
 ‘these last beautiful tables’

(30) te dwie pilne studentki (Polish)
 these_{NOM.PL} two_{NOM.PL} diligent_{NOM.PL} students_{NOM.PL}
 ‘these two diligent students’

Unfortunately, this prediction is confirmed only in a subset of instances in Russian and is not borne out in Polish at all. In the subject position numeral phrases with higher numerals (≥ 5 , Q_{HP} s) predominantly show accusative (Babby 1987; Franks 1994, 1995, 2002; Bailyn 2004; Bošković 2006; Pereltsvaig 2006; Przepiórkowski 2004, Przepiórkowski and Patejuk 2012; Witkoś and Dziubała-Szrejbrowska 2016):

- (31) a. Pjat' devušek rabotali/ rabotalo tam. (Russian)
 five girls_{GEN} worked_{PL}/worked_{N.SG} there
 'Five girls worked there.'
- b. Èti pjat' devušek rabotali/ *rabotalo tam. (Russian)
 these_{NOM} five girls_{GEN} worked_{PL}/ worked_{N.SG} there
 'Five girls worked there.'
- (32) a. Te trzy dziewczyny pracowały/*pracowało tam.
 these_{NOM} three girls_{NOM} worked_{PL}/ worked_{N.SG} there
 'These three girls worked there.' (Polish)
- b. Te pięć dziewczyn *pracowały/pracowało tam.
 these_{NOM} five girls_{GEN} worked_{PL}/ worked_{N.SG} there
 'These five girls worked there.' (Polish)

Przepiórkowski (2004) convincingly shows that Q_{HP} s in Polish are marked for accusative in the subject position, based on the following comparison of the masculine and feminine forms:¹²

- (33) (Tych/ Te) pięć kobiet stało.
 these_{GEN.F}/these_{NOM?/ACC.F} five_{NOM?/ACC.F} women_{GEN.F.PL} stood_{3SG.N}
 'These five women were standing.'
- (34) (Tych/ *Ci) pięciu mężczyzn
 these_{ACC/GEN.M}/ these_{NOM.M?} five_{NOM?/ACC/GEN.M} men_{GEN.M.PL}
 stało.
 stood_{3SG.N}
 'These five men were standing.'

The nominative/accusative syncretism in the feminine gender forms of the demonstrative pronoun obscures the identity of the case, but in the mascu-

¹² Franks (1994, 1995, 2002) also concludes on these grounds that Polish Q_{HP} s in the subject position are accusative.

line gender the nominative form cannot appear while the accusative can (here syncretic with genitive).

Another particularly telling fact is that the accusative-marked Q_{HP} s as clausal subjects are not placed in a complement position to V, a canonical position for the licensing of this case in NPTC (pp. 66–67).

On the same note, there are two further issues that invite an analysis more compatible with the NPTC: the size of the Russian Q_{HP} in light of the analysis proposed in Pereltsvaig (2006) and the optional case agreement of Q_{HP} subjects in Polish with the predicative adjective and the passive participle.

Pereltsvaig (2006) notices that, besides the morphosyntactic difference, agreeing and nonagreeing Q_{HP} subjects in (35) also differ in a number of interesting interpretive options. For instance, the so-called individuated interpretation is possible only with agreeing subjects, while the nonagreeing subject receives the group interpretation:¹³

- (35) Rol' Džejmisa Bonda ispolnjali/ #ispolnjalo [pjať izvestnyx
role James Bond performed_{PL}/ performed_N five famous
akterov].
actors

'Five famous actors performed the role of James Bond.'

The agreeing form is the preferred one in (35), for the role of an individual must have been played by five different individual actors. Furthermore, only agreeing subjects can receive a specific interpretation brought out by adjectives denoting specificity:

- (36) a. V Mariinskom teatre tancevali [opredelennye pjať
in Mariinskij theater danced_{PL} certain five
balerin].
ballerinas.

'A certain five ballerinas danced in the Mariinskij Theater.'

- b. *V Mariinskom teatre tancevalo [opredelennye pjať
in Mariinskij theater danced_N certain five
balerin].
ballerinas.

Intended: 'A certain five ballerinas danced in the Mariinskij Theater.'

¹³ Ironically, the individuated-versus-group contrast was central to the analysis put forward in Pesetsky 1982.

Perelstvaig also recognizes the correlation between the agreement pattern and a strongly partitive interpretation, which refers to a subset of a previously mentioned set:

- (37) a. V naš gorod priexala grupa balerin/ priexali
to our town came group ballerinas_{GEN}/came
baleriny iz Peterburga.
ballerinas from Petersburg
'A group of ballerinas from St. Petersburg came to our town.'
- b. Vo včerašnem koncerte tancevali [pjatero iz nix].
in yesterday's concert danced_{PL} five of them
'Five of them danced in yesterday's performance.'
- c. *Vo včerašnem koncerte tancevalo [pjatero iz nix].
in yesterday's concert danced_N five of them
Intended: 'Five of them danced in yesterday's performance.'

Another correlation concerns the possibility of an inverse scope reading with the agreeing numeral subjects versus the lack thereof and the necessity of isomorphic scope readings with the nonagreeing ones:

- (38) a. Každyj raz pjat' xirurgov operirovali Bonda.
every time five surgeons operated_{PL} Bond
'Every time five surgeons operated on Bond.'
ambiguous: (every >5 or 5 > every)
- b. Každyj raz pjat' xirurgov operirovalo Bonda.
every time five surgeons operated_N Bond
'Every time five surgeons operated on Bond.'
unambiguous: (every > 5; #5 > every)

In sum, the agreeing numeral subjects show the following properties: they allow for the individuated interpretation, specific interpretation, partitive interpretation, nonisomorphic wide scope, act as controllers and antecedents of anaphors, and do not allow for approximative inversion. Their nonagreeing equivalents negatively mirror these properties. As the central point of her hypothesis, Perelstvaig proposes the following structure for agreeing (referential) numeral subjects, shown in (39), and the nonagreeing numeral subjects, or "small nominals," shown in (40):

- (39) a. [DP D [QP Q [NP N]]]
 b. [DP 0_D [QP pjat'_Q [NP banditov_N]]]
- (40) a. [QP Q [NP N]]
 b. [QP pjat'_Q [NP banditov_N]]

Crucially for her analysis, the level of the DP projection in (39) correlates on the morphosyntactic side with full agreement and nominative licensed on it in the subject position and on the semantic side with the property of referentiality.¹⁴ The absence of the DP projection in small numerals makes them nonreferential (and nonquantificational).

However, the structure in (19–20) and the analysis proposed in Pesetsky's monograph leads one to abandon these distinctions: all Q_{HP} s are supposed to constitute DPs, so the structural dimension of the notion of "small nominals" is forfeited despite a substantial number of its well-attested properties. This is exactly where the notion of "program" comes to the fore; the radical NPCT seen as a program requires fine tuning, its most trivial starting point being an assumption that there are several sorts of D. There may be a full-blooded sort of D that assigns the nominative feature to its complement domain, but there may also be a defective D that functions like its regular equivalent minus the nominative case assignment and other interpretive properties. The defective D would have to appear in Pereltsvaig's small nominal contexts, where it would have to assign a different case to QUANT (quite unpredictably, the V-like accusative). Note that NPCT does not allow for an option whereby the nominal projection grows up only to QUANTP, as in (40), as this element is initially placed within the projection of the head noun N in (19–20) and is thus predicted to appear in genitive (incorrectly) unless it moves out (or gets overwritten with another case, which should not happen with NPs in the clausal subject position). Of course, the remaining problem is the influence QUANT exerts on T in the form of default agreement in the examples above. It requires some effort to accommodate Pereltsvaig's structural distinction and its consequences into NPCT.

In Polish an interesting pattern emerges in participial and adjectival agreement with Q_{HP} subjects. Two equivalent case options are available, and the participle can either show the more expected accusative, shared with the head of Q_{HP} , or the much less expected genitive, shared with the NP complement to Q (cf. Przepiórkowski and Patejuk 2012; Willim 2015; Witkoś and Dziubała-Szrejbrowska 2016):

¹⁴ This was, in fact, also Pesetsky's original 1982 analysis, based on the opposition between NP and QP, as well as that of Franks (1994, 1995), utilizing DP.

- (41) Te pięć dziewczyn było [PrtP wybran-e/ wybran-ych
 these five girls_{GEN.PL} was_{3SG.N} selected_{3PL.ACC}/selected_{3PL.GEN}
 do rady wydziału].
 to faculty council

‘These five girls were selected for the faculty council.’

Now, the NPCT-based structure in (19–20) and (23) above, which predicts agreement in nominative, cannot easily account for this agreement pattern, albeit a property that it shares with a large number of other accounts of this construction in the literature.

6. Conclusion

In conclusion, *Russian case morphology and the syntactic categories* is a bold attempt at providing a refreshing perspective on the grammar of case in the light of recent advances in phase theory. A creative combination of the concepts of case overwriting and multiple Spell-Out leads to the formation of an insightful derivational framework for case relations: the case a nominal phrase bears is either its own signature property (base genitive) or the signature property of its selector. Specifically, the structures in (19–20) and (23) and the accompanying analyses provide a novel and fascinating solution to the issue of the DP-internal case distribution within numeral and quantificational phrases in Russian (and Polish). Ironically, Pesetsky’s account of these constructions turns the tables on previous accounts in the literature, including his own, which typically focus on the source of genitive for the NP-complement to the numeral/quantifier in structural-case contexts. Instead, he proposes a broader perspective, naturally combining both the structural and inherent case contexts. NPCT also meets the comparative expectations placed on any theory of case assignment and realization with ease and, as such, constitutes an invitation to analyses of grammars showing different case systems. As for NPCT inviting further particular solutions, Pesetsky’s proposal in its current shape seems to encounter problems with DP-external syntax. Specifically, the (case) agreement pattern of the Q_{HP} in the subject position in Polish does not easily follow from the case overwriting paradigm.¹⁵ Despite the open questions mentioned above, Pesetsky’s New Program for Case Theory certainly deserves to be extended and further developed.

¹⁵ See Witkoś and Dziubała-Szrejbrowska 2016 for an analysis of the Q_{HP} internal and external syntax based on the notion of case as a functional projection and nanosyntax.

References

- Babby, Leonard. (1987) "Case, prequantifiers, and discontinuous agreement in Russian". *Natural language and linguistic theory* 5: 91–138.
- Bailyn, John F. (2004) "The case of Q". Olga Arnaudova, ed. *Formal approaches to Slavic linguistics: The Ottawa meeting*. Ann Arbor: Michigan Slavic Publications, 1–36.
- . (2014) Review of David Pesetsky, *Russian case morphology and the syntactic categories*. *Russian language journal* 64: 230–44.
- Bošković, Željko. (2006). "Case and agreement with genitive of quantification in Russian". Cedric Boeckx, ed. *Agreement systems*. Amsterdam: John Benjamins, 99–120.
- Chomsky, Noam. (1995) *The minimalist program*. Cambridge, MA: MIT Press.
- . (2000) "Minimalist inquiries". Roger Martin, David Michaels, Juan Uriagereka, and Samuel J. Keyser, eds. *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*. Cambridge, MA: MIT Press, 89–156.
- . (2001) "Derivation by phase". Michael Kenstowicz, ed. *Ken Hale: A life in language*. Cambridge, MA: MIT Press, 1–52.
- . (2008) "On phases". Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, eds. *Issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud*. Cambridge, MA: MIT Press, 133–66.
- . (2013) "Problems of projection". *Lingua* 130: 33–49.
- . (2014) "Problems of projection: Extensions". Unpublished ms., MIT.
- Cinque, Guglielmo. (2005) "Deriving Greenberg's Universal 20 and its exceptions". *Linguistic inquiry* 36: 315–32.
- . (2010) *The syntax of adjectives: A comparative study*. Cambridge, MA: MIT Press.
- Corbett, Greville G. (1979) "Adjective movement". *Nottingham linguistic circular* 8(1): 1–10.
- Emonds, Joseph. (2006) *Lexicon and grammar: The English syntacticon*. Berlin: Mouton de Gruyter.
- Franks, Steven. (1994) "Parametric properties of numeral phrases in Slavic". *Natural language and linguistic theory* 12: 597–674.
- . (1995) *Parameters of Slavic morphosyntax*. New York: Oxford University Press.
- . (2002) "A Jakobsonian feature based analysis of the Slavic numeric quantifier genitive". *Journal of Slavic linguistics* 10: 141–81.
- Ionin, Tania and Ora Matushansky. (2006) "The composition of complex cardinals". *Journal of semantics* 23: 315–60.
- Kayne, Richard. (1994) *The antisymmetry of syntax*. Cambridge, MA: MIT Press.
- Koizumi, Masatoshi. (1996) *Phrase structure in minimalist syntax*. Ph.D. dissertation, MIT.
- Lasnik, Howard. (1999) *Minimalist analysis*. Oxford: Blackwell.

- Pereltsvaig, Asya. (2006) "Small nominals". *Natural language and linguistic theory* 24: 433–500.
- Pesetsky, David. (1982) *Paths and categories*. Ph.D. dissertation, MIT.
- Pesetsky, David and Esther Torrego. (2001) "T-to-C movement: Causes and consequences". Michael Kenstowicz, ed. *Ken Hale: A life in language*. Cambridge, MA: MIT Press, 355–426.
- . (2002) "Tense, case, and the nature of syntactic categories". Jacqueline Guéron and Jacqueline Lecarme, eds. *The syntax of time*. Cambridge, MA: MIT Press, 495–538.
- Przepiórkowski, Adam. (2004) "O wartości przypadku podmiotów liczebnikowych". *Bulletin de la Société polonaise de linguistique* 60: 133–43.
- Przepiórkowski, Adam and Agnieszka Patejuk. (2012) "The puzzle of case agreement between numeral phrases and predicative adjectives in Polish". Michael Butt and Tracy Holloway King, eds. *The Proceedings of the LFG'12 Conference*. Stanford, CA: CSLI Publications, 490–502.
- Rozwadowska, Bożena. (1997) *Towards a unified theory of nominalizations: External and internal eventualities*. Wrocław: Wydawnictwo Uniwersytetu Wrocławskiego.
- Stepanov, Artur. (2001) "Late adjunction and minimalist phrase structure". *Syntax* 4: 94–125.
- . (2007) "The end of CED? Minimalism and extraction domains". *Syntax* 10: 80–126.
- Svenonius, Peter. (2004) "On the edge". David Adger, Cécile de Cat, and George Tsoulas, eds. *Peripheries: Syntactic edges and their effects*. Dordrecht: Kluwer, 261–87.
- Travis, Lisa deMena. (1984) *Parameters and effects of word order variation*. Ph.D. dissertation, MIT.
- Willim, Ewa. (2015) "Case distribution and ϕ -agreement with Polish genitive of quantification in the feature sharing theory of Agree". *Poznań studies in contemporary linguistics* 51(2): 315–57.
- Witkoś, Jacek and Dominika Dziubała-Szrejbrowska. (2016) "Numeral phrases as subjects and agreement with participles and predicative adjectives". *Journal of Slavic linguistics* 24(1): 225–60.

Adam Mickiewicz University in Poznań
Faculty of English
al. Niepodległości 4
61-874 Poznań
Poland
wjacek@amu.edu.pl

Received: August 2016

