24.952 Advanced Syntax Markéta Ceplová
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Minimalist Islands – Restricting P-features*

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In this squib, I investigate a possible way of accounting for certain island phenomena by restricting the distribution of P-features in the system. I show that by making P-features subject to requirements present in (or at least compatible with) the current system we can derive the distinction in the possibility of extraction out of subjects vs. objects. I also show that the analysis can be extended beyond the subject/object asymmetry.

1. Overview of the problem

1.1. Islands

In the real world, there seem to be domains from which things can easily move out and others from which movement is almost impossible (so called islands). The distinction between these domains doesn't seem to be always inherent in the phrases that constitute the domains, as shown by the following example. In both sentences, what we are trying to move from is a DP (and the same one):

(1) a. What did you buy [a picture of __]?
b. *What did [a picture of __] please John?

These differences are taken to be derived from the different structural relations that an object and a subject (and potentially others like adjuncts) have.

In other cases, the question may be more difficult, as for example with the distinction between definite and indefinite DPs or finite or infinite clauses:

(2) a. Which man did you discover [a poem about __]? (Szabolcsi 1999)

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b. ??Which man did you discover [the poem about __]? (ibid)

(3) a. Which topic did John ask [whether to talk about __]? (ibid)

b. *? Which topic did John ask [who was talking about __]? (ibid)

There are many factors that can determine whether a movement out of a certain domain is going to be good or not apart from the properties of the domain. An important and often mentioned factor is the element that is trying to move out (adjuncts being generally more restricted than arguments etc.).

For the purposes of this squib, I will concentrate on the islands that seem to be created by certain structural configurations and I will pretend that the world is as simple as it can be, i.e. that the structural configuration is the only relevant factor that determines the possibility or impossibility of extraction out of a certain domain. I am aware that for the picture to be complete, other factors need to be taken into account as well.

1.2. Minimalist framework

The Minimalist framework (Chomsky, 1998 and 1999) introduces several substantial changes in comparison with the previous theories. First of all, phases are introduced and with them the Phase Impenetrability Condition (PIC) with the result that movement is prohibited from a strong phase after its completion (with the exception of the head of the phase and its specifiers). With the requirement that all movement be driven by features, if nothing else were added, all strong phases would act as islands for most elements in most cases (with the exception of specifiers of the phase-inducing heads, such as the subject). Although we know that there are some islands, we also know (or at least believe) that there is long-distance movement and that things under certain conditions can move out of what is now a strong phase. To allow this (and, in combination with the PIC, to require long-distance movement to proceed in successive cyclic fashion), the system also includes P-features to allow movement from inside the phase to its edge (i.e. to the specifier position of the head of the phase).

In the current theory, all phase-boundary-inducing heads can have P-features. A head with a P-feature can attract elements with unsatisfied uninterpretable features to its specifier, with the result that the P-feature is checked by the attractee, and the attractee is in a position from which it can move further to satisfy its uninterpretable feature (and thus prevent the derivation from crashing).

The problem that arises by this proposal is that now nothing should be an island if all strong phases allow movement out of them (due to P-features), unless the islandhood is caused by something totally unrelated. Assuming, as suggested above, that at least some domains are islands because of their position in the structure, we would like to find a way to account for these in the Minimalist framework. And furthermore, if possible, it would be nice to derive these effects without having to introduce any new principles into the grammar beyond the ones we already have. And this is precisely what I will attempt to do in the rest of this squib.

2. (Re-)introducing islands by restricting P-features

The observation I will start with is that it seems that it is never the *v*P that creates a problem for movement[1]. On a similar note, Chomsky (1986) explicitly exempts IPs from being inherent barriers (although IP is not the present equivalent of *v*P, it is still rather close in the structure). Assuming that *v*P in transitive constructions constitutes a strong phase and adopting P-features as a means of allowing extraction out of a strong phase, this fact might suggest, that somehow *v*P should always be allowed to have a P-feature. An alternative which I will not pursue here is that *v*P[2] is not a strong phase, contrary to Chomsky (1998, 1999) in which case we would expect anything to be able to move out of *v*P without any problem, but we would at the same time not expect intermediate landing sites of successive cyclic movement in [Spec, *v*] (unless *v* has uWH feature for an independent reason) and we might need to reconsider other reasons for postulating the *v*P as a strong phase.

We could ask whether we could account for the possibility of extraction out of other domains (like objects) by reconsidering their phase-status as well. This possibility, however, seems to be highly problematic since the same categories that allow extraction when in object position (namely CP's and DP's) do not allow extraction when in subject or adjunct position. It is therefore hard to associate the possibility of extraction with an inherent property of the categories unless we develop an account of islandhood that doesn't depend on PIC (in which case the

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[1] This is meant to be a pre-theoretic observation and it is not to say that blocking movement out of *v*P is never used in a particular theory to explain the island effect(s).

[2] I use *v* for transitive *v*, or *v** in Chomsky's notation, unless stated otherwise.

islandhood status might not correlate with phase status at all anyway if P-features are generally possible on heads of all strong phases).

Rather than introducing another island-inducing property in the system, I would like to investigate a possibility of restricting the distribution of P-features that depends on structural position of the category, a possibility reminiscent of L-marking in Chomsky (1986). A question quickly arises about which structural relations we can employ to make a distinction between an object and a subject (and possibly an adjunct as well). There is no defined notion of government in the Minimalist framework that would allow us to use L-marking or ECP or any other similar principle. Furthermore we need a structural relation that takes into account the surface structure since extraction out of subject is bad regardless of whether the subject starts off in object position or as the External Argument of *v*.[3] One important distinction between subjects and objects is in the head that assigns case – T for subjects and *v* for objects. Given that *v* is the only head that seems to always allow P-features, it is interesting to find that it is precisely the argument that enters into Agree relation with *v* that can have P-features, unlike an argument which agrees with T. And if agreement with *v* was what licenses P-features on any other phrase then we would expect adjuncts not to have them and therefore (as is the case) to be islands for extraction.

What I want to propose is essentially the following: what is crucial in checking off P-features is not just attracting a phrase to the specifier of the element that bears it, but an Agree relation between two elements that each bear a P-feature and which involves other features as well. Without such "licensing", the P-feature remains unchecked and causes the derivation to crash (as any unchecked uninterpretable feature). Thus an object DP that bears a P-feature (to allow extraction out of its domain) can get its P-feature checked by agreement with *v* (which is independently necessary for checking Case on the DP and uϕ-features on *v*), while a subject DP if it had a P-feature would be stuck with it due to the fact that T with which it agrees does not have a P-feature that could check off the P-feature on the DP (T cannot have a P-feature since it isn't a strong phase).

I adopt the properties of P-features assumed in Chomsky (1998, 1999), i.e. that P-features are able to attract elements with unchecked uninterpretable features (of certain type, but not for any

[3] This rules out the possibility that it depends on the verb that takes the object as its complement.

specific one, at least not unless wh-movement, topicalization and other types of what used to be A-bar movement are all driven by the same feature)[4]; that they have an EPP property (and in certain cases multiple EPP property since they are able to attract more than one thing); that, for whatever reason, the Agree relation between the Probe (the attracting P-feature) and the Goal (the attractee) is not sufficient to delete the uninterpretable feature on the Goal (since it has to remain active for further movement), possibly because the P-feature-bearing head doesn't have other features necessary to check off the uninterpretable feature on the Goal (i.e. is defective with respect to the needs of the Goal).

However, several assumptions and stipulations are needed beyond the ones stated above to make this analysis work. First, to require the P-feature to seek another P-feature, it seems as if it is not only the uninterpretable feature on the Goal that cannot be checked off, but the P-feature on the Probe as well. One reason that can be given in this effect is to include P-features in the requirement that they be checked at the same time as other uninterpretable features (as is required of the ϕ-features) of the head that bears them. If this holds, then the P-feature can only be deleted by the same Agree relation that checks off other uninterpretable features on the head, namely Case on object DPs[5] (and similarly for subjects with the caveat that there is no head that could satisfy this requirement).[6] It would be nice if we could assimilate P-features to Case in this

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[4] It could very well be the case that what we call P-feature is in fact uWH feature for successive cyclic wh-movement and uX feature for topicalization (whatever the X feature that drives topicalization is) etc. What I propose here doesn't seem to substantially rely on any specific nature of P-feature, only it would be more surprising to find out that uWH doesn't delete under Agree with an element with WH feature and needs something else. However, this might be the result of P-feature being in fact a bundle of features, one of them being uWH and the further licensing being needed for the other part of the bundle. A potentially serious problem of treating P-feature as a bundle of features is how to make sure that the features cannot appear separately and do the same job without the licensing – i.e. what requires the presence of features other than just uWH, or, in other words, why the uWH needs any other feature to accompany it.

[5] I will return to the possibility of the P-feature being checked simultaneously with a feature other than Case below.

[6] A somewhat suspicious consequence of this analysis is that there can be an Agree relation between a Probe and a Goal (by definition involving matching features) that doesn't really check off (nor otherwise affect) any of the involved features.

respect, allowing for the P-feature to be eliminated when the head enters into an Agree relation and checks off other features.

However, there needs to be one more requirement than just that – namely that the Probe also has a P-feature (since otherwise we should expect extraction out of subjects to be equivalent to extraction out of objects). It is not entirely clear to me why this should necessarily be the case, but one possible reason could be that P-feature is of a different nature than ϕ-features and cannot be taken as a reflex of these matching on the Probe and the Goal (unlike Case); or if Case turns out to be an uninterpretable instance of a feature that is interpretable on T/*v* then we might just require that the feature in question be always present on both the Probe and the Goal (thus eliminating free-riders from our system). However, regardless of what the right formulation of this requirement is, we have to, at least in this case, allow two uninterpretable features to check off each other[7].

To extend this analysis to object vs. subject CPs I need to assume that CPs do in fact enter into the same relations as DPs, namely subject CPs have to agree in some feature with T and object CPs with *v*. This requirement might seem to go against the traditional view that CPs don't need Case and don't trigger agreement on verbs (at least don't trigger full agreement). However, note that an argument that subject CPs need to enter into relation with T is independently provided by Pesetsky & Torrego (2000) and also by the fact that the CP is able to check off the EPP feature of the T (which is claimed to be obligatory in English in the Minimalist framework). I remain vague on the issue of which feature exactly needs to be checked off by agreement with T/*v* (it could be some form of optional Case, or any other uninterpretable feature) since the choice is not crucial for the given analysis as long as there is such a feature[8].

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[7] I don't see any possible way out from this problem unless *v* had a feature that was intepretable on it and had the ability of P-feature of attracting needy elements to the edge of the phase; this would in fact be a very desirable result given the remark made earlier that *v* seems to always allow extraction out of its domain, unlike other strong phases, because it would provide a natural explanation of this fact. However, at this point, it is difficult to even imagine what this feature could be.

[8] This feature needs to be optional on CP rather than obligatory (as on DPs) since otherwise we would run into problems with the matrix C. This, however does neither exclude, nor indicate the possibility that it is obligatory for certain CPs and never present for others.

3. Consequences and Predictions

3.1. CP islands addendum

The treatment of CPs sketched above has an interesting consequence for the following sentences:

(4) a. What$_i$ do you regret [that you said t_i]?

b. *What$_i$ do you regret it [that you said t_i]?

In (4a) the CP occupies the object position and enters into Agree relation with *v* which checks off the uninterpretable features on C (including the P-feature). In (4b), however, it is the pronoun *it* that acts as the object, entering into Agree relation with *v*. The CP is thereby blocked from agreeing with *v* and any potential P-feature on the C would remain unchecked, causing the derivation to crash.

Similarly, a CP embedded in a DP will be an island (see CNPC facts) as long as the embedded CP does not agree with the head of the NP/DP and there is no element inside the NP/DP that could do the same job as *v* does (i.e. check off the P-features of the C). The claim here is that if there is *n* in the nominal phrase, it must have properties different from *v*, either in not being a strong phase or with respect to the Agree relation between *n* and the CP. This seems intuitively on the right track since nouns generally cannot assign Nominative/Accusative case.

3.2. Adjuncts

The analysis sketched above provides a free explanation why adjuncts behave as islands, as for example in the following sentence:

(5) *What will you cry [unless we discuss __]?

To allow movement out of a strong phase, a P-feature is needed. But this P-feature needs to be licensed by an Agree relation with another element. Adopting the standard assumptions about adjuncts, we need to go no further. Adjuncts are not taken to enter into Agree relations (except for adjunct wh-phrases that enter into Agree relation with interrogative C to check off C's uWH and the adjunct's uQ features[9]), and even less into Agree relations that would involve other

[9] This predicts that if there was a full adjunct wh-phrase, we might be able to extract out of it (to the same extent we can extract out of subject wh-phrases). I am unable to construct examples that could be tested in this case, if such constructions are possible at all.

features than the P-feature. Therefore they cannot agree with *v* and cannot get their P-feature checked off (preventing the structure from converging).

3.3. Supporting features for P-feature

I suggested above that P-features need to be checked off at the same time as another uninterpretable feature because they are subject to the requirement that uninterpretable features on one head cannot be checked separately by different Agree relations (a requirement that needs to apply to ϕ features). However, there is at least one feature that needs to be exempt from this requirement, and that is uQ – a feature that is on moving wh-phrases and remains unchecked until the wh-phrase reaches an interrogative C which bears Q. To be able to do that, it needs to remain unchecked even beyond the point at which the Case feature of the wh-phrase is checked (if the wh-phrase is in an argument position).

The question now arises, could P-feature possibly be allowed to choose between being checked together with Case or together with uQ (or possibly even yet another feature) if the phrase in question is a wh-phrase? The possibly somewhat surprising answer is that if we do allow this choice, we obtain an analysis of why extraction out of subject wh-phrase is better than extraction from a non-wh-subject, as shown in the following examples:

(6) a. ??who do you wonder [$_C$ [$_D$ which picture of __] is on sale]? (Kitahara, 1994)
b. *who do you think [$_C$ that [$_D$ pictures of __] are on sale]? (ibid)

As already shown above, the non-wh-subject enters into an Agree with T to check off its Case and T's uninterpretable ϕ-features and since the T cannot have a P-feature, the DP better not have one either. However, the situation is somewhat different for wh-subjects which have a uQ feature in addition to the Case feature. The Case is checked under an Agree relation with T and uQ under an Agree relation with interrogative C. If this interrogative C happens to have a P-feature, the P-feature on the wh-subject can get checked through the Agree with C thus allowing the derivation to converge.[10] Note that this possibility is not available to non-wh-subjects under

[10] The degraded status of (6a) still needs to be accounted for. One possibility is that it is due to movement out of a wh-island. Or maybe the P-feature can get checked in tandem with uQ but at a price (e.g. for waiting to get checked beyond the first Agree that could potentially check it if it had the appropriate P-feature, or just for not being checked at the same time as Case).

this account, because there can be no Agree relation with C involving other features than the P-feature if the subject is not a wh-phrase[11].

There still seems to be a problem with this analysis, though, since if this was the end of the story, the C should be able to have a P-feature regardless on whether it is in the subject or object position of the higher clause. This seems to be incorrect given the following contrast:

(7) a. **What is [$_C$ [$_D$ how many pictures of __] were on sale] not known?

b. ??What are you wondering [$_C$ [$_D$ how many pictures of __] were on sale]?

The C that can check off P-feature on the subject wh-phrase seems to need to have its P-feature checked the same way as if it was not checking a P-feature of something else, i.e. it still needs to enter into Agree relation with *v*, as if it itself needed its P-feature "licensed" before it can "license" a P-feature on something else. This is indeed predicted if the P-feature had to be deleted at the same time as the uninterpretable feature on C that enters into Agree relation with T/*v* of the matrix clause.

The remaining question then is why should the P-feature be prohibited to be deleted together with the uninterpretable feature on C that Probes the attracted wh-phrase (arguable uWH feature). There are several possibilities we might explore. If it was the case that the P-feature may choose any uninterpretable feature and act in tandem with it, we would need another explanation for the contrast in (7). If on the other hand it had certain preferences, or even more strongly, it was not allowed to act in tandem with certain features (like uWH, for whatever reasons that may be), the contrast would be explained. We could imagine a scenario in which acting in tandem with uninterpretable feature other than Case is a last resort strategy that is unavailable in this case because it would require look-ahead (i.e. knowing that the Agree with T will not be able to check the P-feature). Or it could not be allowed in this case due to some restriction that only one P-feature may be checked in tandem with a feature other than Case.

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[11] Subject raising to [Spec, C] to check off uT on C as argued for in Pesetsky & Torrego (2000) cannot really save the P-features on the subject DP if the P-feature needs to be checked at the same time as Case (as the only other uninterpretable feature on D); if so, since the Case is checked off by Agree with T, P-feature cannot wait until the subject enters into Agree with C. The only thing that can get the P-feature on a subject checked beyond Agree relation with T is then an uninterpretable feature different from Case that is not required to be checked at the same time as Case.

I don't know the correct answer to this problem and maybe the contrast in (6) is due to totally unrelated reasons and should not be accounted for by this mechanism at all, in which cases the P-feature may very well be tied specifically to Case.

3.4. V-to-C raising as a way to license P-features

Another area we might want to investigate are languages with different verb morphology. If a language generally didn't allow extraction out of object CPs (e.g. because they were able to enter into a proper relation with *v*), and if for some reason in certain object CPs the verb was allowed to raise to C we might expect the extraction to become possible, since the verb arguably has to adjoin first to *v* before adjoining to C, thus allowing a P-feature on C to enter into an Agree relation with something (namely the V in the relevant adjunction structure) else bearing a P-feature (inherited from *v*). Data from German resembling this pattern were suggested to me by David Pesetsky (p.c.).

3.5. P-feature on v

One issue which I have been glossing over and which deserves a more thorough discussion is the P-feature on *v*. So far, I have been assuming that all *v*'s (when strong phases; this does not necessarily carry over to non-transitive *v*'s) can have a P-feature. Let us assume that the P-feature on *v* has exactly the same checking requirements as any other instance of a P-feature (leaving aside the possibility of P-feature being somehow interpretable on *v*). Namely and foremost, the P-feature on *v* needs to be checked off by the same element that checks off the uϕ-features of *v*. In effect then, *v* is required to have its P-feature checked off by the object. This in turn requires the objects to always have a P-feature, even though there might not be anything to attract; since the attractee doesn't play a substantial role in checking off the P-feature anyway, this does not pose a serious problem[12]. And since a transitive *v* should always be able to check its P-feature, extraction out of its domain should not pose a serious problem even for elements that

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[12] It might seem somewhat undesirable to assume that the object has a P-feature just to satisfy the needs of *v*. However, the same seems to be at least one of the reasons the Minimalist framework requires DPs to have a Case – to be able to check off uninterpretable features on T/*v*. As part of eliminating the Case feature in favor of uT feature on D as suggested by Pesetsky & Torrego (2000), we might also speculate about the possibility of P-feature being part of the Accusative case assigned to object DPs.

cannot themselves agree with *v*, like adjunct wh-phrases. A problem could arise with intransitive *v* since there is no object to check any P-feature. But this problem does not arise in the current framework because intransitive *v*'s are not taken to be strong phases (and therefore don't need a P-feature to allow movement out of their domain since they are not opaque).

4. Conclusion and remaining problems

Apart from the problems noted as we proceeded, there seems to be a substantial problem for this account posed by *there* constructions. Unlike extraction out of subjects, extraction out of the associate in a *there*+associate construction doesn't cause ungrammaticality:

(8) a. The house, which there were pictures of __ on all the walls
b. *The house, which pictures of __ were on all the walls

The analysis for (8b) is the same one we had for other cases of extraction out of subject. What is problematic is the (8a) sentence. Under the standard analysis, the associate enters into Agree relation with T (without movement), but no Agree relation to *v* is assumed (even if *v* was transitive as is probably not the case). It is therefore mysterious why it can have a P-feature under the current requirements on P-features.

I don't have a solution to this problem. But it could possibly be, at least to a certain degree, related to the contrast between extraction out of (some) subjects that started off in object position, which (even though still bad) is better than extraction out of subjects of transitive verbs. It might also be interesting to look at other properties of *there* constructions, such as restrictions on scope and the definiteness effect and the different surface order from the one expected if the associate was merged into [Spec, *v*]. One would hope that these facts might be somehow connected and could allow for including these constructions into the current account.

All in all, even though not without problems, the presented analysis seems to give at least a starting point for further investigation. It is able account for the very basic distinction between subjects and objects, it explains why extraction out of adjuncts should be bad as well as out of CPs associated with 'it'. Moreover, it provides a rather natural explanation for why *v* doesn't seem to act as an island. The proposed account furthermore relies for the bigger part on assumptions and principles that are independently needed in the theory.

References

Chomsky, Noam. 1986. Barriers. Cambridge, Ma: MIT Press.

Chomsky, Noam. 1998. Minimalist Inquiries: the Framework. Cambridge, Ma: MIT Occasional Papers in Linguistics.

Chomsky, Noam. 1999. Derivation by Phase. Cambridge, Ma: MIT Occasional Papers in Linguistics.

Kitahara, Hitsatsugu. 1994. A Minimalist Analysis of Cross-Linguistically Variant CED Phenomena. In: Proceeding of NELS 24, vol. 1. Mercè Gonzàlez, ed. Graduate Linguistics Students Association, University of Massachusetts, Amherst.

Szabolcsi, Anna. 1999. Strong and Weak Islands. ms. To appear in *SynCom*, edited by M. Everaert & H. van Riemsdijk.