

# Pronoun Movement and Attraction

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The paper considers phenomena of pronoun displacement in a variety of languages and argues that pronoun movement is triggered by properties of an attracting functional head, and not only by properties of the pronoun, as was previously understood. After introducing the Minimalist conception of movement and the challenge raised by pronoun movement for an approach in terms of attraction, section 2 presents an argument for the syntactic status of pronoun movement, recently challenged in Holmberg (1999). Section 3 argues, based on Celtic and Semitic varieties, that all pronouns are involved in a checking relation with a functional head, paving the way to movement as Attraction. A conclusive argument is developed in section 4, which highlights the significance of the syntax of the attracting head. It is shown, first, that weak pronouns may fail to be attracted, contrary to Greed-based expectations. Second, the contexts in which weak pronouns fail to raise are surprisingly similar to those in which strong pronouns may fail to double, and both are shown to follow from pronoun movement as attraction by  $F^o_{[person]}$  and the syntax of the attractor.

## 1 Greed, Attraction, and Pronoun Movement

The central goal of the Minimalist Program (Chomsky (1995), and subsequent work, henceforth MP) has been to explore the possibility of reducing grammatical mechanisms to interpretive conditions imposed by its interfaces with the language-external conceptual and articulatory modules, roughly LF and PF. The challenge faced by the program is to account, therefore, for grammatical phenomena without recourse to rules of grammar proper. While the study of syntactic movement has been at the core of all generative frameworks, the Minimalist Program approaches the phenomenon from a fresh perspective: if grammars constitute optimal solutions to externally imposed conditions, why should displacement exist at all? i.e., in what sense and to what extent can syntactic movement be viewed as a means towards satisfying interface conditions?

Stating the question this way shifts the perspective on movement significantly. Viewed as an exception to the optimality of grammatical operations, the Minimalist approach to displacement generalizes across its various manifestations (roughly, NP-movement and Wh-movement), insofar as it seeks a principled explanation for movement in general.<sup>1</sup> All movement operations, by assumption, are uniformly triggered, raising a general question regarding the properties of the movement trigger and its syntactic location. These properties are morpho-syntactic in nature, distributed across lexical items and functional heads, and legible, in principle, at the PF and LF interfaces. The movement operation, by producing a checking relation between some  $H^o_{[feature]}$  and some  $XP_{[feature]}$  in its specifier, leads to the elimination of those features which are illegible at LF or PF. Syntactic movement, from this perspective, serves to eliminate grammatical features through a procedure of feature checking under identity, and constrained by structural configuration, i.e. the result of movement.

Regarding its location, the [feature] triggering movement (=requiring elimination at an interface) may be associated with the moved constituent, or movement may be driven by a [feature] of the target position. The early MP version developed in Chomsky (1993) pursued the former, Greed-based approach: similar to the LGB conception of NP-movement, all movement in MP is triggered by properties of the

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<sup>1</sup> Unlike, for example, the earlier LGB model (Chomsky, 1981) which derived NP-movement from Case properties of NP, and Wh-movement from properties of  $C^o$ .

moving constituent or more technically, a feature of XP in need of elimination by LF or PF. In Chomsky's system features come in two varieties, [+/- interpretable] features, the negative value of which triggers movement in general, and [+/- strong] features, the positive value of which triggers movement in the overt component. Here I adopt the view that all movement is overt (Kayne, 1998), and assume that an attracting feature is simply [-INT], non-interpretable at some interface.

The alternative to Greed, in which all movement is triggered by a feature of a functional target, is pursued in Chomsky (1995). In the spirit of earlier work on Wh-movement, it is a feature of a functional head in need of elimination which 'attracts' an XP with an identical feature to its specifier. Without denying that features of moved constituents may also get deleted in the process, the Attract approach entails the existence of a feature on the target requiring checking; given that checking is accomplished by feature identity, that feature must be associated with the moved constituent as well. Crucially, however, the Greed approach assigns the property [+STRONG] or [-INT] to a feature of the category which undergoes movement, while Attract will have these properties associated with features of a functional head.

A major advantage of the Attract approach is the reduction in computational complexity in the course of the derivation that it entails. Assuming derivations to proceed from bottom to top, Attract requires a [-INT] feature associated with a functional head to be checked immediately upon insertion, by merging an XP or by movement of an XP contained within the projection built so far. Cyclicity effects, as observed, for example, in Wh-island violations, are straightforwardly derived. The Greed approach, on the other hand, leaves open the computational space within which a [-INT] feature associated with an XP may be checked. As a result, an  $H^0_{[feature]}$  may incorrectly be passed, the cyclicity of derivations needs to be independently stipulated, and most significantly, the amount of material to be considered by principles of Economy is substantially increased.

The paper provides important evidence for the Attract approach to movement, by arguing, based on a variety of languages and pronominal classes, that even phenomena related to pronoun displacement are better understood in terms of attraction by a feature associated with a functional head. Pronoun movement appears, at first glance, to be recalcitrant to an analysis based on feature attraction, because in a number of languages, only a subset of pronouns seem to be affected. In Swedish, Italian, and Hebrew, for example, only unstressed or unmodified pronouns (= 'weak' pronouns) undergo obligatory movement. Stressed pronouns (= 'strong' pronouns), on the other hand, remain in-situ:<sup>2</sup>

- (1) a. Anna sag kanske inte **DEN** / \***den** (Swedish, Homberg & Platzack (1995))  
 Anna saw maybe not it  
 b. Anna sag **den** kanske inte  
 Anna saw it maybe not
- (2) a. Il professore diede l'autorizzazione a **loro** /\***loro** (Italian, Cardinaletti (1994))  
 the professor gave the authorization to them  
 b. Il professore diede **loro** l'autorizzazione  
 the professor gave them the authorization

<sup>2</sup> See Cardinaletti & Starke (1999) for a development of the division into clitics and pronouns in Kayne (1975) into a tripartite distinction including clitics, weak pronouns, and strong pronouns. Based on a broad cross-linguistic sample, C&S argue that phonological, morphological, semantic, and syntactic properties distinguish three pronominal classes. Most relevant to the present paper is the inherent distinction between strong pronouns and weak pronouns (clitics included):

Strong pronouns (such as the French *moi, toi, lui* series): must refer to human referents, may bear stress, can be coordinated and modified, occur in base positions and may be dislocated. Strong pronouns are dominated by CP, SigmaP, and IP.

Weak pronouns (as in the French *je, tu, il* series; and clitics): may not bear stress or be coordinated/modified; may not introduce new discourse referents; occur in derived A-positions. Weak pronouns are dominated by SigmaP and IP, clitics are dominated by IP only. 'Minimize Structure', an Economy principle, selects the weakest form compatible with properties of the potential utterance.

- (3) a. rina tazmin be-hexlet **et Dani / OTO / \*oto** la-mesiba (Hebrew, Shlonsky (1997))  
 rina will-invite certainly et Dani / HIM / him to the party  
*Rina will certainly invite Dani / HIM to the party*
- b. rina tazmin **oto** be-hexlet la-mesiba  
 rina will-invite him certainly to-the-party  
*Rina will certainly invite him to the party*

In these languages, only clitics and weak pronouns appear to undergo movement, an observation which has led to the conclusion that it is exclusively properties of the pronoun which force it to appear in a derived position. Among these proposals, Roberts & Shlonsky (1996) argue that all pronouns raise, by LF at the latest, but weak pronouns cannot procrastinate because having little intrinsic content they disappear at LF; Cardinaletti & Starke (1999) argue that lacking Case, weak pronouns must associate with a Case position; Holmberg (1999) claims that in signaling given information, hence lacking [+FOC], weak pronouns must be associated to [+FOC] lexical material. Though different in detail, these proposals agree that weak pronouns are in some sense deficient, and that this deficiency triggers their displacement. Judging from facts such as (1)-(3) alone, a Greed approach to pronoun movement appears to be inevitable.

In what follows I argue that an Attract analysis of pronoun movement is in fact within reach, once these facts are considered together with the kind of pronominal doubling pervasive in Celtic and Semitic varieties, and also in French and Spanish. Overt pronoun doubling, I show in section 3, affects pronouns of the strong type in these languages, strongly suggesting that the syntactic inertness of strong pronouns in Swedish, Italian, and Hebrew may only be apparent. If so, all pronouns are involved in some syntactic relation with a functional head, contrary to the conclusions reached by Greed approaches. Still, it could be argued that all pronouns include some feature in need of checking by a functional head. That possibility is countered in section 4 where it is shown that restrictions on pronoun doubling in French closely resemble restrictions on pronoun movement in Italian and Swedish. Taken together, these restrictions reveal, first, the uniform source of doubling and movement, and second, they demonstrate the significance of the syntax of an attractor. As I show, contexts of non-movement and non-doubling follow from the absence of an attracting head, or the presence of a closer candidate as determined by Shortest Move. Furthermore, the observation that so-called weak pronouns may sometimes fail to move suggests that the only relevant distinction is between pronouns which can fail to be attracted and those that cannot (Romance clitics). In contexts of non-attraction, the weak/strong distinction appears to dissolve, suggesting that the gamut of properties associated by Cardinaletti & Starke (1999) with the ‘weak’ and ‘strong’ classes are derivative of syntactic position. But before proceeding to the argument for Attract, I show first that pronoun movement is indeed a syntactic phenomenon.

## 2 Syntactic Evidence for Pronoun Movement

Based on the observation that Swedish pronoun movement appears to have none of the familiar syntactic effects, Holmberg (1999) argues that it is best viewed as a PF phenomenon. Pronoun movement does not create new binding configurations for Principles A and B, in (4), as it should if it an instance of A-movement. Similarly, it shows no A-bar movement effects, giving rise neither to Weak Crossover violations, in (5), or to parasitic gaps, in (6) (examples from Holmberg & Platzack (1995)):

- (4) a. Han ansåg till deras / \*sin / \*varandras besvikelse [Per och Martin vara lika bra]  
 he considered to their / REFL / each other's disappointment Per and Martin be equally good  
*To their disappointment he considered Per and Martin to be equally good*
- b. **De**<sub>1</sub> ansågs till \*deras / sin / varandras besvikelse [e<sub>1</sub> vara lika bra ]  
 they considered-PASS to their / REFL / each other's disappointment be equally good  
*To their / each other's disappointment they were considered equally good*
- c. Han ansåg **dem**<sub>1</sub> till deras / \*sin / \*varandras besvikelse [e<sub>1</sub> vara lika bra ]  
 he considered them to their / REFL / each other's disappointment be equally good  
*To their disappointment he considered them equally good*
- (5) a. ?**Vem**<sub>1</sub> tilldelade dom i [hans<sub>1</sub> frånvaro] e<sub>1</sub> priset?  
 who awarded they in his absence the prize  
*Who did they in his absence award the prize?*
- b. Dom tilldelade **honom**<sub>1</sub> i [hans<sub>1</sub> frånvaro] e<sub>1</sub> priset?  
 they awarded him in his absence the prize
- (6) a. **Den artiklen**<sub>1</sub> kastade dom t<sub>1</sub>, [innan jag hade läst e]  
 that article threw they before I had read  
*That article they threw away before I had read*
- b. \***Den artiklen**<sub>1</sub> kastades t<sub>1</sub>, [innan jag hade läst e]  
 that article was-thrown before I had read
- c. \*Jag kastade **den**<sub>1</sub> inte t<sub>1</sub>, [innan jag hade läst e]  
 I threw it not before I had read

Thus, unlike a passivized NP in (4b), a pronoun moved from the small clause subject position fails to license reflexive binding, in (4c). And unlike Wh-movement, which in (5a) triggers a Weak Crossover violation, and in (6a) licenses a parasitic gap, a moved pronoun fails to trigger Weak Crossover and fails to license a parasitic gap.

It appears, however, that the conclusion based on negative evidence in Swedish for the PF status of pronoun movement is premature. While binding facts in Hebrew are identical to the Swedish facts of (4)-(6), Hebrew does exhibit a concrete syntactic effect, in the form of a contrast in accusative pronoun raising across different types of dative constituents. Observe first that raising of an (unstressed) accusative pronoun across a preceding dative is impossible in Swedish, though possible, in fact obligatory, in Hebrew:

- (7) a. Jag gav inte Elsa **den** (Swedish, Holmberg, 1999)  
 I gave not Elsa it  
*I didn't give it to Elsa*
- b. \*Jag gav **den** inte Elsa t<sub>obj</sub>  
 I gave it not Elsa
- (8) a. natati kvar le-dina OTO / \*oto (Hebrew, ordinary dative)  
 gave.I already to-dina IT / \*it
- b. natati **oto** kvar le-dina t<sub>obj</sub>  
 gave.I it already to-dina  
*I already gave it to Dina*

While a stressed pronoun remains in its post-dative position, an unstressed pronoun must raise, presumably

to a VP-external position preceding the adverb, in (8b). In the possessive dative construction, however, accusative pronoun raising is impossible. The accusative constituent associated with a possessive dative may undergo Wh-movement, in (9b), or NP-movement, as in the unaccusative example in (9c) (Borer & Grodzinsky (1986)). Still, pronominal raising of the accusative constituent is impossible. Movement of the accusative pronoun to a pre-adverb position, as in (10a), or a pre-subject position, as in (10b), leads to ungrammaticality:

- (9) a. dina lixlexa le-mina et ha-xulca (Hebrew, possessive dative)  
 dina soiled to-mina et the-shirt  
*Dina soiled Mina's shirt*
- b. [eize xulca]<sub>1</sub> dina lixlexa le-mina t<sub>1</sub> ?  
 which shirt dina soiled to-rina  
*Which shirt of Mina's did Dina soil?*
- c. [ha-xulca]<sub>1</sub> hitlaxlexa le-mina t<sub>1</sub> ba-mis'ada  
 the-shirt was.soiled to-mina at.the-restaurant  
*Mina's shirt got dirty at the restaurant*
- (10) a. \*lixlaxti **ota**<sub>1</sub> kvar le-mina t<sub>1</sub>  
 soiled.I it already to-mina
- b. \*etmol lixlexa **ota** dina le-mina t<sub>1</sub>  
 yesterday soiled it dina to-mina

The ungrammaticality of (10) is related to pronoun movement, and not to a general incompatibility of a possessive dative with a pronominal possessee. While a weak accusative pronoun may not remain in-situ, a pronominal Wh-phrase or a pronominal subject with an unaccusative verb are both possible, in (11b) and (11c):

- (11) a. \*dina lixlexa le-rina **ota**  
 dina soiled to-rina it
- b. Ma<sub>1</sub> dina lixlexa le-rina t<sub>1</sub> ?  
 What dina soiled to-rina  
*What of Rina's did Dina soil?*
- c. hi<sub>1</sub> hitlaxlexa le-dina t<sub>1</sub> ba-mesiba  
 it soiled to-rina at.the-party

Hebrew thus shows a contrast between possible accusative pronoun raising in an ordinary dative construction, and ungrammatical accusative pronoun movement with a possessive dative. The phonological identity of these datives casts doubt on a PF analysis of the contrast, and of pronoun movement more generally. The syntax of these constructions, on the other hand, is clearly distinct. The possessed object in a possessive dative construction may be embedded within a larger constituent, as in (12a), while the Theme in an ordinary dative construction must be complement to V<sup>o</sup>. In addition, the dative must c-command the possessed object or its trace (Borer & Grodzinsky (1986) and Landau (1997)). In (9b) and (9c), for example, the dative c-commands the trace of the moved object, but when the possessed object moves as part of a larger constituent, as in PP topicalization, the c-command relation is obstructed, leading to ungrammaticality (from B&G (1986)):

- (12) a. dina sixka le-rina im ha-kelev  
 dina played to-rina with the-dog  
*Dina played with Rina's dog*

- b. \* $[\text{im ha-kelev}]_1$  dina sixka le-rina  $t_1$   
 with the-dog dina played to-rina

The ungrammaticality of pronoun movement can be understood along similar syntactic lines, in terms of lack of c-command by the dative of the pronoun or its trace. If pronoun movement occurs at PF, the dative will c-command the in-situ pronoun in the overt component, and the ungrammaticality of (10) remains entirely unexpected. Pronoun movement must therefore be overt, and its trace must not be c-commanded by the dative. Such a configuration is conceivable if complement pronouns raise in Hebrew as part of a larger constituent containing  $V^0$  as well, roughly as in (13):<sup>3</sup>

(13)  $[\text{V}^0 \text{ acc.pronoun}]_1 \dots [\text{vP possessive dative } t_1]$

In (13) the possessive dative c-commands the trace of the complex [V+pronoun], but it c-commands neither the accusative pronoun nor its trace, on a par with PP topicalization. On this analysis, the fact that pronoun movement shows no binding effects and fails to license parasitic gaps follows from the trajectory of overt movement, and not from its PF status. Embedded within [V+pronoun], the pronoun is unable to c-command any DP from its derived position. Pronoun movement as part of [V+pronoun] movement explains, syntactically, both the ungrammaticality of extraction across a possessive dative and the lack of binding effects in general.

In sum, while syntactic effects may not be observable in Swedish, Hebrew exhibits a contrast between accusative pronoun movement across a possessive dative and across an ordinary dative, unexpected if pronouns raise at PF. I have proposed that pronouns do raise overtly, and as a result of amalgamation with  $V^0$ , they fail to leave a trace c-commanded by the dative, and they fail to produce new binding effects from their derived position. If so, the syntactic status of pronoun movement can be maintained. The following section argues that strong pronouns are related to a functional head via doubling by rich inflection.

### 3 The Syntax of Doubled Pronouns

Languages such as Italian, Swedish, and Hebrew appear to support a Greed analysis of pronoun movement, since only clitics and weak pronouns appear to be affected; if pronouns were attracted to their derived position by a feature of a functional head, all pronouns, including those considered to be ‘strong’ should be syntactically related to a functional head. Consideration of languages with richer inflectional systems, I now show, reveals that indeed ‘strong’ pronouns are syntactically related to an attracting feature by virtue of obligatory doubling. In particular, I argue that the kind of agreement found in Celtic and Semitic varieties is required exclusively by strong pronouns in-situ, and that it functions as a raised pronominal element which is attracted by a functional head  $F^0_{[\text{person}]}$  in lieu of the pronoun. Following the diagnostics developed in Cardinaletti and Starke (1999), the pronoun doubled by inflection in Welsh, Breton, and Standard Arabic qualifies as ‘strong’: it occurs in a non-derived position, it can be emphatic or conjoined, it can be dislocated, and it is formally invariant across Case positions.

#### 3.1 Welsh

The kind of inflection found in Celtic and Semitic varieties, labeled ‘rich’ or ‘synthetic’ inflection by grammarians, is obligatory with pronominal arguments, and impossible with full DPs, as in the following subject paradigm from Welsh (from Rouveret, 1991):

<sup>3</sup> See Sichel (2001) for cliticization of object pronouns and  $V^0$  in the derivation of object pronoun movement in Hebrew.

- (14) a. Darllenasant (hwy) y llyfr  
 read-past-**3pl** they the book  
*They read the book*  
 b. \*Darllenasant y plant y llyfr  
 read-past-**3pl** the children the book  
 c. Darllenodd y plant y llyfr  
 read-past-**3sg** the children the book  
*The children read the book*  
 d. \*Darllenodd hwy y llyfr  
 read-past-**3sg** they the book

The sensitivity of inflection to the pronominal status of the subject directly reflects a syntactic relation between an inflectional element  $F^0$  and a pronominal argument, compatible with the claim that pronominal material is attracted by a pronominal feature,  $F^0_{[person]}$ . In addition, the pronoun obligatorily doubled by inflection has all the makings of a strong pronoun in the sense of Cardinaletti and Starke (1999). Rouveret (1991) reports, based on an observation attributed to Robert Borsely, that pronouns doubled by inflection can be emphatic. They can also be conjoined:

- (15) Gwelais [**i** ac Emrys] ddraig  
 saw-1sg I and Emrys dragon  
*Emrys and I saw a dragon*

Similarly, pronouns doubled by inflection appear to occupy the same underived positions as full DPs. Based on their DP-internal position when functioning as genitives, Koopman (1999) argues that pronouns doubled by inflection occupy the same position as a full DP. An inflectional element in a Welsh DP precedes  $N^0$ , while a full DP follows  $N^0$  and adjectives, in (16) (from McCloskey & Hale, 1984). Exactly as in the subject paradigm, an overt pronominal genitive requires inflectional material. This overt pronoun, like ordinary DPs, follows  $N^0$  and its adjective, as in (17), from Koopman (1999):

- (16) a. **ei** gi  
 3ms dog  
*his dog*  
 b. **ci** John  
 dog John  
*John's dog*  
 c. llyfr newydd Dafydd  
 book new David  
*David's new book*

- (17) **ei** hanes (\***ef**) bywiog **ef** am yr ymfudwyr  
 Agr3 story his lively his about the immigrants  
*his lively story about the immigrants*

The combination of these properties suggests that pronouns doubled by inflection in Welsh are similar to strong pronouns of the Romance / Germanic variety, the difference being that in Welsh these pronouns are visibly doubled by an inflectional element. Such doubling, I argue in 3.2, is due to the presence of a  $F^0_{[person]}$  which attracts pronominal material, more specifically [person], from within DP.

### 3.2 Rich Agreement as a Raised Clitic

The idea that ‘rich’ agreement in Celtic / Semitic varieties is pronominal in the concrete sense of having a DP-internal source is not new. Similar to the discussion regarding the nature of the syntactic relation between a Romance clitic and its double (Kayne (1989) claims that clitics raise from an argument position, while Sportiche (1996) argues that clitics are base generated in their functional position), there have been claims for and against a movement analysis of Celtic and Semitic inflection. Doron (1988) and Rouveret (1991) claim that inflection of this sort starts out within an argument position and comes to be associated with the functional domain via movement, while Roberts & Shlonsky (1996), and Koopman (1999) argue that rich inflection instantiates a functional head which agrees with a pronominal DP, possibly null, in its specifier. In what follows, I demonstrate how the extremely rich pronominal system of Welsh supports, quite directly, a movement approach, once the trigger for movement is understood in terms of Attraction by  $F^0_{[person]}$ .

Major support for a movement approach to ‘rich’ inflection is provided by its alternation, in some syntactically defined contexts, with an independent pronoun (Rouveret (1991), Roberts & Shlonsky (1996), and Koopman (1999)). Independent pronouns are never doubled by inflection, and they are formally distinct from those pronouns which are doubled by inflection, coined ‘auxiliary pronouns’ by Celtic grammarians:

(18) auxiliary pronouns (require synthetic inflection)

<b>i</b> / fi	<b>I</b>	ni	<i>we</i>
ti / di	<i>you</i>	chwi	<i>you</i>
ef / efo	<i>he</i>	hwy / hwynt	<i>they</i>
fe / fo	<i>he</i>		
hi	<i>she</i>		

(19) simple independent pronouns (exclude synthetic inflection)

<b>mi</b> / fi	<b>I</b>	ni	<i>we</i>
ti / di	<i>you</i>	chwi	<i>you</i>
ef	<i>he</i>	hwy / hwynt	<i>they</i>
hi	<i>she</i>		

The choice between an auxiliary pronoun and an independent pronoun is determined strictly by the presence of inflection and not by Case position. Since subject inflection in Welsh is obligatorily available with a pronominal argument, that pronoun will always surface as an auxiliary pronoun. Things, however, are different in the object and prepositional domain. Older varieties of Welsh made more extensive use of an inflectional element in post-particle position, giving rise to an auxiliary pronoun in object position, in (20a). In contemporary Welsh, in contrast, the inflectional element appears to be obsolete, and an independent pronoun surfaces in-situ, in (20b) (from Rouveret (1991)):

- (20) a. Fe 'm gwelodd y dyn **i**  
 PRT CL saw the man me  
*The man saw me*  
 b. Fe welodd y dyn **mi**  
 PRT saw the man me

Welsh prepositions similarly exhibit a choice between independent pronoun or inflection plus an optional auxiliary pronoun, though here the choice is determined lexically. Prepositions which are associated with an inflectional paradigm will obligatorily inflect, hence the only pronoun which may surface is the auxiliary

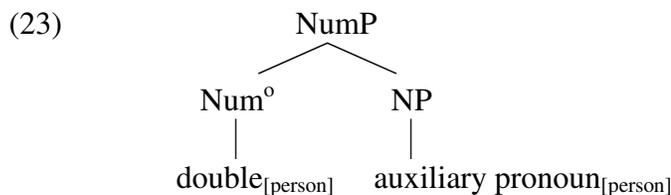
type. With non-inflecting prepositions, only an independent pronoun may surface (McCloskey & Hale (1984)):

(21) arnaf     **fi** / \***mi**  
 on-1st,s I  
*on me*

(22) a. ag            ‘with’  
 b. ag ef        ‘with him’

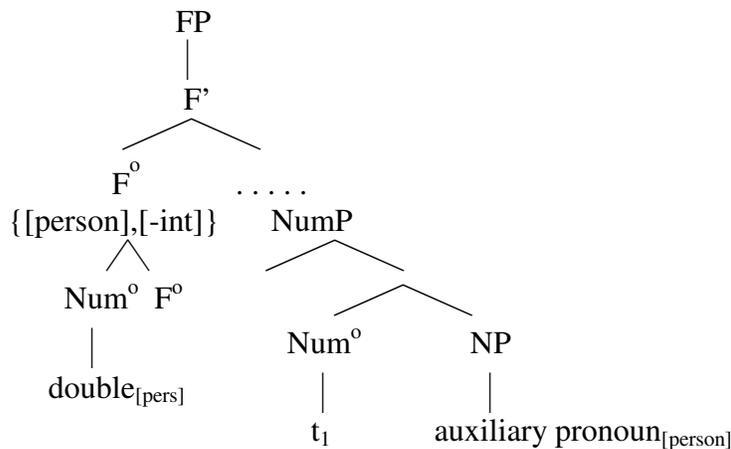
Welsh thus demonstrates a systematic complementarity between inflectional material associated with the functional domain, and a pronominal element in A-position. It also exhibits a clear preference for inflection over an independent pronoun, found more pervasively in Irish with its mixed subject inflectional systems, and referred to as the Blocking Effect (McCloskey & Hale (1984), McCloskey (1986)): the presence of inflection blocks the appearance of an independent pronoun. But why should this be so? Why is an independent pronoun ungrammatical in inflectional contexts, rather than an option in free variation with inflection?

The alternation between inflection and an independent pronoun, and the preference for the former are directly explained if inflectional material has a DP internal source and reaches its surface position via movement triggered by  $F^0_{[person]}$ . In the absence of movement, inflection surfaces as a morphologically independent element in base position, giving rise to an independent pronoun. On this analysis, an independent pronoun is syntactically identical to non-raised inflection, hence the complementarity effect<sup>4</sup>. The Blocking Effect which prefers inflection whenever available now falls into place, since the presence of an attracting feature imposes obligatory movement, i.e rich inflection. Following the structure given in Rouveret (1991) for lexical and pronominal DPs, I assume that inflectional material is generated as  $Num^0$  and lexical nouns or an optional auxiliary pronoun are generated within the NP layer, as illustrated in (23). In the presence of an attracting  $F^0_{[person]}$ ,  $Num^0$  raises and adjoins to  $F^0$ , as determined by Shortest Move, giving rise to rich inflection, in (24):



<sup>4</sup> See Sichel (2001) for a more detailed argument for a movement analysis, and a close comparison with the set of assumptions required by the base-generation approach proposed in Koopman (1999).

(24)



Independent pronouns, from this perspective, are simply non-attracted instances of Num<sup>o</sup> within NumP in argument position. And indeed, non-attracted Num<sup>o</sup> may be accompanied by an additional pronominal, as predicted by the structure in (23). These are the so-called reduplicated pronouns, restricted to non-inflectional contexts such as the following, as expected if they reflect non-attraction of Num<sup>o</sup> (examples from Doron (1988)):

- (25) a.    yfi    oedd   yn cwyno  
          I-redup be-past in complain  
          *It was I who was complaining*  
      b.    \*yfi    oeddwn   yn cwyno  
          I-redup be-past-1sg in complain

The alternation between independent or reduplicated pronouns and inflectional material is directly explained if Num<sup>o</sup> can fail to be attracted. The failure of attraction, in turn, can only be understood if it is properties of the functional position which trigger movement, and not properties of the pronoun itself; unlike Romance clitics, for example, a non-attracted Num<sup>o</sup> is free to remain in-situ in the absence of an attracting head. Blocking Effects, therefore, reduce to the presence of an attractor. In contemporary Welsh, an F<sup>o</sup><sub>[person]</sub> is always associated with the subject domain, obsolete in the object domain, and lexically determined in the prepositional domain. In the remainder of this section, I briefly show that pronominal syntax in Breton and Standard Arabic is virtually identical. Here too pronouns doubled by inflection bear the hallmarks of strong pronouns of the Romance / Germanic variety.

### 3.3 Breton

As in Welsh, subject agreement is impossible with lexical DPs and required with pronouns. A doubled pronoun is necessarily emphatic, on a par with strong pronouns in Romance and Germanic (example from Doron (1988)):

- (26) a.    bemdez   e    lennont eul levr  
          every day PRT read-3p a   book  
          *They read a book every day*  
      b.    bemdez   e    lenn / \*lennont ar vugale eul levr  
          every day PRT read / read-3p the kids a   book  
          *The kids read a book every day*

- c. levriou a lennan-**me** / \*lenn **me**  
 books PRT read-1s+1s / read 1s  
*I read books*

A further similarity to strong pronouns of the more familiar type is the formal invariance of doubled pronouns across Case positions. The pronominal ‘-me’ obligatorily accompanied by an inflectional element is a prepositional complement in (27) and a possessor in (28), and is formally identical to the subject pronoun in (26c) (examples from Stump (1989)):

- (27) a. \*Ul levr a zo gant-**me**  
 a book PCL is with-1sg  
 b. Ul levr a zo ganin-**me**  
 a book PCL is with+1sg-1sg  
*I have a book*  
 c. Ul levr a zo ganin  
 a book PCL is with+1sg  
*I have a book*
- (28) a. \*Klanv eo breur-**me**  
 sick is brother-1sg  
 b. Klanv eo **ma** breur-**me**  
 sick is 1sg brother-1sg  
*My brother is sick*  
 c. Klanv eo **ma** breur  
 sick is 1sg brother  
*My brother is sick*

A final diagnostic of pronominal strength attested in Breton is the occurrence of doubled pronouns in dislocated position. As opposed to Welsh, Breton does allow a preverbal subject, argued in Stump (1984) to be in IP internal position in affirmative clauses. If so, a preverbal pronoun will have checked  $F^0_{[person]}$  by XP movement to spec of IP, and no synthetic inflection is expected, in contrast to postverbal pronouns which require inflection as in (28). That prediction is confirmed, as in the following (from Stump, 1984):

- (29) a. **Me** a lenn / \*lennan levriou  
 I PRT read / read-1s books  
*I read books*  
 b. **Te** a lenn / \*lennaz levriou  
 you PRT read / read-2s books  
*You read books*

The complementarity of a preverbal pronoun and inflection supports the general claim that raised inflection and raised pronouns are equivalent modes of  $F^0_{[person]}$  checking. Weak pronouns, however, cannot be dislocated. Stump argues at length that pre-verbal subjects in negative sentences are IP-external, topicalized or clefted. A pronoun in this position, necessarily strong, *must* occur with inflection, in contrast to (29)<sup>5</sup>:

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<sup>5</sup>Adapted from Stump who reports the fact.

- (30) **Int** ne lennont / \*lenn ket levriou  
 they PRT read-3p / read neg books  
*They didn't read a book*

Breton thus provides additional evidence supporting the hypothesis that strong pronouns are not exempt from and syntactic relation with  $F^0_{[person]}$  and are associated with an inflectional element when an attracting [person] feature is present. Doubled pronouns in Breton exhibit properties highly reminiscent of strong pronouns in Romance and Germanic. They are interpreted as emphatic, they are Case invariant, and they can be dislocated.

### 3.4 Standard Arabic

Pronoun syntax in Standard Arabic is identical in all relevant respects to the Celtic varieties considered so far, and provides evidence of a similar sort for the strong status of doubled pronouns. Briefly, just as in Breton, rich inflection is obligatory with a postverbal pronoun, and impossible with a postverbal full DP, in (31). Again, a pronoun doubled by inflection is necessarily emphatic or contrastive, as seen by the ungrammaticality of (32a) (examples from Fassi Fehri (1993)):

- (31) a. \*ji?-na l-banaat-u  
 came-**3pf** the-girls-nom  
 b. jaa?-at l-banaat-u  
 came-**f** the-girls-nom  
*The girls came*  
 c. \*jaa?-at **hunna**  
 came-**f** they-f  
 d. ji?-na  
 came-**3pf**  
*They(f) came*
- (32) a. \*jaa?-uu **hum**  
 came-**3pm** they-m  
 b. jaa?-uu **hum** laa xuddaam-u-hum  
 came-**3pm** they-m not servants-nom-their  
*They came, not their servants*

Similarly, a pronoun doubled by inflection is invariant across Case positions, as in the examples in (33), which show a doubled so-called nominative form surfacing as a direct object, genitive, and complement of preposition. Assuming these to be strong pronouns, the fact that the same form shows up in all Case positions is no longer surprising. Finally, as expected if doubled pronouns are of the strong variety, a pronoun doubled by rich agreement can be dislocated, as in (34):

- (33) a. ?-antaqid-u-**ka** ?**anta**  
 I-criticize-ind-you you  
*I criticize you*  
 b. ?-as?al-u an xabar-i-**ka** ?**anta** laa an xabar-ii  
 I-inquire about news-gen-you you not about news-me  
*I am inquiring about your news, not about mine*

- c. marar-tu bi-**hi**            **huwa** laa bi-?axii-hi  
 passed.by-I with-him he      not with-brother-his  
*I passed by him, not his brother*

- (34) **hunna** laa y-ubaalii ?-ahad-un bi-hinna  
 they.f not 3-care one-nom about-them.f  
*As for them(f), nobody cares about them*

Summing up, the inflectional paradigms of Welsh, Breton, and Standard Arabic show a clear distinction between pronominal and non-pronominal arguments, the latter being associated with impoverished inflectional material, compared with the ‘rich’ or synthetic agreement which obligatorily accompanies a pronoun. Based on the alternation observed in Welsh between rich inflection and the pronominal variety termed ‘independent’ by grammarians, it has been argued that rich inflection is in fact an independent pronoun attracted to a head position by  $F^0_{[person]}$ . The only difference between rich inflection of the Celtic/Semitic variety and the weak pronouns observed in derived positions in Romance and Germanic, is that the former raise as heads and have the morphological properties of inflection, while the latter raise as XPs to specifier position. The similarity between the pronominal systems of Celtic/Semitic and Romance/Germanic extends to pronouns in-situ as well. Consideration of the nature of pronouns doubled by inflection reveals that they are surprisingly similar to strong pronouns of the more familiar type, being interpreted emphatically, occurring in non-derived positions, allowing conjunction and dislocation, and showing formal invariance across Case positions. The fact that in these languages strong pronouns are visibly doubled by inflectional material suggests, finally, that all pronouns are involved in a syntactic relation with a functional head, paving the way to an approach to pronoun movement in terms of attraction by a functional head associated with a pronominal feature,  $F^0_{[person]}$ . Still, it could be argued that all pronouns, and not only those of the clitic or weak variety, have special needs which require checking against a functional head. The next section counters that possibility by examining contexts in which pronouns fail to raise and fail to double. Such cases are unexpected on a Greed approach, for if pronouns are associated with functional material due to their own requirements, derivations in which such a relation is not established are expected to lead to ungrammaticality. The observation that non-raised and non-doubled pronouns can be grammatical leads to a theory of pronoun movement in terms of the syntax of the attractor, in conjunction with Shortest Move.

#### 4 Contexts of Non-Attraction

This section develops a conclusive argument in favor of pronoun movement via attraction by  $F^0_{[person]}$  by examining grammatical contexts with pronouns which are neither raised nor doubled. Grammatical occurrences of non-raised weak pronouns are surprising from a Greed-based perspective, which takes the movement of these pronouns to be triggered exclusively by a feature of the pronoun, which unchecked would cause the derivation to crash. Here too, the syntax of pronouns which are visibly doubled by inflection is illuminating, and points to a systematic relation between raising and doubling. Just like weak pronouns may, in some contexts, fail to raise, so may strong pronouns fail to be doubled. Furthermore, the contexts in which strong pronouns can fail to be doubled turn out to be remarkably similar to those in which so-called weak pronouns may fail to raise, including gapping constructions, complements to oblique prepositions and prepositional particles, and ‘except’ phrases.

The identity in contexts of non-movement and non-doubling provides a strong argument for assigning to these processes a common source, and for taking their trigger to include properties of an attractor,  $F^0_{[person]}$ . Contexts in which pronouns fail to raise or be doubled are analyzed in terms of non-attraction, in some cases because no attracting  $F^0_{[person]}$  is present, and in others due to the presence of a

closer candidate, as determined by Shortest Move. As I show, the distinction between weak and strong pronouns is neutralized, in effect, in contexts of non-attraction, as non-raised non-doubled pronouns cannot be characterized as weak or strong in the mutually exclusive sense proposed by Cardinaletti & Starke (1999).<sup>6</sup> Put slightly differently, the weak / strong distinction and the gamut of associated properties is claimed to apply only in contexts of attraction, and as such weakness and strength correlate with syntactic position, but do not appear to define pronominal classes inherently. Proceeding from constraints on the distribution of pronoun doubling in French, I turn to similar contexts in Swedish, Italian, and Standard Arabic which exhibit so-called weak pronouns in-situ and argue that these are best analyzed in terms of absence of an attractor or presence of a closer candidate as determined by Shortest Move.

#### 4.1 Restrictions on pronoun doubling in French

The pattern of clitic doubling in French is remarkably similar to the distribution of rich inflection in the languages examined above. While fully referential DPs can never be doubled by a clitic, invariant pronouns such as *moi* and *toi* (characterized as strong by Cardinaletti & Starke) must be doubled by a clitic in a variety of contexts. A pronoun in direct object position, subject position, or complement of a dative preposition must be doubled by a clitic (all French examples from Kayne (2000)):<sup>7,8</sup>

- (35) a. Jean connaît Marie  
       Jean knows Marie  
       b. \*Jean **la** connaît Marie  
       Jean her knows Marie

- (36) a. Jean **me** connaît  
       Jean me knows  
       b. \*Jean connaît **moi**  
       Jean knows me  
       c. Jean **me** connaît **moi**  
       Jean me knows me

- (37) a. Je vois Marie  
       I see Marie  
       b. \*Moi / MOI vois Marie  
       I           see Marie  
       c. **Moi, je** vois Marie  
       I     I see Marie

- (38) a. Jean me parle  
       Jean to-me speaks

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<sup>6</sup> Recall that Cardinaletti & Starke (1999) define weak and strong pronouns inherently, in terms of the amount of functional material they are dominated by, SigmaP and CP respectively, and propose that the choice between pronominal classes is determined by an economy principle, Minimize Structure, which selects the least amount of structure compatible with the expression within which the pronoun is embedded.

<sup>7</sup> Unlike first and second pronouns, a third person pronoun (i.e. *lui*) is not ungrammatical without a doubling clitic. Following Kayne (2000), I assume that the inflectional element doubling third person pronouns is syntactically active though phonetically null.

<sup>8</sup> Speakers report on a contrast between (38b), with a non-doubled dative, which is slightly better than non-doubled pronouns in subject or direct object position. I will assume that the improvement with datives is related to the possibility of interpreting the dative marker as an oblique preposition, a context in which doubling is not observed (see (39)).

- b. \*Jean parle a moi  
Jean speaks to me
- c. Jean **me** parle a **moi**  
Jean me speaks to me

Just like rich inflection in Celtic and Semitic does not, in itself, require a corresponding argument, so can a French clitic occur without a corresponding argument. A pronominal argument, on the other hand, requires doubling by a clitic; the ungrammaticality of non-doubled pronouns in (36b), (37b), and (38b) parallels the ungrammaticality of Celtic and Semitic pronouns not accompanied by rich inflection, suggesting again that the requirement for a clitic is related to the pronominal status of the argument. The fact that French pronouns of this sort are uncontroversially strong, and have no special needs of their own, strengthens the conclusion that the requirement for an inflectional element must be determined by the functional portion of the clause, not by properties of the DP in argument position. However, unlike Celtic and Semitic auxiliary pronouns, which must be associated with rich inflection, a French invariant pronoun may not be doubled in a variety of contexts, as in the following examples:<sup>9</sup>

- (39) Jean parle de **moi** (oblique preposition)  
Jean speaks of me
- (40) a. Jean aime la physique, et **moi** la chimie (gapping)  
*Jean likes physics, and me chemistry*  
b. \*Jean aime la physique et **moi je** la chimie  
Jean likes physics and me I chemistry
- (41) Marie n'aime que **moi** ('except' phrase)  
Marie neg loves than me  
*Marie loves only me*

While invariant pronouns in subject, direct object, and dative position must be doubled by a clitic, an identical pronoun as complement of an oblique preposition, in a gapped conjunct, or in an 'except' phrase, as in (41), need not be doubled. The presence of a clitic in these constructions is, in fact, ungrammatical, as seen for example in (40b). Assuming that in gapping constructions the TP Case-related layer is absent in the second conjunct, Kayne (2000) proposes the following generalization:

- (42) Invariant pronouns in structurally Case-marked positions must be doubled by a clitic

The generalization in terms of Case-marked positions distinguishes between those pronouns that must be doubled, and those that are not. Subjects, objects, and presumably datives as well (see for example Sportiche (1996)) are associated with structural Case, and on Minimalist assumptions they occur in Case-related derived positions. In contrast, complements of oblique prepositions, assigned inherent Case, and pronouns in gapping constructions do not occupy Case-related positions.

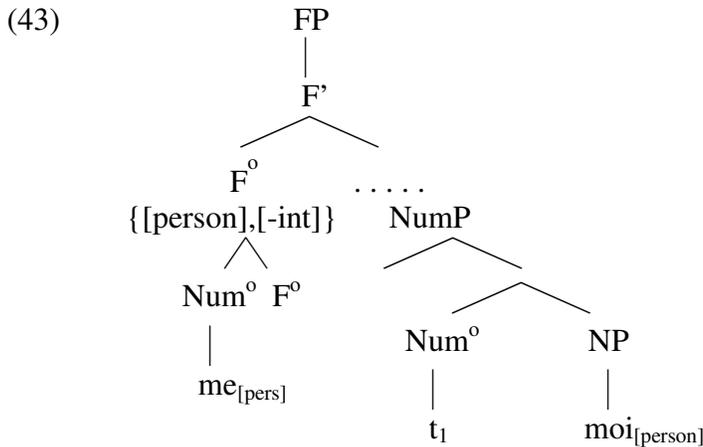
The generalization in (42) remains neutral regarding the source of restrictions on pronoun doubling. In particular, it leaves open the reason why the nature of the pronoun's position should determine the requirement for a clitic. It also leaves open why invariant pronouns in particular, as opposed to weak pronouns (such as *je*, *tu*, etc.), are those which impose the requirement for doubling by a clitic. After all, if invariant pronouns doubled by a clitic occupy Case-marked positions, that position is shared by pronouns of

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<sup>9</sup> Recall that pronouns not doubled by inflection in Celtic surface as independent pronouns; an auxiliary pronoun not associated with inflection is ungrammatical. I return in the final section to discussion of this and related differences.

the weak sort, as these occupy derived Case-related positions as well.

Considered in the light of Celtic and Arabic pronominal syntax and the theory of attraction developed so far, the relation between invariant pronouns and doubling, and its sensitivity to Case properties, can be understood in terms of attraction by an  $F^0_{[person]}$ . The relation to Case properties follows, though indirectly, if the attracting feature is associated with a functional head, located in the subject, object, and dative functional domains. Suppose, then, that exactly as in Welsh, the clitic is generated along with the invariant pronoun within DP, and that an  $F^0_{[person]}$  located in the subject, direct object or dative functional domain attracts pronominal features. As in Welsh, the candidate for attraction is the clitic in  $Num^0$ , since it is closer to  $F^0_{[person]}$  than the NP pronoun:



On this analysis, an invariant pronoun of the *moi* type need not itself occupy a Case-related derived position, as the clitic checks the relevant [person] feature in lieu of the pronoun; and indeed, the invariant pronoun is optional. The absence of a clitic in (39), (40), and (41) points therefore to the conclusion that in these cases [person] features of the pronominal NumP associated the invariant pronoun are not attracted. For the oblique prepositional construction of (39) it seems reasonable to assume that lack of [person] attraction is due to the absence of the kind of functional head that bears [-int, person], as oblique Case, commonly assumed to be inherent, appears not to be mediated by functional structure outside of PP. The lack of doubling in gapping constructions can be analyzed along similar lines. Assuming with Kayne (2000) that gapping constructions lack subject-related functional material, here too there will be no  $F^0_{[person]}$  to attract features of the pronominal NumP. Therefore, no doubling of the NP pronoun is observed.

An analysis in terms of absence of attractor does not extend straightforwardly to the *ne...que* construction in (41). Since  $V^0$  here is clearly transitive, an attracting  $F^0_{[person]}$  must be located in the accusative functional domain. Nevertheless, absence of doubling indicates non-attraction, in this case due to Shortest Move (Chomsky (1995)) and the presence of a direct object candidate closer to  $F^0_{[person]}$  than the complement of *que*. Consistent with the transitivity of  $V^0$ , I assume that its complement is a pronominal direct object equivalent to *nobody / personne* which undergoes PF deletion, licensed by recoverability in the context of ‘except DP’. Following the analysis of verb raising in gapping and pseudo-gapping given in Lasnik (1999), PF deletion of pronominal *nobody / personne* allows its [person] feature to raise to accusative  $F^0_{[person]}$  by removing potentially non-convergent phonological material, the residue of [person] extraction from *nobody*. In other words, given an attractor and Shortest Move, the [person] feature associated with the direct object checks accusative  $F^0_{[person]}$ . Since the pronoun in the complement of *que* is unaffected, no doubling is required. Non-doubling in (39)-(41), then, are all cases of non-attraction. In gapping constructions and with oblique prepositions there is no attracting  $F^0_{[person]}$ , and in ‘except phrases’ there exists a closer candidate, the [person] feature of the direct object.

The analysis in terms of absence of an attractor is identical to that given for Welsh non-inflecting prepositions.<sup>10</sup> Nevertheless, there is a significant difference between these languages: whereas in Welsh, a non-attracted Num<sup>0</sup> in-situ produces an independent Num<sup>0</sup> pronoun, French Num<sup>0</sup> in-situ impossible. A non-attracted French clitic always leads to ungrammaticality, as observed in the gapping construction above and in the general ungrammaticality of post-verbal clitics ( \**Jean voit me*). Similarly, there is no grammatical *me-moi* sequence in French on a par with Welsh reduplicated pronouns. In contrast to Welsh, therefore, French (and more generally, Romance) instantiations of Num<sup>0</sup> do appear to have checking requirements of their own, causing the derivation to crash if not checked against F<sup>0</sup><sub>[person]</sub>. While earlier studies had taken Romance clitics to be representative of pronouns in general (the Greed approach), attraction by F<sup>0</sup><sub>[person]</sub> implies that Romance clitics are but a special case within the general class of pronouns. The possibility that some pronouns may indeed have checking requirements of their own, in addition to the checking needs of F<sup>0</sup><sub>[person]</sub>, is perfectly consistent with the view that, universally and generally, the trigger for pronoun movement is located in the functional domain.

Since only attraction by F<sup>0</sup><sub>[person]</sub> can explain the Celtic / Semitic paradigms and restrictions on the distribution of doubling in French, the clausal properties of these languages will be identical. The source of parametric variation must therefore be located within NumP, and more specifically, the properties of Num<sup>0</sup>. Parametric variation in the morpho-syntax of Num<sup>0</sup> is further supported by another, related difference between these languages mentioned in passing above: a Welsh NP (‘auxiliary’) pronoun is impossible without its double, while French *moi* is fine, as in (39)-(41). Generalizing across these facts, it appears that a Welsh Num<sup>0</sup> always dominates pronominal material, which may or may not be attracted by a higher F<sup>0</sup><sub>[person]</sub>, while French Num<sup>0</sup> dominates material only when that material is subsequently attracted by F<sup>0</sup><sub>[person]</sub>. Assuming that lexical material merged under Num<sup>0</sup> is cross-linguistically uniform in all relevant respects, these differences will follow from variation in the properties of Num<sup>0</sup>. French Num<sup>0</sup> is morpho-syntactically inert, having no features, and Welsh Num<sup>0</sup> is specified at least for [person, -int], possibly [number] as well (see Rouveret (1991)). As such, French Num<sup>0</sup> imposes no checking requirements and may remain empty; but if a clitic is inserted, it must raise further in order to have its features checked. Welsh Num<sup>0</sup>, on the other hand, requires checking, hence the requirement that pronominal material be merged; but once checked, Num<sup>0</sup> need not be attracted by a higher head, though it may.<sup>11</sup> Pronouns, on this approach, are divided into three classes, along two distinct dimensions, a categorial dimension - Num<sup>0</sup> pronouns, and NP pronouns – and a morpho-syntactic dimension, Num<sub>[+feature]</sub>, as in Welsh, and Num<sub>[-feature]</sub>, as in French. Pronominal instantiations of NP are formally invariant, and never raise, qua NP, to a derived position. Num<sub>[+feature]</sub> pronouns may or may not be attracted by a higher head, and Num<sub>[-feature]</sub> pronouns, instantiated by Romance clitics, cannot fail to be attracted.

Summing up, the Case-sensitivity of French pronoun doubling follows straightforwardly if doubling is triggered by an attracting [person] feature located in those functional domains typically associated with Structural Case. Differences between Welsh and French turn out to be systematic, and reduce to the morpho-syntax of Num<sup>0</sup>. Since French Num<sup>0</sup> is syntactically inert, pronominal material may be merged into Num<sup>0</sup> only if further attracted by a higher head. Welsh Num<sup>0</sup>, on the other hand, being specified for an attracting feature, will necessarily dominate pronominal material, which may or may not be subsequently attracted by F<sup>0</sup><sub>[person]</sub>. The typology of pronouns emerging from this analysis includes three classes, NP pronouns which never raise, Num<sup>0</sup> pronouns which may raise or remain in-situ, and Num<sup>0</sup> pronouns which cannot fail to raise.

The analysis of restrictions on pronoun doubling in French in terms of non-attraction leads to the prediction that in contexts of non-attraction so-called weak pronouns should be free to remain in-situ. The next sections confirm the prediction, and argue that contrary to Greed-based expectations, so-called weak

<sup>10</sup> Recall the non-inflecting prepositions license an independent Num<sup>0</sup> pronoun in-situ when Num<sup>0</sup> is not attracted.

<sup>11</sup> Checked features are available for attraction by a higher head if, following Pesetsky & Torrego (2001), checked features are deleted at the phasal level and NumP, as seems reasonable, is not a phase (see Chomsky (2001) for CP and vP as phases).

pronouns may fail to raise, precisely in these contexts. For the purposes of argumentation, I continue to refer to these pronouns, descriptively, as weak, though as will become clear, the weak/strong distinction appears to dissolve in contexts of non-attraction, casting doubt on its definitional status.

#### 4.2 Oblique Prepositions

Where French invariant pronouns need not double, Italian and Swedish pronouns need not raise. Although accusative pronouns which are not stressed, conjoined, or modified, must raise in these languages, as seen in (44a) and (45a), the presence of an oblique preposition excludes pronoun movement, as in (44b) and (45c):

- (44) a. \*Ho visto **lui** (Italian)  
           have seen him  
       b. Ho parlato con **lui**  
           have spoken to him  
           *I have spoken to him*
- (45) a. \*Jag talade **henne** inte med (Swedish)  
           I spoke her not with  
       b. Jag kysste **henne** inte  
           I kissed her not  
       c. Jag talade inte med **henne**  
           I spoke not with her

The ungrammaticality of (44a) and (45a) attest to the obligatory nature of pronoun movement when the pronoun is ‘weak’, in the terminology of Cardinaletti & Starke (1999), i.e. is not stressed, modified, or conjoined. However, if properties of the pronoun determined its movement exclusively, the grammaticality of a non-stressed, non-modified, non-conjoined pronoun in-situ as complement to an oblique preposition is surprising, as the pronominal feature responsible for raising is expected to cause the derivation to crash regardless of syntactic environment. That fact that precisely in this environment French invariant pronouns need not be doubled strengthens the claim that oblique prepositions are not associated with the kind of functional structure which hosts an attracting [person] feature, related to the fact that Case assignment by these prepositions is mediated by theta-role assignment, not functional structure. Given that pronoun doubling by a clitic or rich inflection, and pronoun movement as in Italian and Swedish are both triggered by the need to check  $F^0_{[person]}$ , both processes are blocked when no attractor is present, as in the context of oblique prepositions. The Italian and Swedish varieties of non-stressed, non-conjoined, non-modified, prepositions, characterized as ‘weak’ by C&S, appear therefore to impose no checking requirements of their own. When they raise, they do so in the service of an attracting feature.

The pronouns in (44b) and (45c) may, but need not, be stressed, conjoined, or modified. Are they ‘weak’ or ‘strong’? Recall that weak and strength, as characterized in C&S, are defined as mutually exclusive by the economy principle Minimize Structure which selects the weakest form compatible with the expression. Combined with obligatory movement of weak forms, Minimize Structure entails that in a given position, either weak or strong forms are observed, but never both. Non-attracted pronouns, however, do not necessarily bear the hallmarks of strength; neither do they necessarily bear the hallmarks of pronominal weakness. It appears therefore that if weakness and strength are defined as mutually exclusive, non-attracted pronouns are neither weak nor strong. In contexts of non-attraction, the distinction dissolves. Pronominal weak and strength, therefore, cannot define inherent pronominal status, and most likely correlate with syntactic position in contexts of attraction. The pattern of accusative pronoun conjunction in Standard Arabic further supports this conclusion, discussed in section 4.5 below.

#### 4.4 Swedish particles and datives

Like oblique prepositions, so do Swedish particles exclude pronoun movement. The pronoun in (46) may not raise to a VP-external position preceding negation when a particle is present (all examples from Holmberg (1999)):

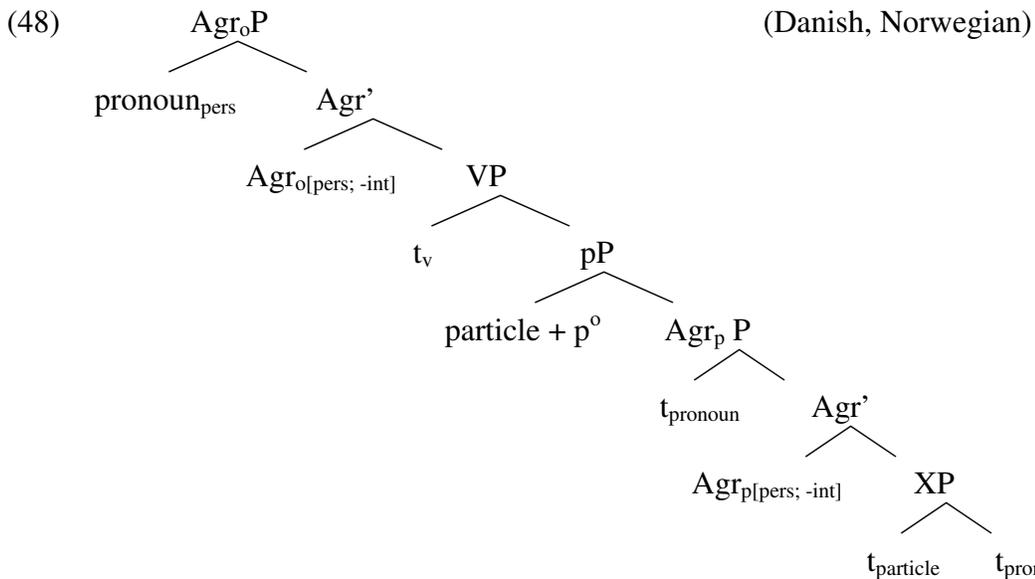
- (46) a. Dom kastade inte ut **mej** (Swedish)  
They threw not out me  
*They didn't throw me out*
- b. \*Dom kastade **mej** inte ut  
They threw me not out

The ungrammaticality of pronoun movement suggests that here too the pronoun is not attracted. It is unlikely, however, that particles, like oblique prepositions, lack the functional structure required to host an attracting [person] feature. Particle constructions in Danish and Norwegian do trigger pronoun movement:

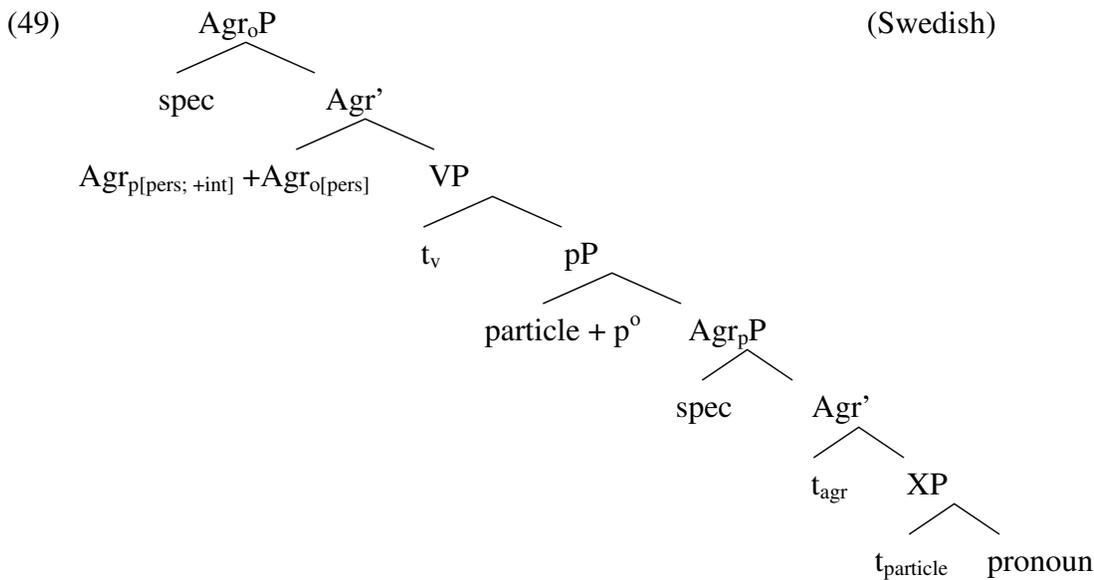
- (47) a. Jeg skrev **det** maske ikke op (Danish)  
I wrote it maybe not up  
*Maybe I did not write it up*
- b. De kastet **meg** ikke ut (Norwegian)  
they threw me not out  
*They did not throw me out*

The obligatory nature of pronoun movement in Danish and Norwegian implies that  $F^0_{[person]}$  is active, and attracts the pronoun to its domain. The fact that the pronoun is attracted to a position external to VP, as indicated by its pre-adverbial and pre-negation landing site, indicates that  $F^0_{[person]}$  here is associated with the accusative functional domain. Since Swedish accusative pronouns are similarly attracted by  $F^0_{[person]}$ , the difference between Swedish, which precludes attraction with particles, and Danish and Norwegian, which force attraction with particles, cannot be related to properties of accusative  $F^0_{[person]}$ . Accusative  $F^0_{[person]}$  in all three languages is active, and will attract pronominal material, in simple accusatives and in particle constructions.

The difference between Swedish and Danish/Norwegian can be understood, instead, in terms of the properties of [person] associated with the structure dominating the particle, [person] being [+interpretable] in Swedish and [-interpretable] in Danish and Norwegian. Following Den Dikken (1995), Svenonius (1996), and Collins & Thrainsson (1996), I assume that particles project functional structure in addition to the functional projections dominating VP. More specifically, pP and AgrP intervene between  $V^0$  and the particle and its complement. The pP projection is associated with particle raising (see Svenonius (1996) for particle movement) and  $Agr^0$  is specified for [person]. In Danish and Norwegian, [person] is [-interpretable] and an attractor.  $Agr^0_{[person, -int]}$  attracts the pronoun to its specifier, and subsequent attraction by  $Agr_{obj}$  (or  $v^0$ ) places the pronoun in spec  $Agr_oP$ :



The hypothesis that the difference between Swedish and Danish/Norwegian reduces to the interpretability of [person] within the particle domain correctly derives the absence of pronoun movement in Swedish. Assuming the same functional structure to dominate Swedish particles,  $Agr_p[person, +int]$  is not an attractor, hence the pronoun remains in-situ.  $Agr_{obj}$ , on the other, is identical to its Danish/Norwegian counterpart, and will attract pronominal material from below. The closest candidate is  $Agr_p[person, +int]$ . By Shortest Move,  $Agr_p$  is attracted to  $Agr_{obj}$ , leaving the pronoun behind in its base position:



In Swedish, then,  $Agr_{obj}$  attracts a phonetically null element,  $Agr_p[person]$ , while in Danish and Norwegian it is the overt pronoun which is attracted to  $Agr_{obj}$ , contingent upon its movement to spec  $Agr_p$ . As in the case of French *ne...que* constructions, non-attraction of the overt pronoun follows from the presence of a closer candidate, as determined by Shortest Move.

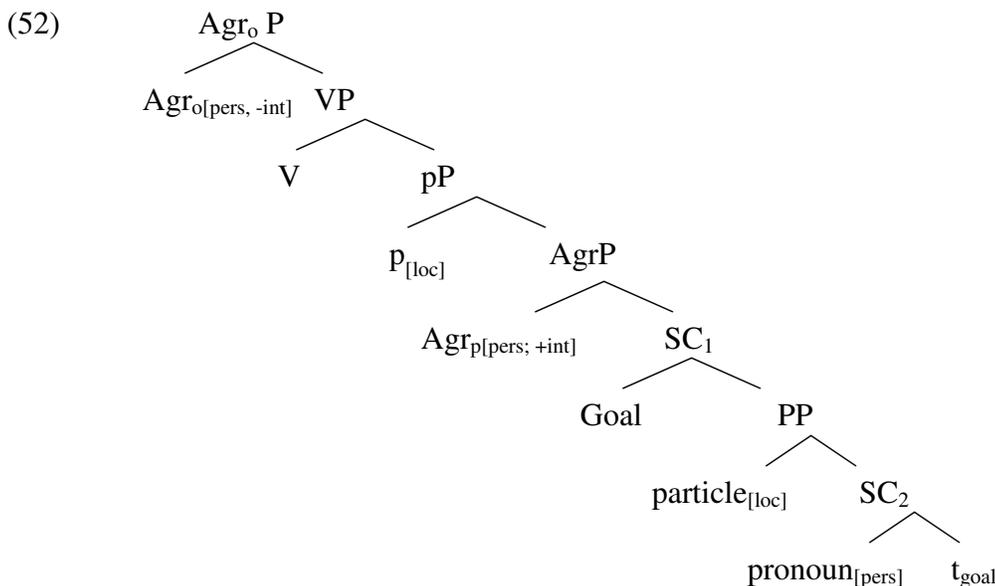
The analysis of Swedish particles may extend directly to dative constructions. Similar to particles and oblique prepositions, a Swedish dative also excludes attraction of an accusative pronoun to a VP-external position:

- (50) a. \*Jag gav **den** inte Elsa  
 I gave it not Elsa  
 b. Jag gav inte Elsa **den**  
 I gave not Elsa it  
*I did not give it to Elsa*

The relation between particle constructions and dative constructions is in fact expected, if, following Den Dikken (1995), datives contain hidden particles, and that ‘dative shift’ is to the specifier of that particle. The relative position of dative and particle is seen in (51), where the particle is overt:

- (51) a. John sent a package off to Bob  
 b. John sent Bob off a package

Assuming with Den Dikken (1995) that dative constructions contain a particle, combined with the functional structure projected by particles in (49), the complement of  $V^0$  will be a pP-AgrpP sequence dominating a small clause containing the dative goal, the hidden particle, and the accusative pronoun:



As in the particle constructions discussed above,  $Agr_{obj}$  attracts a [person] feature from below. Since  $Agr_p[person, +int]$  is not an attractor, the accusative pronoun remains in its base position within the small clause, and [person] in  $Agr_{obj}$  is checked by  $Agr_p[person, +int]$ , closer to  $Agr_{obj}$  than the pronoun.

#### 4.5 Ne...que and except phrases

Where French pronouns need not double, Standard Arabic pronouns need not raise. Recall that a French invariant pronoun need not double in *ne...que* constructions, repeated in (53).

- (53) a. Marie n'aime que **moi**  
 Marie neg loves than me  
*Marie loves only me*  
 b. Marie connaît mieux Jean que **moi**  
*Marie knows Jean better than me*

A similar restriction is imposed on Standard Arabic pronoun movement. Independent pronouns are impossible as simple accusatives, as in (54).  $F^0_{[person]}$  in the accusative domain attracts the pronoun, resulting in a post-verbal clitic, parallel to pronoun movement in Italian and Swedish, and to rich inflection in Welsh (all Standard Arabic examples from Fassi Fehri (1993)):

- (54) a. \*raʔay-tu ʔiyyaa-ka  
           saw-I    you  
       b. raʔay-tu-ka  
           saw-I-you  
           *I saw you*

Object cliticization is blocked in a variety of contexts, and what surfaces instead is a morphologically independent pronoun, which I take to be a realization of non-attracted  $Num^0$ .<sup>12</sup> Unsurprisingly, an independent pronoun is licensed in ‘except phrases’:

- (55) a. maa raʔay-tu ʔillaa ʔiyyaa-ka  
           not saw-I    except you.acc  
           *I saw only you*  
       b. \*maa raʔay-tu-ka ʔillaa  
           not saw-I-you except

Following the analysis given above for absence of doubling in French, the transitivity of *see* implies the presence of an attracting  $F^0_{[person]}$  in the accusative domain. Continuing to assume that the complement of  $V^0$  is a pronoun equivalent to *nobody*. PF deletion, licensed by recoverability in the context of ‘except DP’, enables  $[person]$  of *nobody*, the closest candidate, to be attracted by  $F^0_{[person]}$ , as all residual material is removed (Lasnik (1999)). Therefore, the overt pronoun complement of *except* is not attracted and remains in its base position.

Like Welsh, Standard Arabic shows very clearly that pronoun movement is affected by syntactic environment, and more significantly, that a non-attracted pronoun may surface in its base position. Again, given the grammaticality of (55a), it cannot be properties of the pronoun which exclude the accusative independent pronoun in (54a), just as it cannot be properties of French *moi* alone which require doubling in simple accusatives, and exclude it in *ne...que* constructions. Standard Arabic  $Num^0$ , then, is identical to Welsh  $Num^0$ , and is specified for a feature, which upon checking with merged pronominal material has no checking needs of its own. It may raise or stay in-situ, depending on the syntax of  $F^0_{[person]}$ .

Independent pronouns of the Welsh and Standard Arabic variety occur in base position, but need not be stressed, conjoined, or modified, on a par with Swedish and Italian non-attracted pronouns. And like Swedish and Italian non-attracted pronouns, they appear to be neither weak nor strong in the terminology of Cardinaletti & Starke (1999). An independent pronoun in object position may indeed be conjoined:

- (56) a. raʔay-tu [ʔiyyaa-ka wa zayd-an]  
           saw-I    you           and zayd-acc.  
       b. \*raʔay-tu-ka wa zayd-an  
           saw-I-you   and zayd-acc.

Given the Coordinate Structure Constraint, the ungrammaticality of object cliticization from a coordinate structure, analyzed as  $Num^0$  extraction, is expected. As in ‘except phrases’,  $Num^0$  is licensed in-situ, and

<sup>12</sup> Recall that NP pronouns in Standard Arabic are always doubled by inflection, while the independent pronoun alternates with inflection, exactly as in Welsh.

surfaces in-situ, as an independent pronoun. Recalling that conjoinability is associated exclusively with strong pronouns, (56) shows that independent pronouns may bear the hallmarks of strength. However, from the mutually exclusive perspective of Cardinaletti & Starke the possibility of a conjoined independent pronoun is surprising. Recall that doubled pronouns in Standard Arabic necessarily bear the hallmarks of strength. Independent pronouns would thus appear to constitute a second class of strong pronouns, but this is impossible on the logic of Minimize Structure which requires there to be exactly one type of pronoun compatible with the expression; i.e. how could Minimize Structure select among distinct strong pronouns, the doubled variety, and the non-doubled independent pronoun? Crucially, the treatment of independent pronouns and doubled pronouns as distinct strong forms misses the generalization that these pronouns are in complementary distribution, and that this complementarity correlates with attraction, doubled pronouns being limited to contexts of attraction. Incorporating the syntax of an attractor, it could perhaps be claimed that strong pronouns necessarily surface in contexts of non-attraction (a weak pronoun would have nowhere to go). This still leaves unexplained the existence of distinct pronominal forms, and their correlation with Num<sup>o</sup> attraction.

On the approach pursued here the conjunction of an independent pronoun poses no special problem, as pronominal forms are not inherently characterized as weak or strong; a non-attracted pronoun need not be neither exclusively weak, nor exclusively strong. The appearance of properties indicative of strength on independent pronouns undermines such an inherent characterization, and suggests instead that these criteria distinguish among positions: pronouns in-situ have properties associated with strength, and pronouns in derived position have the set of properties associated with clitics and weak pronouns<sup>13</sup>.

## 5 Conclusions

Languages with rich inflectional / pronominal systems, such as Welsh, Breton, Standard Arabic, and French, provide direct evidence for a syntactic relation between invariant pronouns and a functional head, in the form of obligatory doubling by a clitic or rich inflection. The observation that doubled pronouns exhibit the hallmarks of pronominal strength implies that all pronouns, and not only those of the ‘weak’ variety, are implicated in a relation to a functional head, removing the strongest argument for a Greed approach to movement. If all pronouns are syntactically related to a functional head, it can no longer be the deficiency of weak pronouns which exclusively triggers their movement. The significance of the syntax of an attractor, F<sup>o</sup><sub>[person]</sub> is clearly seen in contexts in which pronouns neither raise nor double, such as gapping constructions, complements of oblique prepositions, particle and dative constructions, and ‘except’ phrases. These show, first, that some pronouns which may appear in derived position are perfectly grammatical in-situ, unexpected on a Greed approach. Furthermore, the similarity of contexts in which pronouns previously analyzed as ‘strong’ need not double and pronouns previously analyzed as ‘weak’ need not raise, confirms the hypothesis that these processes have a common source, attraction by F<sup>o</sup><sub>[person]</sub>. In some contexts, it is argued, pronouns fail to raise or double due to absence of F<sup>o</sup><sub>[person]</sub>, and in others due to the presence of a closer candidate as determined by Shortest Move.

The conclusion that even the recalcitrant case of pronoun movement is better understood in terms of attraction provides significant empirical evidence in favor of movement as attraction by a feature of a functional head. The analysis brings pronominal syntax into the fold of Wh-movement and NP-movement, a desirable result from the perspective of economy considerations, as the theory of movement based on

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<sup>13</sup> Assuming that Cardinaletti & Starke (1999) are correct to correlate these properties with the amount of containing structure, the contrast between pronouns in-situ and pronouns in derived position may follow from the trajectory of pronoun movement. A pronoun in derived position may indeed be dominated by less functional material than a pronoun in-situ, as in Koopman’s (1999) analysis of pronoun movement as NumP extraction from a larger DP. On this analysis, a pronoun in-situ is dominated by a full DP structure, and a raised pronoun is a NumP.

attraction reduces computational complexity in the course of the derivation, compared with the earlier Greed-based approach to movement. Furthermore, attraction by  $F^0_{[person]}$  integrates the pronominal systems of Germanic and Romance with those of Celtic and Semitic varieties, and limit the locus of parametric variation to properties of  $Num^0$ . While attraction by  $F^0_{[person]}$  is universal, languages may differ in the morpho-syntax they assign to  $Num^0$ , inert in Romance and active in Welsh and Standard Arabic.

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