

The Placement of Arabic Pronominal Clitics

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1 Parallel evaluation and syntax-prosody interaction

- (1) CLAIM FROM THE LITERATURE: (Prosody-syntax) mapping constraints can outrank syntactic constraints. Subclaims: either (i) they can freely intermingle (Büring 2001; Samek-Lodovici 2005; Dehé 2005), or (ii) the mapping block and the syntax block are freely rerankable with respect to each other but do not intermingle (Szendrői 2001).
 - The claim is interesting because it contradicts the view that syntax is insensitive to phonological concerns (PPFS) (Zwicky and Pullum 1986; Miller et al. 1997)
 - Three of the authors making the claim base it on rankings in which STAY is crucially implicated as the one syntactic constraint which can be subjugated to mapping constraints. Dehé's claim relies on the constraint NO PARTICLE PIED-PIPING, which is perhaps only a very specific version of STAY.
 - (2) Hungarian focus fronting (Szendrői 2001):
LEFT-ALIGN STRESS \gg STAY (M \gg S)
 - (3) German focus scrambling (Büring 2001):
FINALFOCUS \gg STAY (M \gg S)
 - (4) French object shift (Samek-Lodovici 2005):
 - a. EPP \gg ALIGN(I, R, HEAD(I), R) \gg STAY (S \gg M \gg S)
 - b. STRESS-XP, ALIGN(P, R, HEAD(P), R) \gg STAY \gg WRAP (M, M \gg S \gg M)
 - (5) English particle placement (Dehé 2005):
ALIGN(P, R, HEAD(P), R) \gg STRESS-XP \gg NPPP \gg ALIGN(I, R, HEAD(I), R)
(M \gg M \gg S \gg M)
 - Only anti-movement constraints seem to yield to mapping constraints, raises suspicion: Are the movements definitely syntactic, i.e., are there bound traces in the interpreted structure, or might these movements be purely phonological? After all, the proposed motivation for movement in each case is itself prosodic.
 - Chamorro (Chung 2003): The movement of weak pronouns (special clitics) can only be interpreted as being phonological. Most striking evidence is that these clitics can interrupt syntactic constituents in unexpected positions, from which it would (presumably) be impossible to properly bind a trace.

(6) Chamorro weak pronouns break up constituents (Chung 2003)

- a. Hayi hao na famalao'an gäi-che'lu?
which? *you* L women WH[NOM].AGR.have-sibling
'Which girls have you as a sibling?'
- b. Bunitu gui' na lahi pa'gu
handsome *he* L man now
'He was a good-looking man now.'

- Chung's analysis: weak pronouns encliticize to the first phonological phrase within their intonational phrase (even if that breaks up a syntactic constituent). The movement is not syntactic, leaves no traces.

(7) QUESTION: How much of what we have been assuming to be syntactic movement might in fact be phonological?

- Can't answer that question fully, but I will propose a p-movement analysis of Arabic pronominal clitic placement, which might otherwise have been treated as s-movement under the influence of mapping constraints
- I believe that the fundamentals of this analysis could be extended to reanalyses of the phenomena treated by Szendrői (2001), Büring (2001), Samek-Lodovici (2005), and Dehé (2005).
- The point is not that these authors are *wrong*, but that the argument for the claim in (1) should be based on more than just movement, unless there are sound diagnostics that the movement is syntactic. Burden of proof is on the less restrictive theory (theirs).

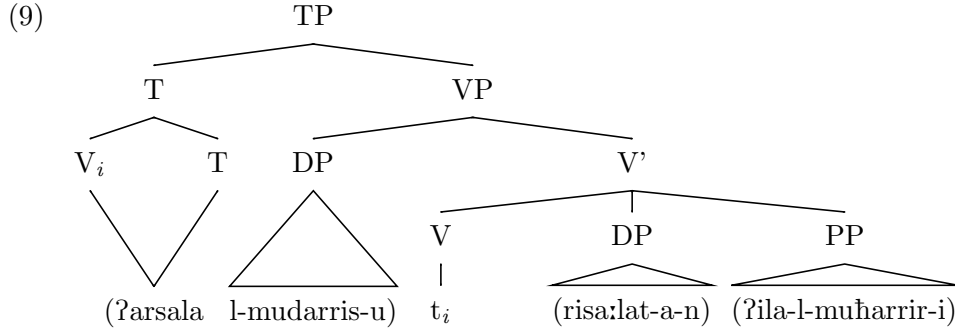
2 Basic word order facts

2.1 Full arguments only

- Relatively free order, default V-S-DO-IO.

- (8) a. ?arsala l-mudarris-u risa:lat-a-n ?ila-l-muharrir-i
sent DEF-teacher-NOM message-ACC-INDEF to-DEF-editor-GEN
'The teacher sent the message to the editor.' (V-S-DO-IO)
- b. ?arsala l-mudarris-u ?ila-l-muharrir-i risa:lat-a-n
sent DEF-teacher-NOM to-DEF-editor-GEN message-ACC-INDEF
(V-S-IO-DO)
- c. ?arsala risa:lat-a-n ?ila-l-muharrir-i l-mudarris-u
sent message-ACC-INDEF to-DEF-editor-GEN DEF-teacher-NOM
(V-DO-IO-S)

- In the absence of focus or topicalization, the verb is always clause-initial (moves to T, Mohammed (1988); Fassi Fehri (1989))



- Phonological phrasing: (VS)(O) (cf. Irish, McCloskey 1999)

2.2 Pronominal clitics

- **Accusative pronouns:** enclitics (typically to V or C, even if they have to move to get there)

(10) Verbal cliticization

- ?arsala-**ha:** l-mudarris-u ?ila-l-muħarrir-i
sent.3mss-3fsACC DEF-teacher-NOM to-DEF-editor-GEN
'The teacher sent it to the editor.'
- *?arsala l-mudarris-u-**ha:** ?ila-l-muħarrir-i
sent.3mss DEF-teacher-NOM-3fsACC to-DEF-editor-GEN
- *?arsala l-mudarris-u ?ila-l-muħarrir-i-**ha:**
sent.3mss DEF-teacher-NOM to-DEF-editor-GEN-3fsACC
- *?arsala l-mudarris-u **ha:** ?ila-l-muħarrir-i
sent.3mss DEF-teacher-NOM 3fsACC to-DEF-editor-GEN

- Some complementizers assign accusative case to the **subject**, force it to front (11a). Nominative pronouns generally pro-drop (11b), but accusative pronouns cannot (11c-11d)

(11) Complementizer cliticization

- lam ?ataşawwar ?anna **l-ħayart-a** sawfa tukađđibu l-i:
NEG.PST imagine.1ss C DEF-life-ACC FUT contradict.2fss to-1sgen
?umm-i: bi-ħa:đihi s-surʕat-i
mother-1sgen with-this DEF-speed-GEN
'I didn't imagine that life would so quickly prove to me that my mother was wrong.' (As-Saʕdāwi 1999:25)
- lan ?affala \emptyset đa:lika
NEG.FUT do.1ss *pro* that
'I won't do that.' (As-Saʕdāwi 1999:24)
- ?inna*(-**hu**) fay?-u-n mu?lim-u-n đjiddan
C-3mssACC thing-NOM-INDEF painful-NOM-INDEF very
'It's a very painful thing.' (As-Saʕdāwi 1999:57)
- li?anna*(-**ha:**) lam taʕud tu?limu-ni:
because-3fsACC NEG.PAST return.3fss hurt.3fss-1sACC
'Because she would no longer hurt me.' (As-Saʕdāwi 1999:16)

- Not agreement morphology: full DP and clitic are mutually exclusive

- (12) a. raʔay-tu(*-hu) Jumʔah
 saw-1sS(*-3msACC) Jumah
 ‘I saw Jumah’
- b. raʔay-tu-hu (*Jumʔah)
 saw-1sS-3msACC (*Jumah)
 ‘I saw him’

2.3 Relatively uncontroversial syntax

- Constraint ranking: FIN-MX, OB-HD \gg STAY (Cf. Grimshaw’s (1997) analysis of auxiliary movement in English)
- Movement is preferred to leaving the sentence without tense (13b), or to leaving T without any lexical item (13c)

- (13) V-to-T

	PAST(send(X, Y, to Z))	OB-HD	FIN-MX	STAY
a.				*
b.			*!	
c.		*!		

- Local assignment of accusative case may drive movement to Spec, T: LOCALCASE \gg STAY

(14) Subject to Spec, T

that(FUT(prove.wrong (life, my mother, to me)))		L-CASE	STAY
☞ a.			*
a.		*!	

- Same analysis applies to pronominal clitics

2.4 Relatively uncontroversial prosody

- When there is no clitic, the nearest argument integrates into a p-phrase with the verb, satisfying PRED at the cost of XP-L.
- PRED requires that the verb share its p-phrase with one of its arguments, while XP-L requires the left edge of each lexical XP to coincide with the left edge of a p-phrase¹.

(15) (VS)(O)

		PRED	XP-L
☞ a.	(?arsala l-mudarris-u) (risa:lat-a-n)		*
b.	(?arsala) (l-mudarris-u) (risa:lat-a-n)	*!	

¹And I assume that DP, being an extended NP (Grimshaw 2005), counts as lexical.

3 The dummy prosodic host

This is where it gets interesting.

Under certain conditions, accusative pronouns cliticize not to a verb or a complementizer, but instead to a dummy lexical item, *?iyya:*, which serves as prosodic host but has no meaning of its own.

3.1 Focus

- This happens most often when the object is placed under focus, either in situ (16a), or when fronted (17a)².

- (16) a. raʔa: muḥammad-u-n ?iyya:-ha:
saw.3msS Muhammad-NOM-INDEF *?iyya:-3fsACC*
'Muhammad saw [her]_{FOC}.'
- b. raʔa:-ha: muḥammad-u-n
saw.3msS-3fsACC Muhammad-NOM-INDEF
'Muhammad saw her.'
- (17) a. ?iyya:-ka naʔbudu wa-?iyya:-ka nastaʔinu
?iyya:-2msACC worship.1ps and-*?iyya:-2msACC* ask.for.help.1ps
'Thee do we worship and thee do we ask for help' (Qur'an 1:5).
- b. naʔbudu-ka wa-nastaʔinu-ka
worship.1ps-2msACC and-ask.for.help.1ps-2msACC
'We worship you and we ask you for help.'

- Criterion A (Zwicky and Pullum 1983): "Clitics can exhibit a low degree of selection with respect to their hosts, while affixes exhibit a high degree of selection with respect to their stems."
- The availability of a dummy prosodic host for object pronouns suggests that they are not highly selective, since the dummy host presumably has no syntactic features.

3.2 Conflicting hierarchies and differential coding

- Dummy host may also be employed as a marked form expressing a marked meaning in a ditransitive clause
- While it is possible to attach two clitics to a single verb, order is fixed according to a person hierarchy, such that 1st person precedes 2nd or 3rd, and 2nd precedes 3rd (Fischer 2002:144).
- At the same time, the clitic nearest the verb is always interpreted as the IO (morphologically identical to DO – both ACC). Call this the argument template: IO precedes DO.
- Unmarked case (18a): IO $>_{pers}$ DO (2 $>_{pers}$ 3), both cliticize to the verb
- Marked case (18b): IO $<_{pers}$ DO (3 $<_{pers}$ 2), conflict between person template and argument template, dummy host resolves conflict (both (18c) and (18d) are possible; see Fischer (2002:144))

²Incidentally, this is not an instance of topicalization, because topicalization, like all other A'-dependencies, requires resumptive pronouns in Arabic, not traces: *?anta, naʔbudu-ka* 'You (nom.), we worship you (acc).'

- (18) a. ʔaʔta:ka-ha:
 gave.3mss-2msACC-3fsACC
 ‘He gave her to you.’
- b. $*\text{ʔaʔta:ha:ka}$
 gave.3mss-3fsACC-2msACC
 Intended: ‘He gave you to her.’
- c. ʔaʔta:ha: ʔiyya:ka
 gave.3mss-3fsACC ʔiyya: -2msACC
 ‘He gave you to her.’
- d. ʔaʔta:ka ʔiyya:ha:
 gave.3mss-2msACC ʔiyya: -3fsACC
 ‘He gave you to her.’

- Reminiscent of other instances of differential coding analyzed in terms of hierarchy alignment (Aissen 1997, 2003): two hierarchies (here, morphological) impose potentially conflicting demands on the same structure
- Interesting literary example: **Resumptive pronoun** in relative clause of (19a) requires dummy host, because alternative would be to misalign the person and argument hierarchies; i.e., IO $<_{pers}$ DO.

- (19) a. sa-ʔu\theta bit-u li-t-ṭabi:ʔat-i ʔanna-ha: bi-r-ra\theta m-i min
 FUT-prove.1ss-IND to-DEF-nature-GEN that-3fsACC in-DEF-spite-GEN from
 ḏa:lika l-ḡasad-i ḏ-ḏaʔi:f-i llaḏi: ʔalbasat-ni: ʔiyya:-hu...
 this DEF-body-GEN DEF-weak-GEN REL.ms dressed.3fs-1sACC ʔiyya: -3msACC
 ‘I will prove to nature that in spite of this frail body which she dressed me in (it)... [I will prevail over her³]’ (As-Saʔdāwi 1999:22-23)
- b. $*\text{ʔalbasat-hu-ni:}$
 dressed.3fs-3msACC-1sACC
 Intended: ‘She dressed me in it’ (violates person template)
- c. ʔalbasat-ni:-hu
 dressed.3fs-1sACC-3msACC
 ‘She dressed it in me’ (more sensible meaning violates argument template)
- d. ʔalbasat-hu ʔiyya:ya
 dressed.3fs-3msACC ʔiyya: -1sACC
 ‘She dressed me in it’ (also possible)

3.3 Implications

The availability of the dummy host, particularly under focus, suggests that a phonological analysis of movement of the pronominal clitics may be the most sensible route in this case.

4 Why a purely syntactic account won’t work

- (At least) three possibilities:

³The word for ‘nature’ is feminine, and I have preserved that in the translation for the sake of clarity, though the author might not have intended such personification.

- (20) Duke-of-York rule application (Pullum 1976):
- a. Clitic moves to T along with verb (by rule)
 - b. Later, under focus, clitic moves back, gets a new prosodic host

- Problem: no evidence for the intermediate movement

- (21) Copy theory of movement (Chomsky 1993):
- a. Copy of clitic in T
 - b. Focus or the lack thereof determines which copy is spelled out.

- Problem: no evidence for the copy in T

- (22) Focus marking blocks movement:
- a. If not focus-marked, clitic moves to T by rule
 - b. If focus-marked, no movement

- Problem: focus-marking as a deterrent of syntactic movement undermines the supposed independence of syntax from prosody; i.e., this analysis implies an $M \gg S$ ranking where none is supposed to exist
- Zubizarreta's (1998) theory has this problem: accounting for focus shift in Minimalist framework forces her to define stress assignment in syntactic terms

5 Phonological movement of clitics?

- Parallel evaluation is unnecessary: the syntactic evaluation can precede the mapping evaluation
- Clitic movement violates *P-MV rather than STAY
- Principal problem with p-movement: locality. For now, we can assume that the moved element must remain within the intonational phrase in which it would otherwise have been located (Chung 2003).

5.1 Cliticization to the verb

- Syntax-prosody mapping constraints force p-movement of clitic
- Clitic is preferred over full DP to share p-phrase with verb; (b) violates XP-L
- Verb must share p-phrase with some argument; (c) violates PRED

(23) Clitic seeks out verb

TP		*[CL] _{PWd}	PRED	XP-L	*P-MV
☞ a.	(?arsala-ha:) (l-mudarris-u)				*
b.	(?arsala l-mudarris-u -ha:)			*!	
c.	(?arsala) (l-mudarris-u-ha:)		*!		
d.	(?arsala l-mudarris-u) (-ha:)	*!			

- Placement of clitics reflects a syntax-phonology mismatch (Halpern 1995), rather than the direct influence of prosody on syntax.

5.2 Movement blocked under focus

- Under focus, clitic can neither remain without a host in situ, nor undergo p-movement to cliticize to the verb. To prevent this, FOCUS PROMINENCE must outrank FULL-INT.
- Dummy host required as a bearer of focal prominence, since pronoun is not stressable, and since placing that prominence on the verb would be interpreted as simple sentential focus.⁴

(24) Focused object pronoun needs dummy

TP		H-I	FP	FULL-INT
☞ a.	(ra?at maryamun) (?iyyá:-hu)			*
b.	(ra?at-hu) (máryamun)		*!	
c.	(ra?át-hu maryamun)		*!	
d.	(ra?át-hu) (maryamun)	*!	*	
e.	(ra?at ?iyyá:-hu) (maryamun)	*!		*

⁴The ungrammaticality of (24b) as an expression of object focus is not fully formalized here, because Unidirectional OT is incapable of ruling out ambiguity (as opposed to Weak Bidirectional OT, which evaluates both form and meaning in pairs, recursively, allowing marked meanings to be paired with marked forms; Blutner 1999; Beaver and Lee 2003; Aissen 2003); i.e., (24c) should be able to ambiguously express either sentential focus or object focus. For now, I simply assume that this ambiguity results in a violation of FP.

- For Grimshaw (1997), FULL-INT is evaluated in the syntax (*do*-support violates it). Reasonable to assume instead that insertion of all lexical items, vacuous or otherwise, can wait until the mapping to phonology (Anderson 1992; Halle and Marantz 1993).
- Syntax does not impose a dummy host, since it has no access to prosodic information. Dummy is inserted to satisfy mapping constraints, in violation of FULL-INT.
- Unavailability of the dummy host under normal sentential focus: FULL-INT \gg *P-MV.

(25) No dummy under normal sentential focus ('Mary saw him')

TP		FULL-INT	*P-MV
<pre> TP / \ T VP / \ / \ V_i T DP V' / \ / \ / \ raʔat maryamun V D t_i -hu </pre>			
☞ a.	(raʔat-hu) (maryamun)		*
b.	(raʔat maryamun) (ʔiyya:-hu)	*!	

5.3 Conflicting hierarchies and differential coding

- Constraints enforcing hierarchical alignment within clitic groups are morphological, may as well be evaluated along with mapping constraints
- Insertion of dummy is preferable to violating person or argument template: PERS, ARG \gg FULL-INT

(26) Dummy for differential coding

TP		PERS	ARG	FULL-INT
<pre> TP / \ T VP / \ / \ V_i T D V' / \ / \ ʔalbasat Ø V D D t_i -ni: -hu </pre>				
☞ a.	(ʔalbasat-ni:) (ʔiyya:-hu)			*
b.	(ʔalbasat ʔiyya:-ya) (ʔiyya:-hu)			**!
c.	(ʔalbasat-ni:-hu)		*!	
d.	(ʔalbasat-hu-ni:)	*!		

5.4 Summary

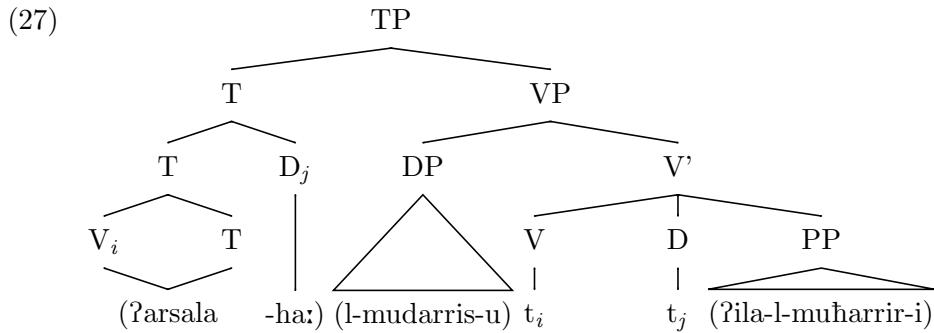
I have at least shown that a p-movement account of Arabic pronominal clitics is tenable. In fact, it may be that any movement forced by syntax-prosody mapping constraints is non-syntactic in nature. However, that is not to say that a syntactic movement account of the Arabic facts is impossible.

6 Syntactic movement of clitics?

M \gg S analysis is possible, although again the only S constraint ranked below M is STAY. Suspicious. Moreover, this theory is less restrictive. Burden of proof.

6.1 Clitics move to T

- Forcing the clitic to adjoin to T along with the verb requires a ranking of four constraints: $*[CL]_{PWd}$, PRED \gg XP-L \gg STAY (M, M \gg M \gg S).



(28) Clitic to T

	PAST(send(the teacher, it))	PRED	XP-L	STAY
a.				**
b.			*!	*

(29) Clitic needs a host

PAST(send(the teacher, it))		*[CL] _{PWd}	STAY
<p>a.</p>			*
<p>b.</p>	*!		

6.2 Focused objects

- FOCUS PROMINENCE, *[CL]_{PWd} ≫ FULL-INT ≫ STAY (M, M ≫ M ≫ S)

(30) Focused object pronoun needs dummy

PAST(see(Maryam, him _{FOC}))		FP	FULL-INT
<p>a.</p>			*
<p>b.</p>	*!		

- FULL-INT \gg STAY: dummy host is not available more generally

(31) No dummy under normal sentential focus

PAST(see(Maryam, him))		FULL-INT	STAY
<p>a.</p>			*
<p>b.</p>	*!		

6.3 Differential coding

- Here nothing changes: PERS, ARG \gg FULL-INT

(32) Dummy for differential coding

PAST(dress(she, me, in it))		PERS	ARG	FULL -INT
i.				*
ii.			*!	
iii.		*!		

6.4 Summary

- M \gg S analysis succeeds, but dispreferred on grounds of restrictiveness

7 Conclusion

- As illustrated, the Arabic facts can be accounted for with or without syntactic movement of pronominal clitics
- Burden of proof is on the less restrictive theory, i.e., that which claims mapping can affect syntax
- Arguments for M \gg S where S includes only anti-movement constraints are only strong if the movement involved is unquestionably syntactic

8 Constraint definitions

- (33) STAY (Grimshaw 1997): Trace is not allowed.
- (34) NO PARTICLE PIED-PIPING (Dehé 2005): Do not pied-pipe a verbal particle.
- (35) LEFT-ALIGN STRESS (Szendrői 2001:171)
 - a. Mark the leftmost phonological word in a phonological phrase by phrasal stress.
 - b. Mark the leftmost phonological phrase in the intonational phrase by main stress.
- (36) FINALFOCUS (Büiring 2001:5): Focus should be sentence final.
- (37) EPP (Grimshaw 1997): Clauses have subjects.
- (38) ALIGN(I, R, HEAD(I), R) (H-I) (Samek-Lodovici 2005): Align the right boundary of every intonational phrase with its head.
- (39) STRESS-XP (Truckenbrodt 1999; Samek-Lodovici 2005): Each lexically headed XP must contain a *phrasal stress* (where ‘phrasal stress’ refers to the head of a phonological phrase).
- (40) ALIGN(P, R, HEAD(P), R) (H-P) (Samek-Lodovici 2005): Align the right boundary of every phonological phrase with its head.
- (41) WRAP-XP (Truckenbrodt 1999): Each XP is contained in a phonological phrase.
- (42) FINITE-MATRIX (FIN-MX): Matrix clauses must be finite.
- (43) OBLIGATORY HEADS (OB-HD)(Grimshaw 1997): A projection has a head [and trace counts as a head – DT].
- (44) LOCAL CASE: Case is assigned to a complement or the specifier of a complement.
- (45) PRED (Büiring 2001): A predicate shares its phonological phrase⁵ with at least one of its arguments.
- (46) ALIGN(XP, L, P, L) (XP-L) (Selkirk 1995): The left edge of a lexical maximal projection should be aligned with the left edge of a phonological phrase.
- (47) *P-MV: A linearized structure should directly mirror the constituent structure it interprets.
- (48) *[CL]_{PWD}: A clitic cannot be the sole member of a prosodic word.
- (49) FOCUS PROMINENCE (FP) (Büiring 2001): Focus is most prominent.
- (50) FULL INTERPRETATION (FULL-INT) (Grimshaw 1997): Lexical conceptual structure is parsed [i.e., ‘no semantically vacuous lexical items’ – DT].
- (51) PERSON TEMPLATE (PERS-TEMP): Clitics are attached to a verb according to the person hierarchy $1 < 2 < 3$.
- (52) ARGUMENT TEMPLATE (ARG-TEMP): Clitics are attached to a verb according to the argument hierarchy $IO < DO$.

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⁵Büiring uses the term ‘accentual domain’ rather than phonological phrase.

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