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- the central point of Cardinaletti & Starke's work: defending a **THREE-WAY TYPOLOGY** of pronouns based on **deficiency**

	DEFICIENCY	POSITION	EXAMPLE (ITALIAN)
STRONG	non-deficient	phrasal, θ	*a lui* 'to him', *a loro* 'to them'
WEAK	deficient	phrasal, non-θ	*loro* 'to.them'
CLITIC	deficient	non-phrasal, non-θ (head)	*gli* 'to.him'

NB though this is primarily a typology for *overt* pronominal elements, there is a natural home in it for *pro*, the null pronoun: Rizzi (1986) argues that *pro* must be licensed in a derived (i.e., non-θ) phrasal position (SpecIP for subject-*pro*; the corresponding position for object-*pro*)

- the Italian data in (1)–(2) will serve as a baseline for the discussion of the typology of pronouns
  - the third person singular masculine dative pronoun can be in P3 (with *a*) or P1 (alone)
  - the third person plural dative pronoun can be in P3 (with *a*) or P2 (alone)

		P1		P2		P3
(1)	a.	non	diró	mai	tutto	*a lui*
		not	I.will.say	never	everything	to him
	b.	non *gli*	diró	mai	tutto	
		not to.him	I.will.say	never	everything	
		both: 'I will never tell him everything'				
(2)	a.	non	diró	mai	tutto	*(*a*) *loro*
		not	I.will.say	never	everything	to them
	b.	non	diró	mai (*a*) *loro*	tutto	
		not	I.will.say	never to.them	everything	
		both: 'I will never tell them everything'				

→ in (1) the form of the 3M.SG dative pronoun is clearly different depending on where it occurs

→ in (2), although *loro* looks the same in the two positions, the distribution of *a* differentiates

- apart from their **morphological** signatures, the forms *a lui* and *a loro* in (1) and (2) have **semantic** and **syntactic** properties not shared with *gli* and 'bare' *loro*

(i) *a lui* and *a loro* occur in their **θ-positions**; *gli* and 'bare' *loro* do not (already illustrated)

(ii) *a lui* and *a loro* can only refer to **humans**; *gli* and 'bare' *loro* are more versatile: see (3)

(3) a. non metteró mai il cappuccio *a loro*
not I.will.put never the cap/top to them
'I will never put the cap on them' → 'them' = 'these people'
↛ 'them' = 'these pens'

b. non metteró mai *loro* il cappuccio
not I.will.put never to.them the cap/top
'I will never put the cap on them' → 'them' = 'these people'
→ 'them' = 'these pens'

(iii) *a lui* and *a loro* can be terms in a **conjunction** structure; *gli* and 'bare' *loro* cannot: (4)

(4) a. non metteró mai il cappuccio *a loro* e *a loro*/*a quelle altre*
not I.will.put never the cap/top to them & to them/to those others
b. *non metteró mai *loro* e *loro* il cappuccio
not I.will.put never to.them & to.them the cap/top

(iv) *a lui* and *a loro* can be **modified** by **focus** particles; *gli* and 'bare' *loro* cannot: see (5)

(5) a. non metteró mai il cappuccio <u>anche</u>/<u>solo</u> *a loro*
not I.will.put never the cap/top also/only to them
b. *non metteró mai <u>anche</u>/<u>solo</u> *loro* il cappuccio
not I.will.put never also/only to.them the cap/top

- **prosodically** as well, *a lui* and *a loro* are different from *gli* and 'bare' *loro* — and we may be tempted to relate this directly to *(iv)*, above: the fact that *a lui*/*a loro* but not *gli*/*loro* can be modified by focus particles

→ but here we need to use caution:

– it is true that *a lui*/*a loro* can be prosodically prominent and contrastive; indeed, they typically are

– but it is <u>not</u> true that *gli*/*loro* can never be prosodically prominent: placing phrasal stress on 'bare' *loro* is entirely possible (6); even the French clitic *le* (whose vowel is a schwa) can be the locus of phrasal stress under the right circumstances (7)

(6) non parleró mai *<u>lo</u>ro*
not I.will.talk never to.them

(7) mais regarde-*<u>le</u>*!
but look.at-him

→ so we should not use prosodic strength as a diagnostic for the status of a particular pronoun

→ but there are some prosodic properties that can be adduced as diagnostics — in French, for instance, the distribution of **liaison**: (8)

(8) a. elles[z] ont dit la vérité
they.LIAISON have said the truth
b. quand elles[*z] ont-elles dit la vérité?
when they.LIAISON have-they said the truth

• note that in (8b), the free-standing pronoun *elles* (not subject to liaison) **co-occurs** with a pronoun *elles* contracted onto the auxiliary *ont* — a case of **doubling**

→ doubling provides us with another diagnostic for telling types of pronouns apart — but here the cut is made specifically between **clitics** and other pronominal elements: only clitics can be doubled; what doubles them can be a weak pronoun, a strong pronoun or a full nominal

(9) a. gliel' ho dato loro
to.him-it I.have given to.them
b. gliel' ho dato a loro/ai bambini
to.him-it I.have given to them/to.the children
c. *l' ho dato loro a loro/ai bambini
it I.have given to.them to them/to.the children

Q **what underlies the difference in deficiency between pronominal elements?**

→ Cardinaletti & Starke's answer: **morphological complexity** — the **more deficient** an element is, the **fewer morphemes** it consists of

→ though, by Cardinaletti & Starke's own admission, 'the vast majority of known <weak; strong> pairs are homophonous', pairs can be found in which the strong element is discernibly richer than the deficient one

→ for <strong; clitic> pairs as well, a difference in morphological complexity can be observed in some cases

→ note that the examples in (10) (all taken from Cardinaletti & Starke's work, *q.v.* for references to the source literature) fail to illustrate a three-way complexity scale — in particular, the hypothesis that weak pronouns are morphologically more complex than corresponding clitics is not borne out by any of the examples

			STRONG		DEFICIENT	
(10)	a.	Italian	*a loro*	~	*loro*	(WEAK)
	b.	Senigalliese	*malu*	~	*lu*/*l'*	(CLITIC)
	c.	Slovak	*jeho*, *jemu*	~	*ho*, *mu*	(CLITIC)
	d.	Serbo-Croatian	*njega*	~	*ga*	(CLITIC)
	e.	Spanish	*ellos*	~	*los*	(CLITIC)
	f.	German	*ihn*	~	*'n*	(CLITIC)

- Cardinaletti & Starke: the 'extra' element occurring in the left-hand examples in (10) is a **'dummy' support morpheme**, present for syntactic reasons

→ they take the important step of providing a **syntactic translation** of the morphological complexity differential

  – the element differentiating between strong and weak pronouns (*a* in Italian (10a)) is a nominal COMPLEMENTISER, C_n, topping off the extended projection of N

  – the element differentiating between weak pronouns and clitics (*je* in Slovak (10c), *nje* in S-C (10d)) is a POLARITY PARTICLE, alternating (both in the nominal and in the verbal domain) with a negation particle — the manifestation of a functional head for POLARITY, Σ, in between N and C

(11) a. *ga* *njega* *nikoga* (Serbo-Croatian)
him(CLITIC) him(STRONG) nobody
b. *sam* *jesam* *nisam*
is(CLITIC) is(STRONG) isn't

(12) a. $[_{CP}\ C_n\ [_{\Sigma P}\ \Sigma_n\ [_{IP}\ I_n\ [_{NP}\ N]]]]$
b. $[_{CP}\ C_v\ [_{\Sigma P}\ \Sigma_v\ [_{IP}\ I_v\ [_{VP}\ V]]]]$

→ Cardinaletti & Starke: 'Σ may be taken to be the locus of prosody-related features' (prosodic *focus*) of the lexical head — (negative) polarity and (affirmative) focus are two sides of the same coin

- the **syntactic translation** of the three-way typology of pronominal elements is now in place

STRONG	$[_{CP}\ C_n$	$[_{\Sigma P}\ \Sigma_n$	$[_{IP}\ I_n$	$[_{NP}\ N\ ]]]]$
WEAK		$[_{\Sigma P}\ \Sigma_n$	$[_{IP}\ I_n$	$[_{NP}\ N\ ]]]$
CLITIC			$[_{IP}\ I_n$	$[_{NP}\ N\ ]]$

NB there is a logical possibility afforded by the syntax which, in Cardinaletti & Starke's typology, does not give rise to a fourth type of pronominal element: 'bare' NP (but see Déchaine & Wiltschko 2002; session 3)

→ 'bare' NPs arguably do exist (at least in certain syntactic positions: esp. in object positions), giving rise to **noun incorporation** in polysynthetic languages (and 'pseudo noun incorporation' in other languages: cf. Hungarian *újságot olvas* 'newspaper.ACC reads')

→ pronominal elements never appear to be the targets of incorporation — unless (certain cases of) **agreement inflection** can be treated in terms of pronominal incorporation (a thought that we will return to in session 3, in the context of Déchaine & Wiltschko's 2002 work)

- this in essence completes the summary of Cardinaletti & Starke's proposal

- a few notes on individual aspects of Cardinaletti & Starke's syntactic analysis of the typology of pronouns

(a) Cardinaletti & Starke follow the bulk of the literature on CLITICS in treating them as being attached to a (functional) head

→ they derive the requirement that clitics attach to a functional head as follows:
  – the clitic must associate with prosodic features
  – the locus of prosodic features is Σ
  – since the clitic does not have a Σ in its own extended projection, it must establish a local relation with a Σ in the extended projection of V
  – for Case reasons, the clitic must undergo phrasal movement into the specifier position of a Case-licensing head in the extended projection of V
  – in order for the clitic to be able to satisfy both requirements (i.e., locally associating to Σ *and* establishing a Spec–Head relationship with a Case-licensing head, both in the extended projection of V), the clitic must undergo a two-step movement derivation:
    (i) phrasal movement of IP_n into the Case-licensing position
    (ii) head movement of the clitic (I_n) to Σ

NB Cardinaletti & Starke assert that the clitic actually has a choice, in principle, regarding the host head to which it attaches: either Σ or V (the latter because V, a lexical head, has all the features that are shared between the lexical head and the functional heads in its extended projection)

→ this is heralded as a positive result, there being both high ('second-position', 'Wackernagel') clitics and V-attached ('adverbal') clitics

→ but in reality, the two-step derivation laid out above (first, phrasal movement to a Case-licensing specifier position outside VP; second, head movement to an appropriate host providing prosodic features) can only materialise if the host of head movement is outside VP — i.e., <u>not</u> the verb itself

→ independently, Kayne (1991) has argued that clitics (in Romance, and, by hypothesis, universally) can only be hosted by functional heads

(b) Cardinaletti & Starke treat the element *a* that differentiates between STRONG *a loro* and WEAK *loro* in Italian as the exponent of the functional head C_n in the extended projection of the noun

→ elsewhere in Italian (and Romance, more generally), *a* serves as a preposition

→ from this, we could conclude either of two things:
  – prepositions are (uniformly) heads in the extended projection of lexical heads (N in the case of *è andato <u>a</u> Parigi* '(s)he went to Paris'; V in the case of *ha provato <u>a</u> farlo* '(s)he tried to do it'), not lexical heads themselves (see Grimshaw 1991, 1997)
  – (certain) prepositions are ambiguous, in principle, between a lexical head (P) and construal as a functional head in the extended projection of a lexical head (N or V)

→ my preference is for the second of these options

- that P-elements (incl. (the translation equivalents of) *to*) can be lexical is shown by the fact that they can have full-fledged extended projections of their own (Den Dikken 2010, 'On the functional structure of locative and directional PPs', in Cinque & Rizzi (eds), *Mapping spatial PPs*, Oxford: Oxford University Press, 74–126)
- that some of the same P-elements can do double duty as functional heads is clear from their role as infinitival markers (English *to*), complementisers (English *for*), and copular elements (*that idiot of a doctor*; *she took me for a doctor*)
- many P-elements are consistently lexical (esp. the more complex ones, such as *upon* and *between*); a small subset of P-elements may be consistently functional (*of* in present-day English and *van* in present-day Dutch are good candidates)

NB Cardinaletti & Starke must assume the existence of a null allomorph of the exponent of C_n — e.g., STRONG **nominative** pronouns in Italian are never marked with *a*; but the properties associated with C_n (humanness, an index and a range; see below) are nonetheless applicable in the case of *a*-less strong pronouns

→ C_n is **always projected** in the syntax of STRONG pronouns, its exponence subject to variation

(c) Cardinaletti & Starke derive from the status of the 'dummy' *a* (and their ilk) as C_n-elements the fact that (pro)nominal expressions marked with the 'dummy' *a* can only refer to **humans**, and have an **index** and a **range** associated with them

→ they associate all three of these properties with C_n; of these three properties, **range** is argued to be key

→ STRONG pronouns have their own range assigned to them, and as a consequence, they can refer to entities in the extra-linguistic universe by themselves, without having to be coreferent with an antecedent prominent in the discourse

→ WEAK pronouns and CLITICS, by contrast, lack a range of their own, and can only be referential by being linked to a referential antecedent prominent in the discourse ('specificity', 'continuing topic'); when they are not so linked, they are **impersonal** or **expletive** elements (roles that STRONG pronouns cannot play, due to the fact that they always have a range)

→ Cardinaletti & Starke: '*not being associated to a range* seems to be the appropriate formulation of *being referentially deficient*'; 'having an index implies having a range'

→ [+**human**] is the **default range** (thus, *the rich*/*poor* can only refer to humans)

NB Cardinaletti & Starke's decision to associate **range** exclusively with $\mathbf{C_n}$ is questionable in light of the fact that in common-noun phrases, range is clearly the province of the nominal root, not of the highest functional head in the root's extended projection: *the men* ranges over male humans and *the women* over female humans, as a function of the lexical properties of the roots *man* and *woman*, not the exponent of C_n, the definite determiner *the*

(d) Cardinaletti & Starke house **Case** (for nominals) in C_n

→ STRONG pronouns, like full nominals, have Case in their own extended projection, hence do not need to move for Case reasons

→ WEAK pronouns and CLITIC pronouns lack CP, hence 'must undergo some process allowing them to be associated to the functional case-feature' — and for CLITICS, the location of the projection in which Case is associated to them must be low enough to allow them to subsequently attach to Σ (something which has non-trivial consequences for the syntax of nominative Case, not explored by in the paper, which says very little about the nominative)

(e) Cardinaletti & Starke blame the ban on **coordination** of deficient pronouns on the absence of CP in their extended projections

- either coordination is strictly the privilege of CPs (a claim attributed to Wilder 1994)
- or coordination of pronouns smaller than CP deprives such pronouns of the chance to establish a local relation with a Case-licensing head under Spec–Head agreement: in a syntax in which [$_{\&P}$ XP [& YP]] finds itself in the specifier of a Case-licensing head, it is &P as a whole that is in a Spec–Head relation with that head; neither of the two coordinated terms (XP and YP) is itself in such a relation with the head

→ the latter is technically correct, and indeed, when XP and YP are singular nominals and &P serves as the subject of a finite clause, we find plural agreement on V in English: *Mary and John are*/**is smart*

→ but the matter is complicated by the fact that not all languages consistently give rise to cumulative plural agreement, not even for preverbal subjects (Hungarian *Mari és János Amszterdamban van*) — and with postverbal subjects, closest conjunct agreement is in fact very common cross-linguistically (even in English: *there is a man and a woman in the room* — Munn 1993:94 gives the version of this example with *are* a full star)

→ if closest conjunct agreement is (as its name suggests) an agreement relationship between a φ-checking F-head and just one of the terms in the coordinate structure, it should be possible to coordinate WEAK pronouns precisely in environments of closest conjunct agreement

(f) Cardinaletti & Starke do not talk about ***wh*-pronouns** — how do these pronouns fit into their typology?

→ 'bare' *wh*-pronouns can be coordinated (*who or what did you see?*), which suggests that they are STRONG pronouns

→ yet 'bare' *wh*-pronouns are legitimate in *there*-existentials (*who*/**which student is there in the room?*), which suggests (in light of the fact that expressions that must be as large as C_nP are generally barred from these constructions: **there is the student*/*every student in the room*) that 'bare' *wh*-pronouns are smaller than C_nP

☹ being STRONG yet being smaller than C_nP is a direct contradiction for Cardinaletti & Starke

NB note also that because of the absence of the C_nP layer from the syntax of 'bare' *wh*-pronouns, the WH-morpheme cannot be treated as an exponent of C_n and the range of the 'bare' *wh*-pronoun cannot be housed under C_n

→ the fact that English *who*, Dutch *wie* and German *wer* range exclusively over humans seems, impressionistically, to go along with the fact that [+human] range is marked lower than C_n (cf. *you*, *'ie* and *er*, likewise [+human] — though the Dutch pronoun *'ie* is less strict)

(g) Cardinaletti & Starke relate the division of labour between the three members of the typology of pronominal elements to an **economy** constraint: **Minimise Structure**

→ since *pro* is included in the typology (as a WEAK pronoun), the Avoid Pronoun Principle (giving preference to silence whenever possible) is subsumed by this constraint — but interestingly, only partially:
- given a choice between a STRONG pronoun and *pro*, the latter must be chosen because *pro* is structurally smaller than a STRONG pronoun
- given a choice between an *overt* WEAK pronoun and *pro*, Minimise Structure leaves open which of the two should be chosen — correctly, for (13)

(13) a. Gianni$_i$ partirà quando ***pro***$_i$ avrà finito il lavoro
b. Gianni$_i$ partirà quando **egli**$_i$ avrà finito il lavoro
Gianni will.leave when (he) will.have finished the work

NB Cardinaletti & Starke do not explicitly illustrate what Minimise Structure dictates when there is a choice between an *overt* CLITIC and *pro* — the prediction here seems categorical (viz., the overt CLITIC should be chosen because it has less structure than *pro*, a WEAK pronoun) and counterintuitive (certainly from the perspective of Avoid Pronoun), but I do not have data at my disposal to (dis)prove the prediction at this time

(h) Cardinaletti & Starke represent the complexity differences between STRONG, WEAK and CLITIC pronouns in terms of **deletion** of structure (what used to be called 'pruning')

→ 'only strong elements are ever generated in base', hence the weaker elements must result from removing layers of structure from the strong elements

→ Cardinaletti & Starke formulate a version of the Projection Principle which ensures that only STRONG elements can be generated in the base: 'all information contained at level R must be present at level R+n'; no information can be *added* — this is what, in much later work, Chomsky has called the **Inclusiveness Condition**

→ an option not considered by Cardinaletti & Starke is the possibility that STRONG, WEAK and CLITIC pronouns are not in a syntactic relationship of reduction (via deletion) but are independently larger or smaller than the others — i.e., rather than deleting parts of the structure of a STRONG pronoun to obtain a WEAK/CLITIC pronoun, the different sizes of pronouns can all, independently, be part of syntactic base structures

→ one could consider ruling this option out by stipulating that only full CPs (not extended projections that do not reach all the way up to CP) are legitimate as arguments (i.e., can occur in θ-positions), with clausal and nominal arguments smaller than CP (WEAK/CLITIC pronouns; 'ECM' and small clauses) being 'pruned' or 'exfoliated' (Pesetsky) — but for *verbal* CPs, it is not in fact obvious that they can occur in θ-positions in the first place (see clausal prolepsis) whereas for clausal units smaller than CP it seems fairly clear that they can serve as arguments (*they consider her to be smart*, *they heard her whistle*)

→ I consider it an open question whether the typology of pronoun size is the result of deletion of structure (based on the syntax of a STRONG pronoun) or of non-merger of structure

(i) Cardinaletti & Starke close by pointing out that the typology of strength that they established for pronouns is **not unique to pronouns** — illustrating the point with reference to **adverbial modifiers**

→ particularly interesting in this connection is the observation that in Senigalliese, **the same 'dummy' support morpheme** that participates in the pronoun system to differentiate between STRONG pronouns and CLITICS (recall (10b)) also rears its head in the adverbial system

(10b) *malu ~ lu/l'* (Senigalliese)

(14) a. *maquà* 'here'
b. *malagiù* 'there'
c. *malì* 'there'

NB unfortunately, Cardinaletti & Starke do not illustrate whether the *ma*-marked forms in (14) have WEAK/CLITIC counterparts lacking *ma* (cf. standard Italian *ci* and French *y* 'there', both locative CLITIC elements)