Some Notes on Single Cycle Syntax and Genitive of Negation

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Abstract: *This paper is an attempt at providing an account of Long GoN within the system of minimalism based on case-agreement and single cycle syntax, closely related to the system developed in Chomsky (1998, 1999, 2000). First, we propose that a successful relation of case-agreement can be established not only between full Probes and complete Goals but also between 'split' Probes and complete Goals. We define a 'split' Probe as a (predefined) pair of heads that complement each other and jointly have features [+case, +φ]. In the concrete case of GoN and Long GoN, the two heads involved are F/Neg [+case] and v [+φ]. The distance holding between the two half Probes in the cases of Long GoN and the punitive power of the PIC, force us to revise certain assumptions concerning the status of phases in the derivation. We propose that for a successful case-agreement relation both the 'split' Probe and the Goal must be placed within the same derivational phase. We therefore submit that neither the vP nor the infinitive embedded under control verbs constitute strong phases. In order to deal with infinitives embedded under control verbs, we reject the idea that they are CPs and propose instead that they are best treated as bare TPs, following Bošković (1997) or, preferably, Hornstein (2000, 2001). The latter hypothesis, based on movement into thematic positions and treatment of obligatory control PRO as an NP trace, has an additional advantage of explaining lack of defective intervention effects that a PRO, with its interpretable [+φ] features visible to the Probe, is otherwise expected to cause.*

1. Introduction: the problem

This paper is inspired by an observation made in Błaszczak (2001) that, on the basis of examples such as (6) below, Long Distance Genetive of Negation (GoN) in Polish is essentially entirely incompatible with Chomsky's (1998, 1999, 2001) hypothesis concerning derivations proceeding in phases. In the introductory part to this paper we present the basic tenets of the single cycle syntax approach, the empirical domain of the Genitive of Negation in Polish and, ultimately, the reason for the incompatibility of the two. In subsequent parts of the paper we aim to present general conditions which a system based on single cycle syntax should meet to account for Long GoN; we attempt to work Błaszczak's

critique of phase-based minimalism into a more positive set of postulates for a successful single cycle system.

2. Probes, Goals and phases

Chomsky proposes that the process of computation proceeds in stages comprising a minimum number of Lexical Items (a subarray) consisting of a lexical category and a functional one (CFC). The number of LIs in a subarray is sufficient to build vP and CP, respectively. Once the process of construction of a phase is completed, or at the latest by the time the next higher phase is completed, the phase undergoes operation Transfer, feeding PF and LF.[i] Technically, once a given phase is completed, any access to it from the outside is severely limited. This property is known as the Phase Impenetrability Condition (PIC):

(1) Phase Impenetrability Condition (Chomsky 1999:10):
The domain of H is not accessible to operations at ZP, but only H and its edge.
Where: ZP is the least strong phase and the edge consists of specifiers.

Feature checking is said to rely on the relation of case-agreement, based on c-command, between a functional head, whose label acts as a Probe, and a substantial category, whose label is a Goal. Features are checked if they match, if the Probe and the Goal are active, that is they both still have unchecked uninterpretable features and if the Goal is the minimal search space (D(P)) of the Probe, practically within its sister constituent:

(2) Matching and Agree (Chomsky 1998:38):
a. Matching is feature identity
b. D (P) is the sister of P
c. Locality reduces to 'closest c-command'

Case licensing, for example Accusative, is performed in situ by agreement between the Probe v and DP_{OB}:

(3) $[_{vP}\ v_{[+\varphi]}\ [_{VP}\ V\ DP_{OB[+\varphi,\ +case]}]]$

A transitive v is said to have a full set of [+φ] features, so the feature [+case] in the DP is deleted and the case is valued as Accusative. Any

displacement of the object DP to the edge of vP is not attributed to the case-agreement relation as such but rather to the (parametrically determined) presence or absence of the [+EPP] feature on v (or on a functional head in general).

3. Empirical Domain of the Genitive of Negation

For readers unfamiliar with the phenomenon of the Genitive of Negation in Polish, here are some rudimentary facts.[ii] In simple clauses it is obligatory whenever the verb is negated and the nominal object would otherwise have appeared in Accusative in an affirmative sentence:

(4)

a. Maria pije kawę.
   Maria drinks coffee-ACC
   'Maria drinks coffee.'
b. Maria nie pije kawy.
   Maria not drinks coffee-GEN/*ACC.
   'Maria does not drink coffee.'

Negation in the main clause causes GoN in the embedded infinitive, as long as the infinitive is not introduced by any complementizer or Wh-phrase; if there is any CP-related material at the head of the infinitive (5c-d), Long GoN is cancelled and the embedded nominal object appears in Accusative:

(5)

a. Maria nie mogła wypić kawy.
   Maria not could drink coffee-GEN/*ACC
   'Maria could not drink coffee.'
b. Maria nie pozwoliła Janowi pić kawy.
   Maria not let John drink coffee-GEN/*ACC
   'Maria did not let John drink coffee.'
c. Maria nie pozwoliła [$_{CP}$ żeby Jan pił kawę].
   Maria not let so that John should drink coffee-ACC/*GEN
   'Maria did not allow for the fact that John should drink coffee.'
d. Maria nie wie [$_{CP}$ kiedy Jan wypije kawę].
   Maria not knows when John will drink coffee-ACC/*GEN
   'Maria does not know when John will drink coffee.'

From the point of view of our subsequent analysis it is a very relevant aspect of the Long GoN that it does not distinguish between the infinitives in the control and raising contexts. In example (5a) it affects the object embedded in the infinitive selected by a raising verb (epistemic modal) and in (5b) it affects the object embedded under an object control verb.

4. Long Distance GoN and phases: the problem

Following this brief introduction, consider a classic case of Long Distance GoN: negation on the control verb forces Genitive on the embedded DP object:

(6)

a. Maria nie chce wypić kawy.
Maria not wants drink coffee-GEN/*ACC
'Maria doesn't want to drink coffee.'

b. ... $[_{NegP}$ Neg-P $[_{VP}$ ... v ... $[_{CP}$ $[_{TP}$ $PRO_{[+\varphi]}$ $[_{vP}$ t_{PRO} ...v ... DP_{OB}-$G_{[+\varphi]}]]]]]]$

Błaszczak (2001) follows a plausible assumption, based on previous analyses in Willim (1990), Dziwirek (1997) and Witkoś (1998): if Chomsky's recent hypotheses are correct, Genitive on the object should be caused by some case-agreement relation involving the object as the Goal (DP_{OB}-G) and matrix negation as the Probe (Neg-P). She observes that this is, however, exactly the type of relation prohibited by the Phase Impenetrability Condition (PIC). As example (6b) shows, the Goal DP_{OB} is not at the edge of the strong phase vP, so it ceases to be accessible to any probing past the point at which the embedded CP has been constructed. Even if Neg were assumed to be a part of the matrix vP phase, it is separated from its purported Goal by the CP phase and the embedded vP phase. Błaszczak concludes, to our mind correctly, that phase-based minimalism is unable to account for the phenomenon of Long Distance GoN.[iii] It might be added that there is one more problem for GoN in an approach based on single cycle; that is an approach discarding the separation of the overt and covert cycles in the derivation. Even if we lump the whole example (6) into a single phase, so that PIC is rendered inoperative and pushed out of the way, there is the issue of the Defective Intervention Constraint (DIC), also exemplified in (6b); an interference in the case-agreement relation between Neg-P and DP_{OB}-G could come from PRO, whose [+φ] features are interpretable,

hence visible to the Probe, yet its uninterpretable case feature is checked, which makes it an invalid Goal, though a valid intervener (β) in the case-agreement relation between α and γ, (Chomsky 1998:38-39):[iv]

(7) *α > β > γ

As argued in Błaszczak (2001) Long GoN should not exist within the frame of the theory, or in other words, there is certainly considerable tension between descriptive adequacy and explanatory adequacy and as the latter may involve very obscure and poorly understood matters, we shall try to put a lot of faith in descriptive adequacy. To put it bluntly, if the existence of GoN and similar constructions is bad news for phases, so much worse for the phases, at least in their current shape. In the analysis that follows, we attempt to push both PIC and DIC out of the way of GoN as well.

5. Probes, Goals and GoN: a proposal.

Let us now proceed in the following fashion: we present an outline of our proposal, based on two key ideas, the first that derivational phases correspond to the constituent level of CP and the other that the properties of the relations involving Agree, Match, Probe and Goal may be more complex than originally assumed.

5.1. Match, check, delete and resurrect

Chomsky (1998, 1999, 2001) suggests that there are no case features per se on the functional head that checks them, rather the case feature of a DP is checked and deleted when valued by a set of full agreement features on a c-commanding Probe. Let us pause briefly to look at features and their elimination in more detail. Because we are concerned with a case-agreement system, the features that are relevant are uninterpretable [+φ] features of the Probe and the structural [+ case] feature of the Goal. Narrow syntax is driven by the need to eliminate uninterpretable features, so once the case feature of the Goal is valued (eliminated) the DP is frozen in place and inaccessible to further case-agreement relations.[v] As for the timing of the case-agreement relation, valuing and elimination of uninterpretable features is supposed to take place as soon as a valid Probe-Goal configuration arises. In a sense then, feature checking is

subject to Pesetsky's (1989) Earliness Principle rather than Chomsky's (1995) Procrastinate; as soon as features match, they should be maximally checked and deleted, on the strength of principle Maximize (Chomsky 2000:12). Let us consider Chomsky's view of heads that are defective Probes and do not have a full set of agreement features. Chomsky (1999:14) discusses the following example in great detail:

(8) [$_{\beta}$ There seem to have been [$_{\alpha}$ caught several fish]].

This derivation involves two cycles, corresponding to the particpial phrase (α) and the matrix TP/CP (β). On the first cycle the participle and the object become involved in the Probe-Goal relation, manifested in many languages through morphological agreement, sometimes including agreement for case. The participle has an incomplete set of [+φ] features: {number, gender and case}, but not [+person]. Although the participle c-commands the object, a valuing of the feature [+case] on both the participle and DP_{OB} cannot take place, as the participial Probe is incomplete. On the other hand, though, DP_{OB} has a full set of (interpretable) [+φ] features, so the incomplete [+φ] features of the participle are matched, valued and deleted. By the end of cycle α, DP_{OB} is still an active Goal, as its case feature has not been valued and deleted. Technically speaking, the participle should be inactive, although its [+case] feature has not been valued. Why? Because only unchecked uninterpretable [+φ] features render Probes active.[vi] At stage β, a complete Probe T with a full set of [+φ] features engages in two case-agreement relations: with DP_{OB} and the participle. The former relation is fully legitimate: the Probe and the Goal are within the same strong phase, the Probe c-commands the Goal, the Probe is complete and the Goal is still active. How is the Probe-Goal relation between T and the participle possible? Chomsky claims that although valued and deleted, [+φ] features of the participle are eliminated from the computation only at the strong phase level (matrix CP), as part of operation Transfer to PF. So at stage β they are still visible to the T Probe and render the participle active as a Goal of the case-agreement relation.[vii] The most significant aspect of the analysis of (8) is that a syntactic object with its [+φ] features valued and deleted in one case-agreement relation can be resurrected and still active in the derivation as long as the second case-agreement relation takes place within the same strong phase.

5.2. The Genitive of Negation: a proposal

We try to capitalize on the idea that features marked for deletion are still accessible within the strong phase and propose an account based on slightly different premises. Chomsky's classification of Probes into complete and defective ones is too coarse grained. We propose that there are thee types of Probes:

(9)

a. complete: $T_{[+\varphi, case]}$, $v_{[+\varphi, case]}$
b. near complete: $v_{[+\varphi]}$
c. incomplete: $T_{[+person]}$, $Neg_{[+case]}$
d. a successful case-agreement relation resulting in valuing case involves an active Goal and a simple or 'split' Probe equipped with complete [+φ] features and the [+case] feature, related to each other within ZP, a strong phase (ZP=CP):
   i) $[_{ZP}\ldots\ T/v_{[+\varphi, case]} \ldots DP_{[+case]}]$
   ii) $[_{ZP}\ldots\ Neg_{[+case]} \ldots v_{[+\varphi]} \ldots DP_{[+case]}]$
   iii) $*[_{ZP}\ldots\ T_{[+person]} \ldots PRT_{[-\varphi]} \ldots DP_{[+case]}]$

Crucially, the difference between (9dii) and (9diii) is that the combined 'split' Probe consisting of a defective T and the participle in the latter case is still short of feature [+case][viii] and is thus still incomplete.[ix] The rationale behind our move is that Polish seems to differ from English in that the task of case licensing, performed in English by a single head is spread onto two heads: the verb and Polarity/Negation. Chomsky (1995, 1998, 1999) claims that relevant features are introduced into the computational procedure via lexical items that carry them. Consider the following assumption: the Probe can value case on the Goal DP only if it carries four features, instead of three usually regarded as the complete [+φ] set: person, number gender and [+x]. There is a parametric option according to which either all relevant features are assigned to one head or more than one head, English shows it in (10a) and Polish in (10b):

(10)

a. $[\ \ldots\ P_{[+pers,+num,+gen,+x]} \ldots DP_{[+case]} \ldots\ ]$
b. $[\ \ldots\ P^1_{[+x]} \ldots P^2_{[+pers,+num,+gen]} \ldots DP_{[+case]} \ldots\ ]$

As a consequence, the unitary Probe can value case on the DP in (10a) and the split Probe can achieve the same Goal in (10b): first the features of P^2 (inexhaustively) match those of the Goal and get checked on the

Probe, in accordance with Principle Maximize. The case feature on the Goal DP is not checked, as P^2 is still incomplete. The features on P^2 are checked but disappear only at the level of the strong phase. Hence they are still visible when P^1 has been merged and together with the feature [+x] on F^1 they can still affect the Goal. Note that we are following the idea implicit in the analysis of example (8) above, namely, that checked formal features are still alive and accessible until the point of Transfer at the end of the strong phase.[x] Naturally, we predict that P^1 and P^2 are able to constitute a split Probe only if they are both placed within the same derivational phase.[xi] In sum, the checking of the case of the object in Polish involves an amalgamated Probe consisting of two heads that complement each other:

(11) $[_{FP}\ F_{[+case]}\ [_{vP}\ v_{[+\varphi]}\ [_{VP}\ V\ DP_{[+case,\ +\varphi]}]]]$

In order to make our picture empirically adequate, we introduce a non CFC (Core Functional Category) F as the head of the Polarity Phrase (Positive or Negative). The idea is that Polish transitive verbs are defective and do not show a full set of features relevant for valuing of case. We assume for concreteness that v has a full set of [+φ] features, in contrast to the passive participle, but the [+case] feature is missing from it.[xii] However, the head of the Polarity Phrase F is equipped with a missing [+case] feature: when F is set to the positive value, the case on the object comes out as Accusative, when F is Neg, it values the case as Genitive. The near-complete Probe v has all its [+φ] features matched by the DP object and these features can delete without valuing the case of the object, in line with the Maximization principle. Importantly, the object is still active in the process of computation. Once F is merged into the syntactic object, it acts as a complementary Probe and becomes involved the Probe-Goal relation with the (still active) object. In a way v intervenes and provides the necessary (deleted but still visible phase internally) features.

6. Problems with Phases

Below, we put forward following observations as problems for (mini)phase-based syntax.

6.1 Disparity between the vP and CP phases.

First, there is a strange disparity between the vP and the CP phase when it comes to their opacity to external probing: vP is porous to external probing, while CP is not. Consider the following configuration, representing a situation in Icelandic, in which v is transitive but does not assign Accusative case and the object DP is valuated against the T Probe of the matrix clause and comes out as Nominative:[xiii]

(12)

a. me-DAT seem (pl.) t_{me} [$_{TP}$ John-DAT to [$_{vP}$ like horses-NOM, pl]] (Ice.)
b. [$_{TP}$ T ... [$_{vP}$ v DP_{OB}]]

Crucially, the strong phase boundary of vP should be porous for the relation between T and the DP_{OB} in a non-edge position. The PIC is inoperative here, as neither the matrix vP (unaccusative verb) nor the embedded TP (defective) are strong phases. Now consider the other strong phase, CP. Interestingly, it is never transparent to the relation of agreement holding between an external Probe and a constituent placed anywhere else but at the edge of CP. For example, it is not possible to have a relation of case-agreement between V and [spec,T]:

(13) *[$_{VP}$ V [$_{CP}$ [$_{TP}$ DP_{SU}]]]

The disparity becomes less of a freak coincidence of vP is not a strong phase, whereas CP is.

6.2. Phonology and vP phases

Chomsky claims that there evidence in favor of vP and CP phases based on their PF properties, namely that they can be both topicalized and extraposed. Here is an example of vP topicalization:

(14)

a. She told him to wash the dishes and [$_{vP}$ wash the dishes] he did t.
b. Maria kazała mi zmywać naczynia i [$_{vP}$ zmywać naczynia] będę t do zmroku.
   Maria told me to wash dishes and wash dishes (I) will until dusk

Strong phases, including vP, are transferred to PF operations as whole indivisible chunks and can move as units. Weak phases are not fed to PF operations independently, only as subparts of large units and are not expected to be displaced as chunks. There is an obvious loophole in this type of argumentation; think about vPs and VPs. Consider a VP headed by a passive participle; it is unaccusative, hence a weak phase. Consequently, it is not expected to topicalize or extrapose, contrary to fact:

(15)

a. I told you that something will be broken into pieces at the party and [$_{VP}$ broken into pieces] was that plate.
b. Mówiłem ci, że będzie wyrzucony na bruk i [$_{VP}$ wyrzucony na bruk] został właśnie wczoraj.
   (I) told you that (he) will be thrown onto the street and thrown onto the street (he) was just yesterday.

Both (15a) and (15b) seem acceptable. But if strong and weak verbal phases can be extraposed, the topicalization test does not distinguish between the two and the argument for the PF independence of strong phases is considerably weakened.[xiv]

6.3. The Status of Infinitives

From the perspective of Chomsky's PIC the status of the infinitive clauses in examples showing Long GoN is crucial. Chomsky (1998, 1999, 2001) relies on the Null Case hypothesis of Chomsky and Lasnik (1993) and Martin (1996, 1999, 2001) and stresses the fact that infinitives embedded under control predicates are full CPs with complete TP complements, whereas infinitives embedded under raising verbs are only defective TPs. Phase-wise, CPs are strong phases while TPs are not. As our account of GoN based on the concept of 'split' Probe requires phase unity between the 'split' Probe and the Goal, we reconsider the idea of the difference in the constituent structure between the two types of bare infinitives. Ideally, it should be possible to treat all bare infinitives as TPs.[xv] As our problem is not only the PIC, caused by the intervening CP, but also the DIC, caused by the visible [+φ] features of PRO, we should search for an account of infinitives, in which there should be neither CP nor PRO. Such an account is provided in Hornstein (1999, 2000, 2001). He argues that from a minimalist perspective, obligatory control PRO has very suspect

properties. He starts by observing that Null Case is a very special type of case, coined only to account for the distribution of PRO (and only partially). It is also the only type of case tied exclusively to one DP type; for example there are no other cases that can show only on phrasal DPs but not on pronouns, Dative or Accusative can show on both. If PRO is a Null Case-marked empty category, it seems to have more in common with the NP trace than another classic case marked empty category in the form of the variable.[xvi] From a conceptual standpoint, he argues that despite very general claims and promises, Chomsky (1995) does not fully break away from the system of syntax based on Deep Structure. Its all important residue is the claim, made repeatedly, that thematic roles are not features and that arguments are assigned thematic roles configurationally in the position of the first Merge (Hale and Keyser 1993). Hornstein observes that it should be more minimalist to limit access to the lexicon if the same interpretive result (identity of reference at LF) could be obtained through a rearrangement of Lexical Items already present on the computational workbench. Consider his account of the subject control construction:

(16) $[_{TP}$ John$_i$ $[_{vP}$ (John$_i$) wants $[_{TP}$ (John$_i$) to $[_{vP}$ (John$_i$) swim in the river]]]].

John is picked for the lexicon and merged with the embedded predicate and then copied and merged in the embedded subject position to satisfy the EPP feature to the embedded (defective) T. Next, *John* is moved to another thematic position in [spec,v] and to the matrix subject position, where it has its case licensed. Note, that movement of *John* in (16) is analogous to regular A-movement in that the chain terminates in a case position, the only difference is that one DP collects several thematic roles in its chain. Needless to say, the identity of reference between the "controller" and the object of control, comes out as expected. Hornstein strictly relies on consequences of an approach to movement based on operations, Copy, Merge and Delete and on the assumption that thematic roles are features and that a given DP can carry an unbounded number of thematic features.[xvii] Let us assume that this general picture is correct and that Obligatory Control is in fact a result of movement of a DP from one θ-position to another. Thus, from the point of view of conceptual minimalist premises Obligatory Control is a sub-case of A-movement, and so the so-called control infinitives are TPs, just like raising infinitives. Interestingly, these very general conceptual postulates can be supported by empirical facts showing that the Null Case hypothesis and

the CP status of bare infinitives are quite suspect. The fullest defense of the Null Case hypothesis is provided in Martin (1996, 1999, 2001), who claims that the following properties should distinguish between the two types of infinitives:

(17) The CP-infinitive characteristics:	(18) The TP-infinitive characteristics:
a. future orientation; b. event interpretation; c. lack of idiom chunk reading; d. difference in thematic interpretation between the active and the passive; e. topicalization.	a. temporal parallelism with the raising predicate; b. lack of event interpretation; c. idiom chunk reading; d. no difference in the thematic interpretation between the active and the passive; e. ban on topicalization.

Thus if we find that there is a substantial mixing of properties, then the difference between the control and raising infinitives is so blurred that it may be decided on the strength of a conceptual appeal of a theory. Then the control-as A-movement wins out as the cheaper option. Consequently, all bare infinitives can be regarded as TPs, including subject and object control configurations and constituting a single phase with their subordinating clauses.[xviii]

Hornstein (2002) points out several inadequacies in the correlation between the eventive interpretation of the infinitive and the raising/control distinction. First, subject raising predicates seem to allow for eventive interpretation with ease and temporal specification prior to the matrix predicate:

(19)

a. Rebecca seemed to win the game right then.
b. John appeared to take the wrong medicine.
c. Doktor Wilczur wydawał sie wówczas badać Marię na obecność wirusa HIV.
   Doctor Wilczur seemed to then examine Maria for presence of virus HIV
   'Doctor Wilczur seemed to examine Maria for HIV then.'

d. Jan zdawał się zażywać złe lekarstwo.
'John seemed to take the wrong medicine.'

Consider examples (19b) and (19d); here the activity of using the wrong medicine should temporarily precede the realization that the wrong medicine was in use. Second, it is possible to construct subject-raising constructions with both eventive interpretation and idiom chunks:

(20)
a. The shit appeared to hit the fan then.
b. Krew wydała sie go zalać właśnie wtedy, kiedy poznał prawdę.
blood seemed to pour over him exactly when learnt the truth
'He seemed to get furious exactly when he learnt the truth.'

Such mixed characteristics are completely unexpected under the Null Case hypothesis: if eventive interpretation implies the configuration of control, the presence of idiom chunks would lead one to believe that idiomatic interpretation is preserved in the configuration of control but then a steadfast criterion for the distinction between control and raising collapses. On the control as A-movement approach such mixing of properties is expected. Another empirical distinction between control and raising infinitives is said to be their PF independence. Analogously to transitive vPs, control infinitives (CPs) are expected to be extraposed, while raising infinitives are not expected to be extraposed. Chomsky (1999:35, fn.11) credits this observation and the following contrast to Rizzi (1982):

(21)
a. It is to go home every evening that John prefers.
b. *It is to go home every evening that John seems.

This contrast is expected in a theory, where CP infinitives constitute strong phases and are fed to PF operations as chunks of structure and raising infinitives are weak phases and are transferred to PF operations jointly with their embedding predicates. There are, however, empirical problems with the expected contrast in (21) and certain cases of topicalization of the raising infinitive are better than others:

(22) [to właśnie ufać bezgranicznie Marszałkowi] on się tylko wydaje t.
it is exactly (to) trust blindly the Marshal he only seems

Though troublesome, the two examples above do not constitute a knock-out counterargument to Chomsky's and Martin's claims but the following example, fairly acceptable to our ear, is of a much bigger caliber:

(23) ?I wtedy okazało się, że (to) być całkowicie nagi król nam się tylko wydawał.
and then it turned out that be completely naked the king us only seemed
'And then it turned out that it only seemed to us that the king was bereft of power.'

This example involves both raising of an idiom chunk including the subject and topicalization of the infinitive. Its relative acceptability implies that in (23) we are dealing with a true raising infinitive, as the idiomatic reading is preserved. The conclusion to be drawn from the examples discussed above is that topicalization does not seem to provide a reliable distinction between raising and control. Hornstein's analysis of obligatory control as A-movement provides a solution to the problem of locality between the Probe and the Goal in GoN: if control is A-movement, the infinitives embedded under 'control' predicates are TPs headed by defective [-case] T and do not constitute strong phases. Examples and analyses reviewed above confirm this claim. If so, the Probe and the Goal in (6) are within the same derivational phase and Long GoN becomes less of an odd man out. Relying on Hornstein's view of control helps us bring Long GoN back into the world of regular syntactic phenomena; relying on Chomsky's view of control keeps it in no man's land of syntax as an inexplicable quirk.

7. The Defective Intervention Constraint

Chomsky (1999:13) formulates the following observation:

(24) DIC Effects:
Only the head of the A-chain (equivalently the whole chain) blocks matching under the Minimal Link Condition. Traces do not interfere with matching of other Probes and Goals.

Postulate (24) practically removes traces/copies from the purview of DIC. If obligatory control PROs are NP-traces, the DIC is not a complicating

factor in Long GoN. At long last we are prepared to consider the typical cases: a raising construction and the subject and object control construction.

8. GoN and Epistemic Modals

Consider the following case of a raising construction:

(25)

a. Jan nie może teraz pić kawy.
John not may now drink coffee-GEN
'John may not be drinking coffee now.'

b. $[_{CP}\ [_{TP}$ Jan T $_{[+\varphi,\ case]}$ $[_{NegP}$ Neg $_{[+case]}$ $[_{VP}$ $[_{TP}$ t_{Jan} T $[_{vP}$ t_{Jan} $v_{[+\varphi]}$ kawy]]]]]]

As example (25b) shows the CP constituent,[xix] to be treated as a simple phase, includes the following set of relevant Probes and Goals: the near complete 'half' Probe v of the embedded verb, the defective Probe T of the embedded clause, the other 'half' Probe Neg of the main clause and the full Probe T of the main clause. The Genitive is licensed in the relation of case-agreement by the 'split' Probe Neg/v. The transitive verb is defective in that it does not have a [+case], though it has a full set of [+φ] features. The missing feature [+case] is provided by the Neg head in the subordinating clause. Both 'half' Probes c-command the Goal, the object DP. As both Probes are in the same phase, the PIC is not violated. If vP is not taken to be a strong phase, its interior is accessible to external probing up to the next strong phase (root CP).[xx]

9. DIC and Ex-subject Control

Adoption of Hornstein's control-as A-movement hypothesis brings an additional bonus in the form of cancellation of minimality problems in subject control configurations. Here is how:

(26)

a. Maria nie chce wypić kawy.
Maria not wants drink coffee-GEN
'Maria does not want to drink coffee.'

b. [$_{TP}$ Maria T [$_{NegP}$ Neg$_{[+case]}$ [$_{VP}$ t$_{Maria}$ chce [$_{TP}$ t$_{Maria}$ T [$_{vP}$ t$_{Maria}$ v$_{[+\varphi]}$ DP$_{OB[+case]}$]]]]]].

With (26) treated as a case of A-movement, there is no PRO, or to be more precise, there is no argument chain of PRO separating Probe Neg from v and DP$_{OB}$. The intervening element is now only an incomplete A-chain, a series of traces (copies) of the subject.

10. DIC and Ex-object Control

Now the only problem left is the issue of the defective Intervention Effect in cases previously analyzed as object control. Here the full A-chain of the indirect object intervenes between Neg and the embedded v and DP$_{OB}$:

(27)

a. Maria nie pozwoliła Janowi czytać tych książek.
Maria not let John read these books-GEN/*ACC
'Maria did not let John read these books.'

b. [$_{CP}$ [$_{TP}$ Maria [$_{NegP}$ Neg $_{[+case]}$ ...Janowi$_{DAT}$ [$_{TP}$ t$_{Janowi}$ T [$_{vP}$ t$_{Janowi}$ [v$_{[+\varphi]}$ książek$_{GEN}$]]]]]]

Our solution is based on the idea that inherently case-marked DPs are not defective interveners. We have been assuming that there is a parametric difference between languages with quirky case-marked DPs that still require licensing of structural case and the ones whose inherent case-marked DPs do not participate in structural case licensing. The idea that Polish belongs to the latter group seems corroborated by some facts in the passives constructions with double object verbs.[xxi]

(28) [$_{TP}$ α T$_{[+EPP,+\varphi]}$ [$_{VP}$ DP$_{IO[+\varphi]}$ [$_{V'}$ V DP$_{DO[+\varphi,\ +case]}$]]]

In the configuration shown in (28) the direct object moves over the indirect object in Polish, while in English such movement is disallowed. How is it at all possible that Probe T should access Goal DP$_{OB}$ if the indirect object is between them and its interpretable [+φ] feature acts as an intervener? A plausible answer is that inherently case-marked DPs are not visible to the Probe-Goal relation at all, possibly subject to language variation.

11. Conclusion

This paper is an attempt at providing an account of Long GoN within the system of minimalism based on case-agreement and single cycle syntax, closely related to the system developed in Chomsky (1998, 1999, 2000). First, we propose that a successful relation of case-agreement can be established not only between full Probes and complete Goals but also between 'split' Probes and complete Goals. We define a 'split' Probe as a (predefined) pair of heads that complement each other and jointly have features [+case, +φ]. In the concrete case of GoN and Long GoN, the two heads involved are F/Neg [+case] and v [+φ]. The distance holding between the two half Probes in the cases of Long GoN and the punitive power of the PIC, force us to revise certain assumptions concerning the status of phases in the derivation. We propose that for a successful case-agreement relation both the 'split' Probe and the Goal must be placed within the same derivational phase. We therefore submit that neither the vP nor the infinitive embedded under control verbs constitute strong phases. In order to deal with infinitives embedded under control verbs, we reject the idea that they are CPs and propose instead that they are best treated as bare TPs, following Bošković (1997) or, preferably, Hornstein (2000, 2001). The latter hypothesis, based on movement into thematic positions and treatment of obligatory control PRO as an NP trace, has an additional advantage of explaining lack of defective intervention effects that a PRO, with its interpretable [+φ] features visible to the Probe, is otherwise expected to cause.[xxii]

Notes

[1] Certainly, several phases can be built in parallel and the syntactic objects thus constructed can be pasted together at the final stage.

[ii.] This is only a very sketchy, yet at this point sufficient presentation of the data. For a more careful review of the data see further parts of this paper and Witkoś (1999) and Przepiórkowski (1999).

iii. Note that the problem of Long Distance GoN remains even if it is assumed that the object is moved to the edge of vP in overt syntax (if Polish has Object Shift), as the edge of the embedded vP phase is visible only up to the CP level and for the object to be visible to the matrix Neg, it would have to be at the edge of the CP phase, an empirically untenable position.

iv. Chomsky (1998:38) comments on the Defective Intervention Constraint: "We therefore have the possibility of a defective intervention constraint [in structure (6), J.W.], where > is c-command, β and γ match the Probe α, but β is inactive, so that the effects of matching are blocked."
v. Unless it is equipped with other uninterpretable features such as [+wh], etc.
vi. Chomsky (1999:4): "For the case-agreement systems, the uninterpretable features are [+φ] features for the Probe (verbal elements, including participles, J.W.) and structural case of the Goal N. [+φ] features of N are interpretable; hence N is active only when it has structural case."
vii. Here Chomsky implicitly uses the notion of features checked and 'marked for deletion' proposed in Pesetsky and Torrego (2000).
viii. So we implicitly reject the following assumption, Chomsky (1999:4): "Structural case is not the feature of the Probes (T, v) but it deletes under agreement if the Probe is appropriate, [φ] complete. Case itself is not matched but deletes under matching of [+φ] features."
ix. An empirical motivation for introducing an additional feature in the case-agreement relation, here called [+case], rather than lumping two defective Probes into a complete one, comes from examples like the one below:
John is believed $[_{TP}$ t $T_{[+pers]}$ to have been mugged$_{[-\varphi]}$ t].
Here, the combination of two defective Probes: the participle with number and gender features and the embedded Tense with the person feature may not result in a successful case-agreement relation. The case of the embedded object is valued by the matrix complete Probe T. The feature composition suggested above also prevents licensing of GoN in a passive construction in Polish.
x. Pesetsky and Torrego (2000) claim that features 'marked for deletion' are still visible and accessible to the computation until the completion of the CP layer or even beyond.
xi. Because feature [+x] is necessary for case-agreement we call it simply the [+case] feature, though we could as well have satisfied ourselves just with [+x].
xii. The idea that there could be 'split' Probes or 'half' Probes is not new and was explicitly considered at the previous stage of the minimalist enterprise. Chomsky (1995) observed that unaccusatives and participles showed agreement features and, judging from the fact that they were supposed to include a 'bare' V rather than the combination of v-V (VB), he suggested that V could be the locus of agreement features, while v could be the locus of the case feature. The notion of a 'split' Probe is also inherent in Agr-based minimalism: for example in the feature checking of the subject with Agr and T in place but in the context of case-agreement under c-command rather than Attract F.
xiii. This example comes from Hiraiwa (2001:78).
xiv. For another argument concerning the issue of Reconstruction at the edge of vP and related to Fox (1999, 2000), see Witkoś (2002).
xv. Even assuming that control and raising verbs are very different from each other need not automatically imply that control verbs take CP complements. Bošković (1997) argues that with the notion of government discarded, PRO does not need the CP projection as a barrier from external government by the verb

and consequently, a prohibition on surplus symbols in representation should eliminate the need for CP.

xvi. For example it does not block the *wanna* contraction.

xvii. Hornstein takes Obligatory Control PRO as a result of movement and Non-Obligatory Control PRO as pro, a pronoun requiring construal. Obligatory Control PRO, the result of movement, shows the following properties: (i) it requires an antecedent, (ii) the antecedent must be local, (iii) the antecedent must c-command the PRO, (iv0 split antecedents are disallowed and (v) it has 'de se' interpretation. (Hornstein 2001:31-33).

xviii. It appears that the Null Case hypothesis, in its form presented by Martin, encounters numerous problems. Probably the first serious blow for the assumption that [+T, -finite] infinitives with independent temporal specification license Null case, while the [-T, -finite] do not, comes form gerunds, which are said to license PRO as subject, yet display temporal properties of raising infinitives, as observed in Stowell (1981).

xix. See Błaszczak (2001) and Witkoś (1998) for a justification of this view.

xx. Let us now consider an example of the same type, also involving subject raising, to illustrate a complication that must be presented before we move on to control constructions.

Jan może teraz nie pić kawy.

John may now not drink coffee-GEN

'John may not be drinking coffee now.'

ii. $[_{CP}\ [_{TP}$ Jan T $_{[+\varphi]}\ [_{VP}\ [_{TP}\ t_{Jan}$ T $[_{NegP}$ Neg $_{[+pers]}\ [_{vP}\ t_{Jan}\ v_{[+\varphi]}$ kawy]]]]]]

The relevant Probe/Goal relations in (ii) involve the object DP as a Goal of the 'split' Neg/v robe and the subject as the Goal of the complete matrix T Probe. Both components of the 'split' Probe c-command the object and they are very close to each other, as close as in a regular simple tensed clause. At this point the following technical question emerges: if embedded negation in (i-ii) forces Genitive, how to prevent embedded Accusative licensing if the content of F is positive? In other words example (25b) could have the following representation:

iii. $[_{CP}\ [_{TP}$ Jan T $_{[+\varphi]}\ [_{NegP}$ Neg $_{[+case]}\ [_{VP}\ [_{TP}\ t_{Jan}$ T $[_{FP}\ Pos_{[+case]}\ [_{vP}\ t_{Jan}\ v_{[+\varphi]}$ kawy]]]]]]

Observe that the technical, but potentially lethal, problem is that the presence of the positive F 'half' Probe equipped with the [+case] feature in the embedded clause would mean completion of the F/v 'split' Probe and accusative case valuing for the object DP irrespective of the presence of negation in the matrix clause, contrary to fact. We acknowledge this problem and propose the following postulate:

iv. Embedded bare infinitives in Polish need not have [+Positive] content of the F Probe.

xxi. According to the distinction drawn in McGinnis (1998), Polish shows the so-called long passive, while English shows short passive:

John was sent five apples.

ii. ?*Five apples were sent John.

iii. *Jan został przesłany dwa jabłka.

John was sent two apples

iv. Dwa jabłka zostały przesłane Janowi.
two apples were sent John-DAT
'Two apples were sent to John.'

xxii. For various empirical ramifications of the proposed 'split Probe' analysis and its comparison to both the feature raising analysis of Witkoś (1998, 1999) and the argument raising analysis of Przepiórkowski (1999), see Witkoś (2002).

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