Canadian Journal of Linguistics/Revue canadienne de linguistique 59(2): 201–234, 2014

On the D-linked character of genitive interrogatives in Iraqi Arabic

LAURA ANDREEA STERIAN
University of Edinburgh

1. INTRODUCTION

This article focuses on the properties of genitive interrogatives in Iraqi Arabic. In particular, I attempt to account for both the contrast between bare interrogatives and genitive interrogatives, and the parallel between genitive interrogatives and D-linked interrogatives.

1.1 D-linking

Pesetsky (1987) notes a difference in the behaviour of interrogative expressions such as *who*, *what*, and the behaviour of *which*-phrase interrogative expressions. Given the peculiar behaviour of *which*-phrases, Pesetsky refers to them as D-linked (for Discourse-linked); he notes that with *which*-phrases, the set of felicitous answers is limited to the set of objects which both speaker and hearer have in mind. It is in this sense that *which*-phrases are discourse-linked. However, no such requirement is imposed on bare interrogative expressions such as *who*, *what* or *how many*. Pesetsky (1987) notes that *which*-phrases seem to function pronominally in that they are "familiar" rather than novel. To exemplify this, Pesetsky (1987:120) gives the examples in (1).

(1) a. Some men entered the room. Mary talked to *them*.
b. Some men entered the room. *Which ones* did Mary talk to?
c. Some men entered the room. *Whom* did Mary talk to?

Pesetsky's interpretation of (1) is as follows: "In (66b) [1b] it is natural, almost obligatory, to assume that the question is asking for a choice among the men who entered the room. In (66c) [1c] considerations of textual connectedness make this assumption possible but much less natural" (p. 120). There are two more notable differences in the behaviour of bare interrogative expressions and D-linked ones: Superiority effects appear with bare interrogative expressions and disappear with D-linked ones (Pesetsky 1987, 2000; Aoun et al. 2003; Boeckx 2003); cross-linguistically, resumptive elements are observed to occur with D-linked interrogative expressions, rather than with bare interrogatives (Sharvit 1999; Aoun et al. 2001; Boeckx 2003; Guilliot and Malkawi 2006, 2009; Malkawi 2009; Rouveret 2011).

1.2 Superiority effects

Superiority effects arise in contexts where two interrogative expressions are contained in the same clause. The Superiority Condition (Chomsky 1968:246) as stated in (2) is an attempt to account for the contrast between the well formed (3) and ill formed (4).

(2) *Superiority Condition*:
No rule can involve X and Y in the structure ... X ... [... Z ... Y ...] ... where the rule could also apply to X and Z , and Z is superior to Y (Z is superior to Y if Z c-commands Y)

(3) a. Who saw what?
b. I wonder who saw what.

(4) a.*What did who see?
b.*I wonder what who saw.

The superiority condition accounts for the fact that in sentences where both the subject and object are interrogative expressions, only the subject (Z) can undergo movement; that is, the movement rule involves X and Z. It correctly prohibits movement of the object over the subject, as this would be an instance of a rule involving X (the object position) and Y (the A′-landing site), when Z (the subject) is superior to Y (the object).

1.3 Resumption

This section presents the resumptive strategy. After defining resumption in section 1.3.1, I discuss previous analyses (section 1.3.2).

1.3.1 Defining resumption

Rouveret (2011:2) defines a resumptive pronoun as follows: "The overt pronominal element found in some languages in the variable position of unbounded A′-dependency constructions — the latter include relative clauses, constituent questions, comparative clauses, dislocation and focus constructions."

Given this characterization of resumption, I adopt the following working definitions (5–(7)):

(5) *A-position* (argument position): a position to which a thematic role is assigned.

(6) *A′-position* (non-Argument position): a position to which no thematic role is assigned.

(7) *A′-dependency*: An A′-dependency is a dependency relation between two syntactic objects, one of which is in an A′-position and the other is in an A-position.

Consider the examples in (8), which illustrate an A′-dependency in Iraqi Arabic in the context of relativization. In (8a), the pronominal element *-hu* 'him' (a clitic pronoun) occupies the thematic A-position of the moved constituent *illyi* 'whom',[1]

[1]For a discussion of relative pronouns versus complementizers (that is elements that move to Spec-CP versus elements that reside in C) as well as an analysis of *illyi* as a relative pronoun, see Sterian (2014).

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

which is in an A′-position. Thus, there is an A′-dependency between the interrogative operator *illyi* and the clitic pronoun *-hu* 'him'; in other words, *-hu* is a resumptive pronoun. In (8b), there is a gap in the thematic A-position: in the context of relativization, the gap strategy is ill formed in Iraqi Arabic.[2]

(8) a. *Resumption*:

ir-riɣa:l illyi ʃuft=*hu* bi=beyt Suha ka:tib ʕaðʔyim
the-man whom saw.1.SG=3.MASC.SG in-house Suha writer great
'The man whom I saw [*him*] at Suha's house is a great writer.'

b. *Gap*:

*ir-riɣa:l illyi ʃuft _ bi=beyt Suha ka:tib ʕaðʔyim
the-man whom saw.1.SG _ in-house Suha writer great
'The man whom I saw _ at Suha's house is a great writer.'

Earlier in the study of resumption, the gap strategy was analyzed as the result of movement of a constituent to an A′-position, leaving behind a gap or a trace. The resumptive strategy has often been analyzed as the result of a binding relation between the antecedent in the A′-position and the pronoun in the A-position. In this view, while the gap strategy involves movement, the resumptive strategy does not (Sells 1984, McCloskey 1990). Shlonsky (1992) discusses data from Palestinian Arabic which is similar to Iraqi Arabic in that resumption is obligatory in direct object position in relative clauses; he proposes that resumption appears as a last resort.

While resumption is obligatory in relativization in Iraqi Arabic as seen in (8), in D-linked content questions both resumption and gap are allowed (9).

(9) a. *Resumption*:

Suha ya: muɣanyy ʃa:fet=*eh* bi-l-maTʕam
Suha which singer saw.3.FEM.SG=3.MASC.SG in-the-restaurant
'Which singer did Suha see *[him]* in the restaurant?'

b. *Gap*:

Suha ya: muɣanyy ʃa:fet _ bi-l-maTʕam
Suha which singer saw.3.FEM.SG _ in-the-restaurant
'Which singer did Suha see _ in the restaurant?'

The example in (9a) is a grammatical D-linked content question with the resumptive pronoun *-eh* 'him' at the extraction site, while (9b) has a gap at the extraction site but is otherwise identical. This data is relevant because the focus of this article is on resumption with certain interrogatives in Iraqi Arabic. Note that the subject in (9) is at the left periphery, higher than the interrogative expression. The position of the subject in Arabic vernaculars is the topic of lively discussion (Shlonsky 1997, Aoun et al. 1999, Brustad 2000, Owens et al. 2009), but will not be dealt with here as it does not bear on the analysis presented. Nevertheless, a brief note on word order in Arabic is given in section 1.6.

[2]The following abbreviations are used:

FEM	feminine	PL	plural
MASC	masculine	SG	singular

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

1.3.2 Previous analyses of resumption

With respect to the syntax of the resumptive strategies, the earliest theories distinguish the gap strategy (derived by movement) from the resumption strategy (without movement) (Sells 1984, McCloskey 1990). Or, they propose resumption as a last resort to save a derivation when movement is blocked (Shlonsky 1992). Other theories of resumption consider it a special kind of movement (Demirdache 1991).

The most recent analyses of resumption propose that:

(i) resumptive elements are not a uniform class, but their status is differentiated between strong (e.g., strong pronouns and NPs) and clitic (e.g., clitic pronouns, alone or doubled by a strong pronoun) (Guilliot 2006, 2008, Guilliot and Malkawi 2006; Malkawi 2009);

(ii) resumptive strategies give rise to reconstruction effects (Aoun and Li 2003, Boeckx 2003, Guilliot and Malkawi 2006, Malkawi 2009, Rouveret 2011);

(iii) resumptive pronouns may have different internal structures (Elbourne 2002, Déchaine and Wiltschko 2002, Boeckx 2003).

Various mechanical solutions have been proposed within the Minimalist framework regarding the phenomenon of resumption. The Phasal Agree approach analyzes the links in the resumptive chain as connected by the operation Agree (Chomsky 2000, 2007; Adger and Ramchand 2001, 2005; Rouveret 2002, 2008).

Boeckx (2003) analyzes resumption as sub-extraction, in which resumptive chains involve Match followed by Move, and not Agree. He brings extensive empirical evidence to show that

(i) a base generation account of resumption is not able to explain a vast array of empirical data (though he allows a base generation account for intrusive resumption where the resumptive element is a complex NP or "strong resumptive" in Malkawi's (2009) and Guilliot and Malkawi's (2011) terminology); and

(ii) a movement account of resumption is able to appropriately analyze the empirical data as well as explain the different behaviour towards islands displayed by resumptive constructions in various languages (section 4.6.1).

Boeckx (2003) presents an analysis of resumptive chains in which the resumptive pronoun and its antecedent are joined together at First Merge in a complex DP. The resumptive is the D head and the antecedent is its NP or *wh*-complement as in (10).

(10) *Boeckx's (2003) resumptive as complex DP*:
$[_{DP}$ D [{wh/Op}-NP]]

Boeckx analyses the resumptive pronoun as a D-head, as do many other authors (Demirdache 1991; Demirdache and Percus 2008, 2011; Guilliot 2006; Malkawi 2009). However, treating the resumptive pronoun as a D-head becomes problematic in explaining its movement. In this article, I propose that the resumptive pronoun

is a defective element (Cardinaletti and Starke 1999) of category φ, rather than D (Déchaine and Wiltschko 2002, Roberts 2010, Sterian 2011). This straightforwardly accounts for its movement.

1.4 Pronouns in Iraqi Arabic

The types of personal pronouns in Arabic include strong and clitic. The strong personal pronouns are the forms used with the Nominative case, whereas the forms used with the Accusative and the Genitive are clitics (Haywood et al. 1990, Wright 1996, Alkalesi 2006). Arabic allows subject pro-drop, and the overt presence of a subject pronoun is highly marked. Moreover, as will be shown, resumption with subject pronouns (i.e., strong pronouns) is not possible in Iraqi Arabic (section 3.2.8). I return to this in section 4.5.

A complete paradigm of Iraqi Arabic personal pronouns, with their strong and clitic forms, is given in Table 1. Of these, the Accusative forms are used resumptively in Iraqi Arabic content questions.

Table 1: The paradigm of personal pronouns in Iraqi Arabic

Person and number	Nominative (strong pronouns)	Accusative (clitic pronouns)	Genitive (clitic pronouns)
1SG	any	-ny	-y
2MASC.SG	enta	-ək	-ək
2FEM.SG	enti	-iʧ	-iʧ
3MASC.SG	hu:wwa	-hu	-hu
3FEM.SG	hyia	-ha	-ha
1PL	ʔiHna	-na:	-na:
2PL	intu:	-tum	-tum
3MASC.PL	humma	-hum	-hum
3FEM.PL	henna	-hunna	-hunna

The resumptive strategy in Iraqi Arabic content questions is realized via clitic pronouns. Since in Arabic the Accusative forms must cliticize to verbs or prepositions, the resumptive strategy in which they participate is known in the literature as *weak resumption*, as opposed to *strong resumption*, which employs strong pronouns and epithets.Weak and strong resumption behave differently with respect to movement and reconstruction effects (Malkawi 2009, Guilliot and Malkawi 2011). Boeckx (2003), who proposes a movement analysis of resumptive pronouns, allows a non-movement analysis of strong resumptives (which he calls "rich NPs" or "strong resumptives" in Guilliot and Malkawi's (2011) terminology), and he shows they are actually intrusive resumptives in the sense of Sells (1984). In this article, the resumptive strategy discussed refers only to clitic pronouns (weak resumption).

1.5 The genitive construction in Iraqi Arabic

The structure of the genitive constructions in Semitic languages is known as the construct state, where the head noun is left-adjacent to a noun phrase or interrogative

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

pronoun (Borer 1999, Fassi Fehri 1988, Ritter 1988a, Shlonsky 2004). Consider the example in (11), which shows the construct state in a content question in Iraqi Arabic.

(11) *bint minnu:* algat gasi:da bi-l-iHtifal
girl who recited poem at-the-function
'Whose daughter recited a poem at the function?'

In (11) *bint minnu* 'whose daughter' is a construct state with the head noun *bint* 'daughter' left-adjacent to the interrogative pronoun *minnu* 'who'.

1.6 Word order in Iraqi Arabic: Deriving SVO versus VSO order

A note on word order is relevant: the basic word order of Modern Arabic is VSO; however, as early as Classical Arabic, SVO is also mentioned in the grammars of the time. In modern times, spoken Arabic varieties have been reported to show both VSO and SVO (Brustad 2000, Owens et al. 2009, Salem 2010). The VSO/SVO alternation in spoken Arabic is a lively topic of study, but issues of word order do not affect the resumptive pronouns presented in this article.

With VSO order, the verb agrees with the subject in gender, but not in number, as shown in (12a). This is sometimes called "clitic agreement", and is associated with the representation in (12b). In particular, note that the verb *ʃa:f* 'saw.3.MASC.SG' raises all the way to Infl, while the subject *il-asa:tiða* 'the professors.MASC' remains in a VP-internal position.

(12) a. *Verb–Subject–Object*:
ʃa:f il-asa:tiða il-kitab bi-l-maktaba
saw.3.MASC.SG the-professors.MASC the-book in-the-library
'The professors saw the book in the library.'

b. *Structure of VSO in Iraqi Arabic*:
$[_{IP}\ [_{I}$ ʃa:f$]\ [_{VP}[_{VP}\ [_{DP}$ il-asa:tiða$]\ [_{V'}[_{V}$ ~~ʃa:f~~$]\ [_{DP}\ [_{D}$ il$]\ [_{N}$ kitab$]\ ]\ ]\ ]\ [_{PP}$ bi-l-maktaba$]\ ]\ ]$

With SVO order, the verb agrees with the subject in both gender and number, as shown in (13a). This is sometimes called "strong agreement", and is associated with the representation in (13b). In particular, note that as before the verb *ʃa:fwu* 'saw.3.MASC.PL' raises to Infl, but here the subject *il-asa:tiða* 'the professors' raises to Spec-IP.

(13) a. *Subject–Verb–Object*:
il-asa:tiða ʃa:fwu il-kita:b bi-l-maktaba
the-professors.MASC saw.3.MASC.PL the-book in-the-library
'The professors saw the book in the library.'

b. *Representation of SVO in Iraqi Arabic*:
$[_{IP}\ [_{DP}$ il-asa:tiða$]\ [_{I'}\ [_{I}$ ʃa:fwu$]\ [_{VP}[_{VP}\ [_{DP}$ il-asa:tiða$]\ [_{V'}[_{V}$ʃa:f$]\ [_{DP}$ il-kita:b$]\ ]\ ]$
$[_{PP}$ bi-l-maktaba$]\ ]\ ]\ ]$

In the following section, I set out a proposal to explain these phenomena. In section 3, I present in greater detail the distribution of bare, genitive, and D-linked interrogatives in Iraqi Arabic content questions, and follow that with an analysis in section 4. Section 5 presents the consequences of the analysis and the conclusions.

2. THE PROPOSAL: GENITIVE INTERROGATIVES ARE INHERENTLY D-LINKED

Consider the following context: a class of students is defending their theses; they all have different supervisors and the secretary of the board has to see that every student's supervisor is present. In Iraqi Arabic a content question with a bare interrogative pronoun is not felicitous (14a). In contrast, a content question with a construct state genitive is felicitous (14b), as is a D-linked content question (14c).

(14) *Bare interrogatives versus genitive interrogatives*:

a. Content question with bare interrogative pronoun:
is-sikriti:ra minnu: ʃa:fit
the-secretary.FEM whom saw.3.FEM.SG
'Whom did the secretary see?'

b. Content question with genitive interrogative construction:
is-sikriti:ra ʔusta:ð minnu: ʃa:fit
the-secretary.FEM professor who saw.3.FEM.SG
'Whose professor did the secretary see?'

c. Content question with D-linked interrogative:
is-sikri:ti:ra ya: ʔusta:ð ʃa:fit
the-secretary.FEM which professor saw.3.FEM.SG
'Which professor did the secretary see?'

The pattern contrasts in (14) are a first indication that bare and genitive interrogatives do not pattern in the same way. They also indicate that there is a parallel between genitive and D-linked interrogatives. The main question that arises is what properties distinguish genitive interrogatives from bare interrogative expressions and make them pattern with D-linked interrogative expressions.

The core of my analysis is that genitive interrogatives are inherently D-linked (Pesetsky 1987, 2000). Specifically, I argue that what defines D-linking is the presence of an overt domain restriction in the form of an overt noun. Consider the structures presented in Table 2. Bare interrogatives such as *minnu:* 'who' lack an overt domain restriction. In contrast, both genitive interrogatives and D-linked content questions have an overt domain restriction. With genitive interrogatives such as *ʔustað minnu:* 'whose professor', the domain restriction is supplied by the head noun.[3] The structure of the genitive in Arabic and Hebrew is known as the construct state, where the head noun is left-adjacent to a noun phrase or interrogative pronoun (Fassi Fehri 1988, Ritter 1988a, Borer 1999, Shlonsky 2004). Ritter (1988b) proposes N-to-D raising in construct states; in genitive interrogatives such as *ʔustað minnu:* 'whose professor', the noun moves up to Spec-DP (section 4.3). Regarding D-linked interrogatives such as *ya ʔustað* 'which professor', the overt domain restriction is supplied by the noun that follows the interrogative operator.

The syntactic parallel between genitive interrogatives and D-linked interrogatives indicates that D-linking arises whenever there is an overt domain restriction.

[3]In the genitive interrogative construction, the interrogative pronoun is not a bare interrogative. Rather, it is part of a construct state to which Ritter's (1988b) analysis applies.

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

Table 2: Internal structure of bare, genitive, and D-linked interrogatives

	Syntax	Example	
Bare interrogative	$[_D$ WH $[_N \emptyset]]$	minnu:	who
Genitive interrogative	$[_{DP}[_N N [_D$ WH$]]]$	ʔustað minnu:	whose professor
D-linked interrogative	$[_D$ WH $[_N N]]$	ya: ʔustað	which professor

On the one hand, domain restriction is purely semantic and arises when a quantifier has an overt restriction on its domain of application. Quantifiers with no overt restriction, such as *each*, *who*, and *what* in (15), are generally taken to have a contextually defined domain restriction.

(15) a. They *each* attended the lecture.
b. *Who* attended the lecture?
c. *What* did they attend?

It is always possible to introduce an overt restriction, such as the underlined nouns in (16). It is the presence of an overt domain restriction that distinguishes D-linked interrogatives (e.g., *which student*, *which lecture*) from bare interrogatives (e.g., *who*, *what*).

(16) a. *Each* student attended the lecture.
b. *Which* student attended the lecture?
c. *Which* lecture did they attend?

3. The data: Iraqi Arabic bare, genitive, and D-linked interrogatives

In this section, I compare the distribution of bare, genitive, and D-linked interrogatives with respect to two diagnostics: superiority effects (section 3.1) and resumption in content questions (section 3.2). This comparison reveals that genitive interrogatives consistently differ from bare interrogatives, and that they consistently parallel with D-linked interrogatives.

3.1 Superiority effects in Iraqi Arabic

In Iraqi Arabic, bare interrogatives show superiority effects, while genitive and D-linked interrogatives do not. Consider the examples in (17) which show that Iraqi Arabic bare interrogatives obey the superiority condition.

(17) a. *Superiority effect observed — subject precedes object*:
minnu: ga:l *fenu:* li-Samer
who said.3.MASC.SG what to=Samer
'Who said what to Samer?'

b. *Superiority effect violated — object precedes subject*:
**fenu: minnu:* ga:l li-Samer
what who said.3.MASC.SG to=Samer
*'What who said to Samer?'

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

With D-linked interrogatives, however, superiority effects disappear. This is illustrated by the grammaticality of the D-linked questions in (18), where (18a) shows the subject preceding the object and (18b) shows the object preceding the subject.

(18) a. *Subject precedes object*:
ya: Ta:liba ya: kita:b iʃtarat
which student.FEM which book bought.3.FEM.SG
'Which student bought which book?'

b. *Object precedes subject*:
ya: kita:b ya: Ta:liba iʃtarat
which book which student.FEM bought.3.FEM.SG
'Which book did which student buy?'

With genitive interrogative constructions the superiority effects also disappear. This is illustrated by the grammaticality of both multiple questions in (19), where (19a) shows the subject preceding the object and (19b) shows the object preceding the subject.

(19) a. *Subject precedes object*:
riʤa:l minnu: walad minnu: ʃa:f
man who boy who saw.3.MASC.SG
'Whose husband saw whose son?'

b. *Object precedes subject*:
walad minnu: riʤa:l minnu: ʃa:f
boy who husband who saw.3,MASC.SG
'Whose son did whose husband see?'

In sum, in Iraqi Arabic bare interrogatives observe superiority effects, while genitive interrogatives and D-linked interrogatives pattern together in lacking superiority effects.

3.2 The resumptive strategy and the gap strategy

In the following sections, I show how genitive interrogatives and D-linked interrogatives systematically pattern in the same way with respect to local and long-distance extraction when the gap strategy and the resumptive strategy are employed, while bare interrogatives pattern differently in similar contexts.

3.2.1 Local extraction with bare interrogatives

First, consider local extraction. Here bare interrogatives allow only the gap strategy with extracted subjects and objects, as in (20) and (21). As for extracted prepositional objects (22), they permit neither the gap strategy (this reflects the general prohibition against P-stranding in Arabic), nor the resumptive strategy. PP-fronting allows only the gap strategy, because Arabic does not have resumptives for entire prepositional phrases (23).

(20) *Subject extraction*:
minnu: _ / **hwu* iʃtara: il-ʤarida il-ba:riha?
who _ / *he* bought.3.MASC.SG the-newspaper yesterday
'Who_ / [*he*] bought the newspaper yesterday?'

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

(21) *Direct object extraction*:
Iman minnu: ʃa:fat _ *=*hu* bi-beyt Awatif
Iman who saw.3.FEM.SG _ =3.MASC.SG in-house Awatif
'Whom did Iman see_[*him*] at Awatif's house?'

(22) *Object of preposition extraction with gap*:
Ragheb minnu: iltaga bi-l-maktaba wu:ya: *_ / *=*hu*
Ragheb who met.3.MASC.SG at-the-library with _ / =3.MASC.SG
'Whom did Ragheb meet at the library with _ /[*him*]?'

(23) *PP-fronting with bare interrogative*:
Ragheb wu:ya: minnu: iltaga bi-l-maktaba
Ragheb with who met.3.MASC.SG at-the-library
'With whom did Ragheb meet at the library?'

3.2.2 *Local extraction with genitive interrogatives*

The pattern with genitive interrogatives differs from that of bare interrogatives. As for extraction from subject position, the gap strategy but not the resumptive is possible, as in (24). In this respect, a genitive interrogative is like a bare interrogative. But local extraction from the direct object position, as in (25), differs from bare interrogatives in allowing both the gap strategy and the resumptive strategy. As for extraction from a prepositional object position, the gap strategy is predictably prohibited because of the impossibility of P-stranding, as in (26). Finally, with PP-fronting, the gap strategy but not resumption is possible (27).

(24) *Subject extraction*:
riʤa:l minnu: ʃa:f _ / **hwu* Najwa bi-l-Hafla
husband who saw.3.MASC.SG _ / *he* Najwa at-the-party
'*Whose husband* _ / *[he]* saw Najwa at the party?'

(25) *Object extraction*:
Najwa riʤa:l minnu: ʃa:fat _ / =*hu* bi-l-maktaba
Najwa man who saw.3.FEM.SG _ / =3.MASC.SG in-the-library
'*Whose husband* did Najwa see *[him]* at the library?'

(26) *Prepositional object extraction*:
Najwa Sadi:g minnu: iltagat wu:ya: *_ / =*hu* bi-l-Hafla
Najwa friend who met.3.FEM.SG with _ / =3.MASC.SG at-the-party
'*Whose friend* did Najwa meet with _ /*[him]* at the party?'

(27) *PP-fronting with genitive interrogative*:
Najwa wu:ya: Sadi:g minnu: iltagat bi-l-Hafla
Najwa with friend who met.3.FEM.SG at-the-party
'*With whose friend* did Najwa meet at the party?'

3.2.3 *Local extraction with D-linked interrogatives*

Now consider local extraction with D-linked interrogatives. With a D-linked interrogative, subject extraction is possible only with a gap (28), direct object extraction permits both a gap and resumption (29), prepositional object extraction permits only resumption (30) and PP-fronting permits only the gap strategy (31).

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

(28) *Subject extraction*:

ya: Sadi:ga iʃtarat _ / **hi:* ʃigga bi-Baghdad
which friend.FEM bought.3.FEM.SG _ / *she* flat in-Baghdad
'Which friend _ / *[she]* bought a flat in Baghdad?'

(29) *Object extraction*:

Iman ya: riʤa:l ʃa:fit _ / *=hu* bi-l-hafla
Iman which man saw.3.FEM.SG _ / =3.MASC.SG at-the-party
'Which man did Iman see_ / [*him*] at the party?'

(30) *Prepositional object extraction*:

Suha ya: muʕallim iltagat wu:ya: *_ / *=hu* bi-l-kulli:a
Suha which professor met.3.FEM.SG with _ / =3.MASC.SG at-the-faculty
'Which professor did Suha meet with_ / [*him*] at the faculty?'

(31) *PP-fronting with D-linked interrogative*:

Suha wu:ya: ya ʔusta:ð iltagat bi-l-kullyia
Suha with which professor met.3.FEM.SG at-the-faculty
'With which professor did Suha meet at the faculty?'

3.2.4 Summary of the local extraction data

Table 3 summarizes the patterning of the gap and resumptive strategies in the context of local extraction with bare, genitive, and D-linked interrogatives.

Table 3: Local extraction of bare, genitive, and D-linked interrogatives

	Gap Strategy			Resumptive Strategy		
Interrogative type	Bare	Genitive	D-linked	Bare	Genitive	D-linked
Subject	✓	✓	✓	✗	✗	✗
Object of V	✓	✓	✓	✗	✓	✓
Object of P	✗	✗	✗	✗	✓	✓
PP-fronting	✓	✓	✓	✗	✗	✗

Table 3 indicates that the resumptive strategy is always prohibited with bare interrogatives, but with genitive and D-linked interrogatives it is permitted with direct objects and prepositional objects. More generally, we observe that genitive and D-linked interrogatives pattern together with respect to local extraction. In the next section I turn to long-distance extraction.

3.2.5 Long-distance extraction with bare interrogatives

With bare interrogatives, long-distance extraction from subject position only allows the gap strategy (32). Long-distance extraction from the object position permits both gap and resumption (33). Long-distance extraction of the prepositional object is ruled out: neither gap nor resumption are possible (34). PP-fronting is also possible with long-distance extraction (35).

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

(32) *Subject extraction*:

Iman minnu: taʕataqid ennu: _ / **hwu* ʃa:f Ahmad bi-l-Hafla
Iman who think.3.FEM.SG that _ / *he* saw.3.MASC.SG Ahmad at-the-party
'Who does Iman think that _ / [*he*] saw Ahmad at the party?'

(33) *Direct object extraction*:

Suha minnu: taʕatagid ennu: ra:H yaʕzim _ / *=hu* Ahmad?
Suha who think.3.FEM.SG that will invite.3.MASC.SG _ / =3.MASC.SG Ahmad
'Whom does Suha think that Ahmad will invite _ / *[him]*?'

(34) *Prepositional object extraction*:

Iman minnu: taʕarif ennu iltaga Bahjat wuya: *_ / **hu*
Iman who know:3.FEM.SG that met.3.MASC.SG Bahjat with _ / =3.MASC.SG
'Whom does Iman know that Bahjat met with _ / [*him*]?'

(35) *PP-fronting*:

Iman wuya: minnu: taʕarif ennu: iltaga Bahjat
Iman with who know:3.FEM.SG that met Bahjat
'With whom does Iman know that Bahjat met?'

To summarize long-distance extraction with bare interrogatives, the direct object allows both gap and resumption, while with local extraction it only allows gap. That resumption becomes more acceptable as the extraction site becomes more deeply embedded has been noted for other languages as well (Erteschik-Shir 1992, Tsimpli 1999, Alexopoulou and Keller 2002).[4] All the other arguments pattern in the same way with local and long-distance extraction.

3.2.6 Long-distance extraction with genitive interrogatives

Now consider long-distance extraction with genitive interrogatives. As before, with subject extraction, only the gap strategy is possible (36). With object extraction, both gap and resumption are allowed (37). The same holds of long-distance extraction of a prepositional object: both gap and resumption are allowed (38). And with PP-fronting, only the gap strategy is possible (39).

(36) *Subject extraction*:

Suha riʤa:l minnu: taʕatagid ennu: ʃa:f _ / **hwu* Najwa
Suha husband who think.3.FEM.SG that saw.3.MASC.SG _ / *he* Najwa
'*Whose husband* does Suha think that _ / *[he]* saw Najwa?'

(37) *Object extraction*:

Suha riʤal minnu: taʕatagid ennu: Najwa ʃa:fat _ / *=hu*
Suha man who think.3.FEM.SG that Najwa saw:3.FEM.SG _ / =3.MASC.SG
'*Whose husband* does Suha think that Najwa saw_ / [*him*]?'

(38) *Prepositional object extraction*:

Suha Sadi:g minnu: tdry ennu: Iman iltagat wu:ya: * / *hu*
Suha friend who think.3.FEM.SG that Iman met.3.FEM.SG with _ / =3.MASC.SG
'*Whose friend* does Suha think that Iman met with _ / [*him*]?'

[4] It is not the object of this article to investigate resumption with bare interrogatives in Iraqi Arabic. This phenomenon and its analysis will be tackled in future research.

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

(39) *PP-fronting with genitive interrogative*:

Suha wu:ya: Sadi:g minnu: taʕatagid ennu: Najwa iltagat
Suha with friend who think.3.FEM.SG that Najwa met.3.FEM.SG
'*With whose friend* does Suha think that Najwa met?'

3.2.7 Long-distance extraction with D-linked interrogatives

Finally, I consider long-distance extraction of D-linked interrogatives. With subject extraction, only the gap strategy is possible (40). With object extraction, both gap and resumption are possible (41). With long-distance extraction of a prepositional object, only resumption is possible (42). And with PP-fronting, only the gap strategy is possible (43).

(40) *Subject extraction*:

Ragheb ya: Sadi:ga ydry ennu: iʃtarat _ / **hi:* ʃigga
Ragheb which friend.FEM think.3.MASC.SG that bought.3.FEM.SG _ / *she* flat
'Which friend does Ragheb think that _ / [*she*] bought a flat?'

(41) *Object extraction*:

Ragheb ya: riʤa:l ydry ennu: Iman ʃa:fit _ / *=hu*
Ragheb which man think.3.MASC.SG that Iman saw.3.FEM.SG _ / =3.MASC.SG
'Which man does Ragheb think that Iman saw _ / [*him*]?'

(42) *Prepositional object extraction*:

Ahmad ya: riʤa:l ydry ennu: Suha iltagat wu:ya:
Ahmad which man think.3.MASC.SG that Suha met.3.FEM.SG with

*_ / *hu*
_ / =3.MASC.SG

'Which man does Ragheb think that Suha met with_ / [*him*]?'

(43) *PP-fronting with D-linked interrogative*:

Ragheb wu:ya ya: muʕallim yaʕatagid ennu: Suha iltagat
Ragheb with which professor think.3.MASC.SG that Suha met.3.FEM.SG
'With which professor does Ragheb think that Suha met?'

3.2.8 Summary of the long-distance extraction data

Table 4 summarizes the patterning of the gap and resumptive strategy in the context of long-distance extraction with bare, genitive, and D-linked interrogatives.

As with local extraction, with long-distance extraction we observe that genitive and D-linked interrogatives pattern in the same way with respect to whether they use the gap or the resumptive strategy. And as before, bare interrogatives are distinct from genitive/D-linked interrogatives.

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

Table 4: Comparison of bare, genitive, and D-linked interrogatives with respect to long-distance extraction (extraction from an embedded clause)

	Gap Strategy			Resumptive Strategy		
Interrogative type	Bare	Genitive	D-linked	Bare	Genitive	D-linked
Subject	✓	✓	✓	✗	✗	✗
Object of V	✓	✓	✓	✓	✓	✓
Object of P	✗	✗	✗	✗	✓	✓
PP-fronting	✓	✓	✓	✗	✗	✗

4. ANALYSIS

I propose that it is the syntactic structure that causes genitive and D-linked interrogatives to pattern together with respect to local extraction, long-distance extraction, and superiority. In particular, I suggest that the structural parallel between genitive and D-linked interrogatives lies in the fact that they both contain an overt domain restriction (section 4.1). I then show the derivation of the resumptive strategy in D-linked content questions (section 4.2), the derivation of genitive interrogatives in questions with a gap (section 4.3) and the derivation of genitive interrogatives in questions with resumption (section 4.4). Last, I show why resumption with subject extraction is not possible given the current analysis (section 4.5) and I present the issue of resumption and islandhood in Iraqi Arabic (section 4.6).

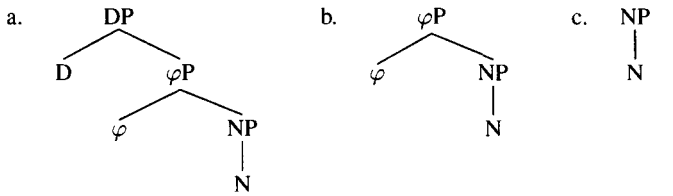
4.1 The internal structure of the DP in bare, genitive, and D-linked interrogatives

Postal (1966) advanced the claim that pronouns are definite articles. Since then, various authors have treated pronouns as DPs (determiner phrases) and worked on their internal structure (Evans 1980, Reinhart 1983, Cardinaletti and Stark 1999). Elbourne (2002) proposes that pronouns are definite determiners whose NP-complement has undergone deletion in the phonology (the NP-deletion Theory) as in (44).

(44) *Elbourne's (2002) internal structure of a pronoun*:
$[_D$ pronoun $[_{NP}$ ~~noun~~$]\,]$

Déchaine and Wiltschko (2002) propose that pronouns are not primitives; instead, they are decomposable. They argue that there are at least three pronoun types: pro-DP, pro-φP, and pro-NP, each one associated with a distinct syntactic projection (45).

(45) *Déchaine and Wiltschko's (2002) internal structure of a pronoun*:



https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

The DP-structure in (45a) functions as an R-expression and always contains φP and NP as sub-constituents. The φP-structure in (45b) functions as a bound variable, while the NP-structure in (45c) has the status of a semantic constant. Relevant to the present analysis is Déchaine and Wiltschko's claim that the φ-element is what allows a pronoun to function as a bound variable. Recall that Rouveret's (2011) definition of resumptive pronoun (introduced in section 1.3.1) equates the resumptive pronoun with an A′-bound variable position. Combining this with Déchaine and Wiltschko's (2002) analysis, the pronominal elements which function as resumptive pronouns should be able to function as bound variables. This prediction is borne out in Iraqi Arabic: the accusative pronoun that otherwise functions as a Condition B pronoun (locally free, as shown in (46)) can also be used as a bound variable (47).

(46) *The pronoun can be bound from within its local domain*:

a. Condition B violation — bound in local domain:

*Iman$_1$ ʃa:fit=*ha*$_1$
Iman saw.3.FEM.SG=3.FEM.SG
'Iman$_1$ saw her$_1$.'

b. Condition B observed — bound from outside local domain:

Iman$_1$ ga:lit ʔin=ny ʃuft=*ha*$_1$
Iman said.3.FEM.SG that=1.SG saw.1.SG=3.FEM.SG
'Iman$_1$ said that I saw her$_1$.'

(47) *Pronoun as a bound variable*:

kull-waHed$_1$ ygwul ennu: Iman ʃa:fit=*ah*$_1$
everyone say.3.MASC.SG that Iman saw.3.FEM.SG=3.MASC.SG
'Everyone$_1$ says that Iman saw him$_1$.'

Sterian (2011) proposes that D-linked interrogative expressions always have a DP shell, but differ according to whether the intermediate φ-layer is present. In terms of the inputs to the numeration, there are two logical possibilities: a [D–N] structure and a [D–φ–N] structure. In terms of how these structures are spelled out, the gap strategy has a [D–N] structure, while the resumptive strategy is always associated with [D–φ–N].

Sterian (2014) discusses the nature of pro-φ and shows how this supports a movement analysis of resumption. In brief, whereas resumptive pronouns have been analysed as D-heads (Demirdache 1991; Boeckx 2003; Guilliot 2006; Demirdache and Percus 2008, 2011; Malkawi 2009), Sterian (2014) proposes instead that resumptive pronouns are not D-heads, but φ-heads. In other words, they are defective goals that must move from their base position to a derived one in IP. This analysis builds on Cardinaletti and Starke's (1999) tripartition of pronouns into strong, weak and clitic; Sterian (2014) argues that the resumptive pronoun in Iraqi Arabic is a clitic in this sense, namely a structurally deficient element which cannot surface in its base position, but must raise and appear in a derived position. Cardinaletti and Starke's (1999) intuition that the special syntactic behaviour of clitics is caused by their defective nature, as well as Déchaine and Wiltschko's (2002) analysis of Romance clitics as pro-φ rather than pro-D, are taken by Roberts (2010) as the foundation for his analysis of clitic movement in Romance. Sterian (2014) applies this to resumptions and

argues that in the complex DP, two movement requirements appear: one is for the resumptive pronoun to raise from its base position to a derived position, and the other is for the *wh*-word to move to Spec-CP.

4.2 Derivation of resumptive strategy in D-linked content questions

In Sterian (2011), in content questions with the resumptive strategy and D-linked interrogative expressions, the D-linked interrogative expression has a tripartite internal structure with a DP–φP–NP substructure, as shown in (48).

(48) *Internal structure of D-linked interrogative expressions*:

$[_{DP}$ [D-linked interrogative] $[_{\varphi P}$ [φ resumptive pronoun] $[_{NP}$ noun]]]

The derivation of the resumptive structure proposed in Sterian (2011) involves movement. To see how the resumptive strategy is derived with remnant-deletion, consider example (49) which has a D-linked content question employing the resumptive strategy (49a) and whose numeration is given in (49b). The minimalist derivational analysis is used, employing bare phrase structure and the operations Select, Merge, Copy, and Delete. Movement is not understood as a primitive operation, but as the combination of Copy + Merge (Hornstein et al. 2006).

(49) *D-linked content question*:

a. Resumptive strategy:

Iman ya: ridʒa:l ʃa:fit=*ah*
Iman which man saw.3.FEM.SG=3.MASC.SG
'Which man did Iman see [*him*]?'

b. Numeration:

{TOP, C, I, *Iman*$_D$, *Sa:fit*$_V$, *ya:*$_D$, *hu*$_\varphi$, *ridʒa:l*$_N$}

The derivational analysis of (49a) is given in (50). The derivation develops by phases (e.g., the *v*P phase, the IP phase, etc.), where each maximal projection represents a domain for the application of rules (Chomsky 1995, Wojdak 2005, Hornstein 2008). Thus, within the VP[5] phase (50b), the DP is built by: (50bi) merging the pronoun *hu* 'him' with the noun *ridʒa:l* 'man' and (50bii) merging that complex syntactic object with the D-linked interrogative *ya:* 'which'. Then the verb *ʃa:fit* 'she saw' merges with the DP *ya: hu ridʒa:l* 'which he man' (50biii), and cliticization of the pronoun *hu* 'him' immediately takes place via successive application of Copy and Delete (50biv–v). Thus the cliticization of the resumptive pronoun to the verb occurs in the VP phase; the pronoun has to cliticize to the verb and this determines its early movement in the derivation, during the VP phase. The subject DP *Iman* then merges with the V at Spec-VP (50bvi). At the IP phase (50c), the inflectional head merges with the VP (50ci), then the subject DP *Iman* is moved to Spec-IP via successive application of Copy and Delete (50cii–iii). At the CP phase (50d), the complementizer merges with the IP and the remnant of the DP *ya: ~~hu~~ ridʒa:l* is moved to Spec-CP

[5]It does not make a difference for this analysis whether the verb is a *v* or a V. To keep matters simple, I label the verb as V.

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

via successive application of Copy and Delete (50di–ii). At the TopP[6] phase (50e), the topical head Top merges with the CP (50ei) and the subject DP *Iman* is moved to Spec-TopP via successive application of Copy and Delete (50eii–iii).

(50) *Derivational analysis of (49a)*:

a. Numeration:
{TOP, C, I, $Iman_D$, $Sa{:}fit_V$, $ya{:}_D$, hu_φ, $ri\widehat{\jmath}a{:}l_N$}

b. VP phase:

i. Merge <φ, N>
[$_\varphi$ [hu_φ] [$ri\widehat{\jmath}a{:}l_N$]]

ii. Merge <D, φ>
[$_D$ [$ya{:}_D$] [hu_φ $ri\widehat{\jmath}a{:}l_N$]]

iii. Merge <V, D>
[$_V$ [$\int a{:}fit_V$] [$_D$ $ya{:}_D$ hu_φ $ri\widehat{\jmath}a{:}l_N$]]

iv. Copy hu_φ and Merge <V, φ>
[$_V$ [$\int a{:}fit_V$ hu_φ] [$_D$ $ya{:}_D$ hu_φ $ri\widehat{\jmath}a{:}l_N$]]

v. Delete hu_φ
[$_V$ [$\int a{:}fit_V$ hu_φ] [$_D$ $ya{:}_D$ ~~hu_φ~~ $ri\widehat{\jmath}a{:}l_N$]]

vi. Merge <D, V>
[$_V$ [$Iman_D$] [$_V$ [$\int a{:}fit_V$ hu_φ] [$_D$ $ya{:}_D$ ~~hu_φ~~ $ri\widehat{\jmath}a{:}l_N$]]]

c. IP phase:

i. Merge <I, V>
[$_I$ I [$_V$ [$Iman_D$] [$_V$ [$\int a{:}fit_V hu_\varphi$] [$_D$ $ya{:}_D$ ~~hu_φ~~ $ri\widehat{\jmath}a{:}l_N$]]]]

ii. Copy $Iman_D$ and Merge <D, I>
[$_I$ [$Iman_D$] [$_I$ I [$_V$ [$Iman_D$] [$_V$ [$\int a{:}fit_V hu_\varphi$] [$_D$ $ya{:}_D$ ~~hu_φ~~ $ri\widehat{\jmath}a{:}l_N$]]]]]

iii. Delete $Iman_D$
[$_I$ [$Iman_D$] [$_I$ I [$_V$ [~~$Iman_D$~~] [$_V$ [$\int a{:}fit_V hu_\varphi$] [$_D$ $ya{:}_D$ ~~hu_φ~~ $ri\widehat{\jmath}a{:}l_N$]]]]]]

d. CP phase:

i. Merge <C,I>
[$_C$ C [$_I$ [$Iman_D$] [$_I$ I [$_V$ [~~$Iman_D$~~] [$_V$ [$\int a{:}fit_V hu_\varphi$] [$_D$ $ya{:}_D$ ~~hu_φ~~ $ri\widehat{\jmath}a{:}l_N$]]]]]]

ii. Copy [$_D$ $ya{:}_D$ ~~hu_φ~~ $ri\widehat{\jmath}a{:}l_N$] and Merge <D, I>
[$_C$ [$_D$ $ya{:}_D$ ~~hu_φ~~ $ri\widehat{\jmath}a{:}l_N$] [$_C$ C [$_I$ [$Iman_D$] [$_I$ I [$_V$ [~~$Iman_D$~~] [$_V$ [$\int a{:}fit_V hu_\varphi$] [$_D$ $ya{:}_D$ ~~hu_φ~~ $ri\widehat{\jmath}a{:}l_N$]]]]]]]

iii. Delete [$_D$ $ya{:}_D$ ~~hu_φ~~ $ri\widehat{\jmath}a{:}l_N$]
[$_C$ [$_D$ $ya{:}_D$ ~~hu_φ~~ $ri\widehat{\jmath}a{:}l_N$] [$_C$ C [$_I$ [$Iman_D$] [$_I$ I [$_V$ [~~$Iman_D$~~] [$_V$ [$\int a{:}fit_V hu_\varphi$] [$_D$ ~~$ya{:}_D$~~ ~~hu_φ~~ ~~$ri\widehat{\jmath}a{:}l_N$~~]]]]]]]

[6] I assume a Top phase, because in Iraqi Arabic questions subjects always move to first position. This does not affect in any way the analysis of genitive interrogatives and resumption presented in this article. An analysis of topicalised subjects will be the object of future research.

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

e. TopP phase:

i. Merge <Top, C>

$[_{TOP}$ TOP $[_C [_D$ *ya:*$_D$ ~~*hu*~~$_\varphi$ *riʤa:l*$_N]$ $[_C$ C $[_I [$*Iman*$_D]$ $[_I$ I $[_V [$~~*Iman*~~$_D]$ $[_V [$*ʃa:fit*$_V$*hu*$_\varphi]$ $[_D$ ~~*ya:*~~$_D$ ~~*hu*~~$_\varphi$ ~~*riʤa:l*~~$_N]]]]]]]]$

ii. Copy *Iman*$_D$ and Merge <D, Top>

$[_{TOP}$ *Iman*$_D$ $[_{TOP}$ TOP $[_C [_D$ *ya:*$_D$ ~~*hu*~~$_\varphi$ *riʤa:l*$_N]$ $[_C$ C $[_I [$*Iman*$_D]$ $[_I$ I $[_V [$~~*Iman*~~$_D]$ $[_V [$*ʃa:fit*$_V$*hu*$_\varphi]$ $[_D$ ~~*ya:*~~$_D$ ~~*hu*~~$_\varphi$ ~~*riʤa:l*~~$_N]]]]]]]]]$

iii. Delete *Iman*$_D$

$[_{TOP}$ *Iman*$_D$ $[_{TOP}$ TOP $[_C [_D$ *ya:*$_D$ ~~*hu*~~$_\varphi$ *riʤa:l*$_N]$ $[_C$ C $[_I [$~~*Iman*~~$_D]$ $[_I$ I $[_V [$~~*Iman*~~$_D]$ $[_V [$*ʃa:fit*$_V$*hu*$_\varphi]$ $[_D$ ~~*ya:*~~$_D$ ~~*hu*~~$_\varphi$ ~~*riʤa:l*~~$_N]]]]]]]]]$

To summarize, the resumptive strategy is analyzed as remnant deletion, because the deletion of the remnant-DP *ya:* ~~*hu*~~ *riʤa:l* resulted from the cliticization of the φ-pronoun to the verb. Thus, in this analysis the resumptive pronoun is a stranded pro-φP deleted from the lower occurrence of the DP, as in (51).

(51) *The resumptive strategy as remnant DP-deletion*:

$[_C [_D$ D$] [[_\varphi [_\varphi$ ~~φ~~$]$ $[_{NP}$ N$]]] \ldots [_I [_V$ V $\varphi] \ldots [_D$ ~~D~~$] [[_\varphi [_\varphi$ ~~φ~~$]$ $[_{NP}$ ~~N~~$]]]]]]$

Observe that the full DP containing all three subcomponents does not surface overtly (i.e., the form *ya: hu riʤa:l* is ungrammatical). Sterian (2011) stipulates that the reason that the resumptive pronoun remains overt in the syntax is that it cliticizes to the verb.

4.3 The derivation of genitive interrogatives in questions with a gap

Building on Sterian's (2011) analysis of the internal structure of the DP in D-linked interrogative expressions, a comparison of the syntax of bare, D-linked, and genitive interrogatives is given in (52).

(52) a. *Syntax of bare interrogatives*:

$[_D$ wh $[_N \emptyset]]$	Gap strategy
$[_D$ wh $[_\varphi$ hu $[N_\emptyset]]]$	Resumption (only long-distance)

b. *Syntax of D-linked interrogatives*:

$[_D$ wh $[_N$ N$]]$	Gap strategy
$[_D$ wh $[_\varphi$ *hu* $[_N$ N$]]]$	Resumption (local and long-distance)

c. *Syntax of genitive interrogatives*:

$[_D [_N$ N $[_D$ wh$]]]$	Gap strategy
$[_D [_N$ N $[_D$ wh$] [_\varphi$ *hu* $[_N]]]]$	Resumption (local and long-distance)

An observation is to be made here: with both genitive and D-linked interrogatives there is an overt noun which specifies a domain restriction. It seems that the D-linked interrogative expressions and the genitive interrogative expressions are domain-restricted because of the overt noun, whereas the bare interrogative expressions do not have this restriction since they do not have an overt noun. That the domain restriction is supplied by the overt noun allows the resumptive strategy to be used in a wider range of contexts than what is possible with bare interrogatives,

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

for example. This suggests a close connection between domain restriction and the presence of a resumptive pronoun, since resumption selects an element from a domain. The bare interrogative expressions do not have any such domain restriction, and therefore resumption is not allowed.

The claim made here is that genitive interrogatives are inherently D-linked. Therefore, they should have a D–N structure in content questions which employ the gap strategy and a D–φ–N structure in content questions which employ the resumptive strategy (Sterian 2011). With this in mind I now look at the derivation of content questions with genitive constructions in more detail.

Consider (53a), a genitive interrogative content question employing the gap strategy. The numeration is given in (53b).

(53) a. *Genitive interrogative with gap*:
Najwa riʤal minnu: ʃa:fit
Najwa husband who saw.3.FEM.SG
'Whose husband did Najwa see?'

b. *Numeration*:
{TOP, C, I, $Najwa_{D}$, $Sa{:}fit_{V}$, $minnu{:}_{D}$, $riʤa{:}l_{N}$}

Consider (54), which shows the derivation of (53a). At the VP phase (54b), the DP is built by merging the interrogative pronoun *minnu:* 'who' with the noun *riʤa:l* 'husband' (54bi). Then the verb *ʃa:fit* 'she saw' merges with the DP *minnu: riʤa:l* (54bii). The subject DP *Najwa* merges with the V at Spec-VP (54biii). At the IP phase (54c), the inflectional head merges with the VP (54ci), then the subject DP *Najwa* is moved to Spec-IP via successive application of Copy and Delete (54cii–iii). At the CP phase (54d), the complementizer merges with the IP (54di), the DP *minnu: riʤa:l* is moved to Spec-CP via successive application of Copy and Delete (54dii–iii). In accordance with Ritter's (1988b) N-to-D raising in construct states, N raises to D via a successive application of Copy and Delete (54div–v). At the TopP phase (54e), the topical head Top merges with the CP (54ei) and the subject DP *Najwa* is moved to Spec-TopP via successive application of Copy and Delete (54eii–iii).

(54) *Derivational analysis of (53a)*:
a. Numeration:
{$Top_{\emptyset}$, $C_{\emptyset}$, $I_{\emptyset}$, $Najwa_{D}$, $Sa{:}fit_{V}$, $minnu{:}_{D}$, $riʤa{:}l_{N}$}
b. VP phase:
i. Merge <D, N>
$[_{D}\ [minnu{:}_{D}]\ [riʤa{:}l_{N}]\ ]$
ii. Merge <V, D>
$[_{V}\ [Sa{:}fit\ _{V}]\ [_{D}\ [minnu{:}_{D}\ ]\ [riʤa{:}l_{N}\ ]\ ]\ ]$
iii. Merge <D, V>
$[_{V}\ [Najwa_{D}\ ]\ [_{V}\ [Sa{:}fit\ _{V}]\ [_{D}\ [minnu{:}_{D}\ ]\ [riʤa{:}l_{N}\ ]\ ]\ ]\ ]$
c. IP phase:
i. Merge <I, V>
$[_{I}\ I\ [_{V}\ [Najwa_{D}]\ [_{V}\ [Sa{:}fit\ _{V}]\ [_{D}\ [minnu{:}_{D}]\ [riʤa{:}l_{N}]\ ]\ ]\ ]\ ]$

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

ii. Copy *Najwa*$_D$ and Merge <D, I>

[$_I$ [*Najwa*$_D$] [$_I$ I [$_V$ [*Najwa*$_D$] [$_V$ [*Sa:fit*$_V$] [$_D$ [*minnu:*$_D$] [*riʤa:l*$_N$]]]]]]

iii. Delete *Najwa*$_D$

[$_I$ [*Najwa*$_D$] [$_I$ I [$_V$ [~~*Najwa*~~$_D$] [$_V$ [*Sa:fit*$_V$] [$_D$ [*minnu:*$_D$] [*riʤa:l*$_N$]]]]]]

d. CP phase:

i. Merge <C,I>

[$_C$ C [$_I$ [*Najwa*$_D$] [$_I$ I [$_V$ [~~*Najwa*~~$_D$] [$_V$ [*Sa:fit*$_V$] [$_D$ [*minnu:*$_D$] [*riʤa:l*$_N$]]]]]]]

ii. Copy [$_D$ [*minnu:*$_D$] [*riʤa:l*$_N$]] and Merge <D, I>

[$_C$ [$_D$ [*minnu:*$_D$] [*riʤa:l*$_N$]] [$_C$ C [$_I$ [*Najwa*$_D$] [$_I$ I [$_V$ [~~*Najwa*~~$_D$] [$_V$ [*Sa:fit*$_V$] [$_D$ [*minnu:*$_D$] [*riʤa:l*$_N$]]]]]]]]

iii. Delete [$_D$ [*minnu:*$_D$] [*riʤa:l*$_N$]]

[$_C$ [$_D$ [*minnu:*$_D$] [*riʤa:l*$_N$]] [$_C$ C [$_I$ [*Najwa*$_D$] [$_I$ I [$_V$ [~~*Najwa*~~$_D$] [$_V$ [*Sa:fit*$_V$] [$_D$ [~~*minnu:*~~$_D$] [~~*riʤa:l*~~$_N$]]]]]]]]

iv. Copy [*riʤa:l*$_N$] and Merge <N,D>

[$_C$ [$_D$ [*riʤa:l*$_N$] [$_D$ [*minnu:*$_D$] [*riʤa:l*$_N$]]] [$_C$ C [$_I$ [*Najwa*$_D$] [$_I$ I [$_V$ [~~*Najwa*~~$_D$] [$_V$ [*Sa:fit*$_V$] [$_D$ [~~*minnu:*~~$_D$] [~~*riʤa:l*~~$_N$]]]]]]]]

v. Delete [*riʤa:l*$_N$]

[$_C$ [$_D$ [*riʤa:l*$_N$] [$_D$ [*minnu:*$_D$] ~~[*riʤa:l*~~$_N$]]] [$_C$ C [$_I$ [*Najwa*$_D$] [$_I$ I [$_V$ [~~*Najwa*~~$_D$] [$_V$ [*Sa:fit*$_V$] [$_D$ [~~*minnu:*~~$_D$] [~~*riʤa:l*~~$_N$]]]]]]]]

e. TopP phase:

i. Merge <Top, C>

[$_{Top}$ Top [$_C$ [$_D$ [*riʤa:l*$_N$] [$_D$ [*minnu:*$_D$] [~~*riʤa:l*~~$_N$]]] [$_C$ C [$_I$ [*Najwa*$_D$] [$_I$ I [$_V$ [~~*Najwa*~~$_D$] [$_V$ [*Sa:fit*$_V$] [$_D$ [~~*minnu:*~~$_D$] [~~*riʤa:l*~~$_N$]]]]]]]]]

ii. Copy *Najwa*$_D$ and Merge <D, Top>

[$_{Top}$ *Najwa*$_D$ [$_{Top}$ Top [$_C$ [$_D$ [*riʤa:l*$_N$] [$_D$ [*minnu:*$_D$] [~~*riʤa:l*~~$_N$]]] [$_C$ C [$_I$ [*Najwa*$_D$] [$_I$ I [$_V$ [~~*Najwa*~~$_D$] [$_V$ [*Sa:fit*$_V$] [$_D$ [~~*minnu:*~~$_D$] [~~*riʤa:l*~~$_N$]]]]]]]]]]

iii. Delete *Najwa*$_D$

[$_{Top}$ *Najwa*$_D$ [$_{Top}$ Top [$_C$ [$_D$ [*riʤa:l*$_N$] [$_D$ [*minnu:*$_D$] [~~*riʤa:l*~~$_N$]]] [$_C$ C [$_I$ [~~*Najwa*~~$_D$] [$_I$ I [$_V$ [~~*Najwa*~~$_D$] [$_V$ [*Sa:fit*$_V$] [$_D$ [~~*minnu:*~~$_D$] [~~*riʤa:l*~~$_N$]]]]]]]]]]

In this section, I have shown that the derivation of Iraqi Arabic genitive interrogatives employing the gap strategy parallels the derivation of D-linked content questions employing the gap strategy (Sterian 2011), in that both have a D–N structure.

4.4 The derivation of genitive interrogatives in questions with resumption

Let us now look at the derivation of a genitive interrogative employing the resumptive strategy (55a). The numeration is given in (55b); notice that it contains the φ-element *hu* 'him'.

(55) a. *Genitive interrogative with resumption*:

Iman riʤa:l minnu: ʃa:fat=*hu*

Iman husband who saw:3.FEM.SG.3MASC.SG

'Whose husband did Najwa see *[him]*?'

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

b. *Numeration*:
{TOP, C, I, $Najwa_D$, $Sa{:}fit_V$, $minnu{:}_D$, $ri\widehat{dz}a{:}l_N$, hu_φ}

Consider (56), which gives the derivation of (55a). At the VP phase (56b), the DP is built by merging the pronoun *hu* 'him' with the noun *ri͡ʒa:l* 'husband' (56bi) and merging this complex syntactic object with the interrogative pronoun *minnu:* 'who' (56bii). Then the verb *ʃa:fit* 'she saw' merges with the DP *minnu: hu ri͡ʒa:l* (56biii) and cliticizaton of the pronoun *hu* 'him' immediately takes place via successive application of Copy and Delete (56biv–v). The subject DP *Najwa* merges with the V at Spec-VP (56bvi). At the IP phase (56c), the inflectional head merges with the VP (56ci), then the subject DP *Najwa* is moved to Spec-IP via successive application of Copy and Delete (56cii–iii). At the CP phase (56d), the complementizer is merged with the IP (56di), the DP *minnu: hu ri͡ʒa:l* is moved to Spec-CP via successive application of Copy and Delete (56dii–iii). In keeping with the N-to-D raising of the construct state (Ritter 1988b), N raises to D via a successive application of Copy and Delete (56biv–v). At the TopP phase (56e), the topical head Top merges with the CP (56ei) and the subject DP *Najwa* is moved to Spec-TopP via successive application of Copy and Delete (56eii–iii).

(56) *Derivation of (55a)*:

a. Numeration:
{TOP, C, I, $Najwa_D$, $Sa{:}fit_V$, $minnu{:}_D$, $ri\widehat{dz}a{:}l_N$, hu_φ}

b. VP phase:

i. Merge <φ, N>
[$_\varphi$ [hu_φ] [$ri\widehat{dz}a{:}l_N$]]

ii. Merge <D, φ>
[$_D$ [$minnu_D$] [hu_φ $ri\widehat{dz}a{:}l_N$]]

iii. Merge <V, D>
[$_V$ [$Sa{:}fit_V$] [$_D$ [$minnu_D$] [hu_φ $ri\widehat{dz}a{:}l_N$]]]

iv. Copy hu_φ and Merge <φ, V>
[$_V$ [$ʃa{:}fit_V hu_\varphi$] [$_D$ [$minnu_D$] [hu_φ $ri\widehat{dz}a{:}l_N$]]]

v. Delete hu_φ
[$_V$ [$ʃa{:}fit_V hu_\varphi$] [$_D$ [$minnu_D$] [~~hu_φ~~ $ri\widehat{dz}a{:}l_N$]]]

vi . Merge <D, V>
[$_V$ [$Najwa_D$] [$_V$ [$ʃa{:}fit_V hu_\varphi$] [$_D$ [$minnu_D$] [~~hu_φ~~ $ri\widehat{dz}a{:}l_N$]]]]

c. IP phase:

i. Merge <I, V>
[$_I$ I [$_V$ [$Najwa_D$] [$_V$ [$ʃa{:}fit_V hu_\varphi$] [$_D$ [$minnu_D$] [~~hu_φ~~ $ri\widehat{dz}a{:}l_N$]]]]]

ii. Copy $Najwa_D$ and Merge <D, I>
[$_I$ [$Najwa_D$] [$_I$ I [$_V$ [$Najwa_D$] [$_V$ [$ʃa{:}fit_V hu_\varphi$] [$_D$ [$minnu_D$] [~~hu_φ~~ $ri\widehat{dz}a{:}l_N$]]]]]]

iii. Delete $Najwa_D$
[$_I$ [$Najwa_D$] [$_I$ I [$_V$ [~~$Najwa_D$~~] [$_V$ [$ʃa{:}fit_V hu_\varphi$] [$_D$ [$minnu_D$] [~~hu_φ~~ $ri\widehat{dz}a{:}l_N$]]]]]]

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

d. CP phase:

i. Merge <C, I>

$[_C\ C\ [_I\ [Najwa_D]\ [_I\ I\ [_V\ [\sout{Najwa_D}]\ [_V\ [fa{:}fit_V hu_\varphi]\ [_D\ [minnu_D]\ [\sout{hu_\varphi}\ ri\widehat{dz}a{:}l_N]\ ]\ ]\ ]\ ]\ ]\ ]\ ]$

ii. Copy $[_D\ [minnu_D]\ [\sout{hu_\varphi}\ ri\widehat{dz}a{:}l_N]\ ]$ and Merge <D, C>

$[_C\ [_D\ [minnu_D]\ [\sout{hu_\varphi}\ ri\widehat{dz}a{:}l_N]\ ]\ [_C\ C\ [_I\ [Najwa_D]\ [_I\ I\ [_V\ [\sout{Najwa_D}]\ [_V\ [fa{:}fit_V hu_\varphi]\ [_D\ [minnu_D]\ [\sout{hu_\varphi}\ ri\widehat{dz}a{:}l_N]\ ]\ ]\ ]\ ]\ ]\ ]\ ]$

iii. Delete $[_D\ [minnu_D]\ [\sout{hu_\varphi}\ ri\widehat{dz}a{:}l_N]\ ]$

$[_C\ [_D\ [minnu_D]\ [\sout{hu_\varphi}\ ri\widehat{dz}a{:}l_N]\ ]\ [_C\ C\ [_I\ [Najwa_D]\ [_I\ I\ [_V\ [\sout{Najwa_D}]\ [_V\ [fa{:}fit_V hu_\varphi]\ [_D\ [\sout{minnu_D}]\ [\sout{hu_\varphi}\ \sout{ri\widehat{dz}a{:}l_N}]\ ]\ ]\ ]\ ]\ ]\ ]\ ]$

iv. Copy $[ri\widehat{dz}a{:}l_N]$ and Merge <N,D>

$[_C\ [_D\ [ri\widehat{dz}a{:}l_N]\ [_D\ [minnu_D]\ [\sout{hu_\varphi}\ ri\widehat{dz}a{:}l_N]\ ]\ [_C\ C\ [_I\ [Najwa_D]\ [_I\ I\ [_V\ [\sout{Najwa_D}]\ [_V\ [fa{:}fit_V hu_\varphi]\ [_D\ [\sout{minnu_D}]\ [\sout{hu_\varphi}$ crosstextitri$\widehat{dz}$a:l$_N$]]]]]]]]]

v. Delete $[ri\widehat{dz}a{:}l_N]$

$[_C\ [_D\ [ri\widehat{dz}a{:}l_N]\ [_D\ [minnu_D]\ [\sout{hu_\varphi}\ \sout{ri\widehat{dz}a{:}l_N}]\ ]\ [_C\ C\ [_I\ [Najwa_D]\ [_I\ I\ [_V\ [\sout{Najwa_D}]\ [_V\ [fa{:}fit_V hu_\varphi]\ [_D\ [\sout{minnu_D}]\ [\sout{hu_\varphi}\ \sout{ri\widehat{dz}a{:}l_N}]\ ]\ ]\ ]\ ]\ ]\ ]\ ]\ ]$

e. TopP phase:

i. Merge <Top, C>

$[_{Top}\ Top\ [_C\ [_D\ [ri\widehat{dz}a{:}l_N]\ [_D\ [minnu_D]\ [\sout{hu_\varphi}\ \sout{ri\widehat{dz}a{:}l_N}]\ ]\ [_C\ C\ [_I\ [Najwa_D]\ [_I\ I\ [_V\ [\sout{Najwa_D}]\ [_V\ [fa{:}fit_V hu_\varphi]\ [_D\ [\sout{minnu_D}]\ [\sout{hu_\varphi}\ \sout{ri\widehat{dz}a{:}l_N}]\ ]\ ]\ ]\ ]\ ]\ ]\ ]\ ]\ ]$

ii. Copy $Najwa_D$ and Merge <D, Top>

$[_{Top}\ Najwa_D\ [_{Top}\ Top\ [_C\ [_D\ [ri\widehat{dz}a{:}l_N]\ [_D\ [minnu_D]\ [\sout{hu_\varphi}\ \sout{ri\widehat{dz}a{:}l_N}]\ ]\ [_C\ C\ [_I\ [Najwa_D]\ [_I\ I\ [_V\ [\sout{Najwa_D}]\ [_V\ [fa{:}fit_V hu_\varphi]\ [_D\ [\sout{minnu_D}]\ [\sout{hu_\varphi}\ \sout{ri\widehat{dz}a{:}l_N}]\ ]\ ]\ ]\ ]\ ]\ ]\ ]\ ]\ ]\ ]$

iii. Delete $Najwa_D$

$[_{Top}\ Najwa_D\ [_{Top}\ Top\ [_C\ [_D\ [ri\widehat{dz}a{:}l_N]\ [_D\ [minnu_D]\ [\sout{hu_\varphi}\ \sout{ri\widehat{dz}a{:}l_N}]\ ]\ [_C\ C\ [_I\ [\sout{Najwa_D}]\ [_I\ I\ [_V\ [\sout{Najwa_D}]\ [_V\ [fa{:}fit_V hu_\varphi]\ [_D\ [\sout{minnu_D}]\ [\sout{hu_\varphi}\ \sout{ri\widehat{dz}a{:}l_N}]\ ]\ ]\ ]\ ]\ ]\ ]\ ]\ ]\ ]\ ]$

Here, I have demonstrated that the derivation of Iraqi Arabic genitive interrogatives employing the resumptive strategy parallels D-linked content questions employing the resumptive strategy (Sterian 2011), in that both have a D–φ–N structure.

4.5 Resumption is not possible with subject extraction

It has been observed that languages which can use resumption with extraction from complements ban it for subject extraction (Borer 1984, McCloskey 1990, Shlonsky 2002, Boeckx 2003, Malkawi 2009, Rouveret 2011). In this section, I discuss why subject agreement on the verb cannot be considered a weak resumptive, and why resumption is not possible with subject extraction.

Regarding subject agreement, Arabic is a *pro*-drop language. If agreement is treated as a pronominal element, then subject agreement will have the status of a resumptive element, but if agreement is not a pronominal element for the purposes of establishing an A′-dependency, then Iraqi Arabic would be analyzed as exhibiting the highest-subject restriction. To choose between these two alternatives, one needs to examine island contexts which obligatorily require resumption. If, in such island

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

contexts, subject agreement by itself is sufficient to license an A′-dependency, then one can conclude that subject agreement has the status of a pronominal element for the purposes of resumption. But if an additional pronoun is needed in such contexts, then one can conclude that subject agreement is not a pronominal element. The relevant data are given in (57) and (58) for *wh*-islands and adjunct islands respectively. In (57a) and (58a), where there is subject agreement only, extraction from the island is illicit. This contrasts with (57b) and (58b), where an overt subject pronoun is present, and extraction from the island is licit. On the basis of such contrasts, I conclude that subject–verb agreement in Iraqi Arabic does not qualify as a pronominal element for the purposes of resumption.

(57) *Wh-island*:

a. No overt pronoun:

*minnu: ytasa:ʔil Ragheb le:ʃ _ ba:sit Behjet bi-l-Hafla
who wonder.3.MASC.SG Ragheb why _ kissed.3.FEM.SG Behjet at-the-party
*'Who is Ragheb wondering why _ kissed Behjet at the party?'

b. Overt pronoun:

minnu: ytasa:ʔil Ragheb le:ʃ *hyi* ba:sit Behjet bi-l-Hafla
who wonder.3.MASC.SG Ragheb why *she* kissed.3.FEM.SG Behjet at-the-party
'Who is Ragheb wondering why she kissed Behjet at the party?'

(58) *Adjunct Island*:

a. No overt pronoun:

*minnu: ga:l Samer li-Ragheb ʃw:aget _ ra:H timʃi: li-Baghdad
who said.3.MASC.SG Samer to-Ragheb when _ will go.3.FEM.SG to-Baghdad
'Who did Samer say to Ragheb when _ will go to Baghdad?'

b. Overt pronoun:

minnu: ga:l Samer li-Ragheb ʃw:aget hyi ra:H timʃi: li-Baghdad
who said.3.MASC.SG Samer to-Ragheb when she will go.3.FEM.SG to-Baghdad
'Who did Samer say to Ragheb when she will go to Baghdad?'

Having established that subject agreement on the verb cannot be considered a weak resumptive, I move on to discuss why resumption is not possible with subjects. Recall that subjects in Iraqi Arabic can only be strong pronouns because they do not cliticize (section 1.4). But, as observed above, Iraqi Arabic has only clitic resumption: the pronominal element which serves as a resumptive is drawn from the (Accusative) clitic series. Therefore, subject resumption is not possible because partial DP-deletion cannot occur, as the pronoun cannot cliticize to the verb.[7] Below, I

[7] As an anonymous reviewer points out, Arabic has subject clitics. Consider (i), which has a subject clitic:

(i) yʕarəf enn=ha taHkyi il-ʕarabyi
knows.3.MASC.SG that=her speaks.3.FEM.SG Arabic
'He knows that she speaks Arabic.'

The subject clitic in (i) occurs only with declarative complementizers like *ennu* 'that'. In contrast, resumptive pronouns appear only in content questions, dislocation and relativization; the relativization strategy uses only the designated relative pronoun *illyi* 'which' that does not

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

present this analysis in more detail. In (59a) I show a content question with subject extraction employing the gap strategy, the numeration of which is given in (59b).

(59) *Subject extraction*:

a. Extraction with gap:

ya: Sadi:ga iʃtarat ʃigga
which friend.FEM bought.3.FEM.SG apartment
'Which friend bought an apartment?'

b. Numeration:

{TOP, C, I, *iʃtarat*$_V$, *ya:*$_D$, *Sadi:ga*$_N$, *figga*$_N$}

The derivation of (59a) is shown in (60) and, as before, it develops by phases, where each maximal projection represents a domain for the application of rules. Within the VP phase (60b), the VP is built by merging the verb V *iʃtarat* 'she bought' with the DP *ʃigga* 'apartment' (60bi). Then the subject is built by merging the D-linked interrogative pronoun *ya:* 'which' with the noun *Sadi:ga* 'friend', as in (60bii). The subject DP *ya: Sadi:ga* 'which friend' then merges with the V at Spec-VP (60biii). During the IP phase (60c), the inflectional head merges with the VP (60ci). Then the subject DP *ya: Sadi:ga* 'which friend' is moved to Spec-IP via successive application of Copy and Delete (60cii–iii). At the CP phase (60d), the complementizer merges with IP and the DP *ya: Sadi:ga* 'which friend' is moved to Spec-CP via successive application of Copy and Delete (60di–iii).

(60) *Derivation of (59a)*:

a. Numeration:

{TOP, C, I, *iʃtarat*$_V$, *ya:*$_D$, *Sadi:ga*$_N$, *figga*$_N$}

b. VP phase:

i. Merge <V, D>

[$_V$ [*iʃtarat*$_V$] [$_D$ *figga*$_N$]]

ii. Merge <D, N>

[$_D$ [*ya:*$_D$] [*Sadi:ga*$_N$]]

iii. Merge <D, V>

[$_V$ [$_D$ [*ya:*$_D$] [*Sadi:ga*$_N$]] [$_V$ [*iʃtarat*$_V$] [$_N$ *figga*$_N$]]]

c. IP phase:

i. Merge <I, V>

[$_I$ I [$_V$ [$_D$ [*ya:*$_D$] [*Sadi:ga*$_N$]] [$_V$ [*iʃtarat*$_V$] [$_N$ *figga*$_N$]]]]

ii. Copy [$_D$ *ya:*$_D$ *Sadi:ga*$_N$] and Merge <D, I>

[$_I$ [$_D$ [*ya:*$_D$] [*Sadi:ga*$_N$]] [$_I$ I [$_V$ [$_D$ [*ya:*$_D$] [*Sadi:ga*$_N$]] [$_V$ [*iʃtarat*$_V$] [$_N$ *figga*$_N$]]]]]]

iii. Delete [$_D$ *ya:*$_D$ *Sadi:ga*$_N$]

[$_I$ [$_D$ [*ya:*$_D$] [*Sadi:ga*$_N$]] [$_I$ I [$_V$ [$_D$ [~~*ya:*~~$_D$] [~~*Sadi:ga*~~$_N$]] [$_V$ [*iʃtarat*$_V$] [$_N$ *figga*$_N$]]]]]]

take clitics. The presence of the subject clitics with the declarative complementizer *ennu:* pertain to the special syntax of *ennu:* (Shlonsky 1994; Benmamoun 2000; Ackema and Neeleman 2003, 2012; Benmamoun and Lorimor 2006) The analysis in this article is not affected either way by this.

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

d. CP phase:

i. Merge <C,I>

[$_C$ C [$_I$ [$_D$ [*ya:*$_D$] [*Sadi:ga*$_N$] [$_I$ I [$_V$ [$_D$ [~~*ya:*~~$_D$] [~~*Sadi:ga*~~$_N$]] [$_V$ [*iftarat*$_V$] [$_N$ *figga*$_N$]]]]]]]

ii. Copy [$_D$ [*ya:*$_D$] [*Sadi:ga*$_N$]] and Merge <D,C>

[$_C$ [$_D$ [*ya:*$_D$] [*Sadi:ga*$_N$]] [$_C$ C [$_I$ [$_D$ [*ya:*$_D$] [*Sadi:ga*$_N$] [$_I$ I [$_V$ [$_D$ [~~*ya:*~~$_D$] [~~*Sadi:ga*~~$_N$]] [$_V$ [*iftarat*$_V$] [$_N$ *figga*$_N$]]]]]]]]

iii. Delete [$_D$ [*ya:*$_D$] [*Sadi:ga*$_N$]]

[$_C$ [$_D$ [*ya:*$_D$] [*Sadi:ga*$_N$]] [$_C$ C [$_I$ [$_D$ [*ya:*$_D$] [~~*Sadi:ga*~~$_N$] [$_I$ I [$_V$ [$_D$ [~~*ya:*~~$_D$] [~~*Sadi:ga*~~$_N$]] [$_V$ [*iftarat*$_V$] [$_N$ *figga*$_N$]]]]]]]]

Let us consider now the ungrammatical example in (61a), a content question with subject extraction employing the resumptive strategy; the numeration of (61a) is given in (61b). Notice that the numeration in (61b) has a resumptive pronoun, and the structure of the D-linked interrogative expressions is D–φ–N.

(61) *Subject extraction*:

a. Extraction with resumption:

*ya: Sadi:ga hyia iʃtarat ʃigga
which friend.FEM she bought.3.FEM.SG apartment
'Which friend [*she*] bought an apartment?'

b. Numeration:

{TOP, C, I, *iftarat*$_V$, *ya:*$_D$, *Sadi:ga*$_N$, *figga*$_N$, *hiya*$_D$}

The derivation of (61a) is shown in (62). Within the VP phase (62b), the VP is built by merging the verb V *iftarat* 'she bought'with the DP *figga* 'apartment' (62bi). The subject DP is built by merging the pronoun *hiya* 'she' with the noun *Sa:diga* 'friend' (62bii), and then merging that complex syntactic object with the D-linked interrogative *ya:* 'which' (62biii). At the next step (62biv), the derivation crashes, because the subject DP merges with V at Spec-V and the pro-φ *hiya* 'she' cannot cliticize to the verb *iftarat* 'she bought' within the VP-phase. Notice that this account crucially assumes that phonological clitic attachments must be resolved within the syntactic phase that introduces the clitic.

(62) *Derivational analysis of (61a)*:

a. Numeration:

{C, I, *iftarat*$_V$, *ya:*$_D$, *Sadi:ga*$_N$, *figga*$_N$, *hiya*$_\varphi$}

b. VP phase:

i. Merge <V, D>

[$_V$ [*iftarat*$_V$] [$_D$ *figga*$_N$]]

ii. Merge <φ, N>

[$_\varphi$ [*hiya*$_\varphi$] [*Sa:diga* $_N$]]

iii. Merge <D, φ>

[$_D$ [*ya:*$_D$] [*hiya*$_\varphi$ *Sadiga*$_N$]]

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

iv. Merge <D, V>

*[$_V$ [$_D$ [*ya:*$_D$] [*hiya*$_\varphi$ *Sadiga*$_N$]] [$_V$ [*iftarat*$_V$] [$_D$ *figga*$_N$]]]

At step (62biv) the derivation crashes, because partial DP-deletion cannot occur; the pronoun cannot cliticize to the verb.

4.6 Resumption and islandhood in Iraqi Arabic

In this section, I present the behaviour of resumptive pronouns with respect to islandhood in Iraqi Arabic. I review the analysis of resumptive chains versus islands as detailed in Boeckx (2003) (section 4.6.1) and present a possible explanation for the behaviour of resumptive chains in Iraqi Arabic with respect to islands (section 4.6.2).

4.6.1 Islands and resumptive chains: Boeckx (2003)

By "island", we understand a syntactic domain from which extraction is not possible (Ross 1986). Resumptive pronouns have been observed to be oblivious to island phenomena (Boeckx 2003, Rouveret 2011). Island constraints also play a role in the scope of semantic operators and quantifiers.

In the spirit of Ross (1964), Boeckx (2003:65) considers that movement is unbounded:

> Crossing an island in and of itself did not suffice to yield a deviant output. Rather, only certain types of rules were sensitive to islands. Ross identified two such types: chopping rules and feature-changing rules. For them, islands constitute impenetrable domains. By contrast, copying rules are said to be insensitive to islandhood. (Interestingly enough, the copying rule that Ross discusses is resumption) [...] it is fair to say that in the context of the minimalist program, the very notion of island is hard to capture.

Boeckx adopts a pluralistic view of islands: he considers that strong islands are adjuncts and therefore Agree cannot apply in these domains, while clitic islands occur because of operator intervention effects. This becomes relevant for his analysis of resumptive chains: if a language has non-agreeing complementizers, Agree is irrelevant and resumptive chains can form unhindered in a strong island environment. If a language has agreeing complementizers, strong island effects will show under resumption, since adjuncts are inaccessible to Agree. Clitic islands are not subject to Agree constraints, hence resumptive chains can form in clitic island environments.

According to Boeckx there is a clear connection between resumption and non-agreement. There is no need for an agreeing complementizer, because the operation Match is enough to cause Move. Since languages have agreeing and non-agreeing complementizers, Boeckx is not only able to account for how resumptive chains are created, but also to explain why languages that use resumption behave differently with islands. Based on whether the complementizer agrees, Boeckx classifies languages into two main types.

(i) Languages with non-agreeing complementizers: Resumption is not sensitive to any type of island, whether strong or clitic (i.e., Hebrew, Irish, Arabic). Match is established between the complementizer and the NP-complement of

the complex DP, causing subextraction to take place. Since there is no need for Agree, resumptive chains are insensitive to islands.

(ii) Languages with agreeing complementizers: These are further divided into two subgroups: languages in which resumption is sensitive to strong islands, but insensitive to clitic islands (Romanian, Scottish Gaelic, and Greek), and languages where resumption is sensitive to all types of islands (Serbo-Croatian and Vata). Because of language-specific factors, if Agree is forced in the domain of resumption, then resumptive chains become sensitive to strong islands, because they are domains into which Agree cannot see (i.e., adjuncts). Since this problem does not apply to clitic islands, resumptive chains can be formed in these domains, as in Romanian, Scottish Gaelic, and Greek.

4.6.2 *Resumption is obligatory in weak islands in Iraqi Arabic*

In this section, I show that Iraqi Arabic resumptive pronouns appear in weak islands. In the following examples, I use *wh*-islands (embedded CPs introduced by *wh*-constituents) and adjunct islands (islands formed from an adjunct clause). Consider first extraction from a *wh*-island: the gap strategy is ill formed, but resumption is possible (63). The same is true with adjunct islands, as seen in (64).

(63) *Wh-island*:

a. Gap strategy:

*ya: Su:ra li-bni=ha Samer ysʔal iða kull mraya
which picture.FEM of-son=her Samer ask.3.MASC.SG if every woman
ʃagagat _
tore.3.FEM.SG _
*'Which photo of her son did Samer wonder if every woman tore _?'

b. Resumptive strategy:

ya: Su:ra li-bni=ha Samer ysʔal iða kull mraya
which picture.FEM of-son=her Samer ask.3.MASC.SG if every woman
ʃagagat=*ha*
tore.3.FEM.SG=3.FEM
'Which photo of her son did Samer wonder if every woman tore *[it]*?'

(64) *Adjunct Island*:

a. Gap strategy:

*ya: Su:ra li-bni=ha Samer zaʕal li-ennu: kull mraya
which picture.FEM of-son=her Samer get-angry because every woman
ʃagagat _
tore.3.FEM.SG _
*'Which photo of her son did Samer get angry because every woman tore _?'

b. Resumptive strategy:

ya: Su:ra li-bni=ha Samer zaʕal li-ennu: kull mraya
which picture.FEM of-son=her Samer get-angry because every woman
ʃagagat=ha
tore.3.FEM.SG=3.FEM.SG
'Which photo of her son did Samer get angry because every woman tore [it]?'

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

In the following, I show how the derivation of a *wh*-island proceeds under the current analysis. Consider the grammatical example in (65a) of a *wh*-island employing the resumptive strategy, and its numeration in (65b).

(65) a. *Wh-Island with resumption*:

Samer ya: Su:ra ys?al iða kull mraya
Samer which picture.FEM ask.3.MASC.SG if every woman

ʃagagat=ha
tore.3.FEM.SG=3.FEM
'Which photo did Samer wonder if every woman tore [it]?'

b. Numeration of (65a):

{C, I, *ʃagagat*$_V$, *ys?al*$_V$, *ya:*$_D$, *Su:ra*$_N$, *kull mraya*$_D$, *ha*$_\varphi$}

The derivation of (65a) is shown in (66). During the embedded VP phase, the DP is built by merging the pronoun *ha* 'her' with the noun *Su:ra* 'picture' (66bi) and by merging that complex syntactic object with the D-linked interrogative *ya:* 'which' (66bii). Then the verb *ʃagagat* 'tore' merges with the complex syntactic object *ya: ha Su:ra* (66biii) and cliticization of the pronoun *ha* 'her' immediately takes place via successive application of Copy and Delete (66biv–v). The subject of the embedded clause *kull mraya* 'every woman' is merged at Spec-V (66bvi). During the embedded IP phase (66c), the inflectional head merges with the VP (66ci), then the subject DP *kull mraya* 'every woman' is moved to Spec-IP via successive application of Copy and Delete (66cii–iii). At the embedded CP phase (66d), the complementizer is merged and the DP *ya: ha Su:ra* is moved to Spec-CP via successive application of Copy and Delete (66di–iii). At the matrix VP phase (66e), the verb *ys?al* merges with the embedded clause (66ei), then the subject *Samer* is merged as Spec-VP (66eii). During the matrix IP phase (66f), the inflectional head merges with the VP (66fi), then the subject DP *Samer* is moved to Spec-IP via successive application of Copy and Delete (66fii–iii). At the matrix CP phase (66g), the complementizer merges with the IP and the DP *ya: ha Su:ra* is moved to Spec-CP via successive application of Copy and Delete (66gi–iii).

(66) *Derivation of (65a)*:

a. Numeration:

{C, *iða*$_C$, I, *ʃagagat*$_V$, *ys?al*$_V$, *ya:*$_D$, *Su:ra*$_N$, *kull mraya*$_D$, *ha*$_\varphi$}

b. VP phase:

i. Merge <φ, N>

[$_\varphi$ [*ha*$_\varphi$] [*Su:ra*$_N$]]

ii. Merge <D, φ>

[$_D$ [*ya:*$_D$] [*ha*$_\varphi$ *Su:ra*$_N$]]

iii. Merge <V, D>

[$_V$ [*ʃagagat*$_V$] [$_D$ [*ya:*$_D$] [*ha*$_\varphi$ *Su:ra*$_N$]]]

iv. Copy *ha*$_\varphi$ and Merge <φ, V>

[$_V$ [*ʃagagat*$_V$ *ha*$_\varphi$] [$_D$ [*ya:*$_D$] [*ha*$_\varphi$ *Su:ra*$_N$]]]

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

v. Delete ha_{φ}
[$_{V}$ [*ʃagagat*$_{V}$ *ha*$_{\varphi}$] [$_{D}$ [*ya:*$_{D}$] [~~*ha*~~$_{\varphi}$ *Su:ra*$_{N}$]]]

vi. Merge <D, V>
[$_{V}$ [*kull mraya*$_{D}$] [$_{V}$ [*ʃagagat*$_{V}$ *ha*$_{\varphi}$] [$_{D}$ [*ya:*$_{D}$] [~~*ha*~~$_{\varphi}$ *Su:ra*$_{N}$]]]]

c. IP phase:

i. Merge <I, V>
[$_{I}$ I [$_{V}$ [*kull mraya*$_{D}$] [$_{V}$ [*ʃagagat*$_{V}$ *ha*$_{\varphi}$] [$_{D}$ [*ya:*$_{D}$] [~~*ha*~~$_{\varphi}$ *Su:ra*$_{N}$]]]]]

ii. Copy *kull mraya*$_{D}$ and Merge <D, I>
[$_{I}$ [*kull mraya*$_{D}$] [$_{I}$ I [$_{V}$ [*kull mraya*$_{D}$] [$_{V}$ [*ʃagagat*$_{V}$ *ha*$_{\varphi}$] [$_{D}$ [*ya:*$_{D}$] [~~*ha*~~$_{\varphi}$ *Su:ra*$_{N}$]]]]]]

iii. Delete *kull mraya*$_{D}$
[$_{I}$ [*kull mraya*$_{D}$] [$_{I}$ I [$_{V}$ [~~*kull mraya*~~$_{D}$] [$_{V}$ [*ʃagagat*$_{V}$ *ha*$_{\varphi}$] [$_{D}$ [*ya:*$_{D}$] [~~*ha*~~$_{\varphi}$ *Su:ra*$_{N}$]]]]]]

d. CP phase:

i. Merge <C, I>
[$_{C}$ [*iða*$_{C}$] [$_{I}$ [*kull mraya*$_{D}$] [$_{I}$ I [$_{V}$ [~~*kull mraya*~~$_{D}$] [$_{V}$ [*ʃagagat*$_{V}$ *ha*$_{\varphi}$] [$_{D}$ [*ya:*$_{D}$] [~~*ha*~~$_{\varphi}$ *Su:ra*$_{N}$]]]]]]]

ii. Copy [$_{D}$ [*ya:*$_{D}$] [~~*ha*~~$_{\varphi}$ *Su:ra*$_{N}$]] and Merge <D, C>
[$_{C}$ [$_{D}$ [*ya:*$_{D}$] [~~*ha*~~$_{\varphi}$ *Su:ra*$_{N}$]] [$_{C}$ [*iða*$_{C}$] [$_{I}$ [*kull mraya*$_{D}$] [$_{I}$ I [$_{V}$ [~~*kull mraya*~~$_{D}$] [$_{V}$ [*ʃagagat*$_{V}$ *ha*$_{\varphi}$] [$_{D}$ [*ya:*$_{D}$] [~~*ha*~~$_{\varphi}$ *Su:ra*$_{N}$]]]]]]]]

iii. Delete [$_{D}$ [*ya:*$_{D}$] [~~*ha*~~$_{\varphi}$ *Su:ra*$_{N}$]]
[$_{C}$ [$_{D}$ [*ya:*$_{D}$] [~~*ha*~~$_{\varphi}$ *Su:ra*$_{N}$]] [$_{C}$ [*iða*$_{C}$] [$_{I}$ [*kull mraya*$_{D}$] [$_{I}$ I [$_{V}$ [~~*kull mraya*~~$_{D}$] [$_{V}$ [*ʃagagat*$_{V}$ *ha*$_{\varphi}$] [$_{D}$ [~~*ya:*~~$_{D}$] [~~*ha*~~$_{\varphi}$ ~~*Su:ra*~~$_{N}$]]]]]]]]

e. VP phase:

i. Merge <V, C>
[$_{V}$ [*ysʔal*$_{V}$] [$_{C}$ [$_{D}$ [*ya:*$_{D}$] [~~*ha*~~$_{\varphi}$ *Su:ra*$_{N}$]] [$_{C}$ [*iða*$_{C}$] [$_{I}$ [*kull mraya*$_{D}$] [$_{I}$ I [$_{V}$ [~~*kull mraya*~~$_{D}$] [$_{V}$ [*ʃagagat*$_{V}$ *ha*$_{\varphi}$] [$_{D}$ [~~*ya:*~~$_{D}$] [~~*ha*~~$_{\varphi}$ ~~*Su:ra*~~$_{N}$]]]]]]]]]

ii. Merge *Samer*$_{D}$
[$_{V}$ [*Samer*$_{D}$] [$_{V}$ [*ysʔal*$_{V}$] [$_{C}$ [$_{D}$ [*ya:*$_{D}$] [~~*ha*~~$_{\varphi}$ *Su:ra*$_{N}$]] [$_{C}$ [*iða*$_{C}$] [$_{I}$ [*kull mraya*$_{D}$] [$_{I}$ I [$_{V}$ [~~*kull mraya*~~$_{D}$] [$_{V}$ [*ʃagagat*$_{V}$ *ha*$_{\varphi}$] [$_{D}$ [~~*ya:*~~$_{D}$] [~~*ha*~~$_{\varphi}$ ~~*Su:ra*~~$_{N}$]]]]]]]]]]

f. IP phase:

i. Merge <I, V>
[$_{I}$ I [$_{V}$ [*Samer*$_{D}$] [$_{V}$ [*ysʔal*$_{V}$] [$_{C}$ [$_{D}$ [*ya:*$_{D}$] [~~*ha*~~$_{\varphi}$ *Su:ra*$_{N}$]] [$_{C}$ [*iða*$_{C}$] [$_{I}$ [*kull mraya*$_{D}$] [$_{I}$ I [$_{V}$ [~~*kull mraya*~~$_{D}$] [$_{V}$ [*ʃagagat*$_{V}$ *ha*$_{\varphi}$] [$_{D}$ [~~*ya:*~~$_{D}$] [~~*ha*~~$_{\varphi}$ ~~*Su:ra*~~$_{N}$]]]]]]]]]]]

ii. Copy *Samer*$_{D}$ and Merge <D, I>
[$_{I}$ [*Samer*$_{D}$] [$_{I}$ I [$_{V}$ [*Samer*$_{D}$] [$_{V}$ [*ysʔal*$_{V}$] [$_{C}$ [$_{D}$ [*ya:*$_{D}$] [~~*ha*~~$_{\varphi}$ *Su:ra*$_{N}$]] [$_{C}$ [*iða*$_{C}$] [$_{I}$ [*kull mraya*$_{D}$] [$_{I}$ I [$_{V}$ [~~*kull mraya*~~$_{D}$] [$_{V}$ [*ʃagagat*$_{V}$ *ha*$_{\varphi}$] [$_{D}$ [~~*ya:*~~$_{D}$] [~~*ha*~~$_{\varphi}$ ~~*Su:ra*~~$_{N}$]]]]]]]]]]]]

iii. Delete *Samer*$_{D}$
[$_{I}$ [*Samer*$_{D}$] [$_{I}$ I [$_{V}$ [*Samer*$_{D}$] [$_{V}$ [*ysʔal*$_{V}$] [$_{C}$ [$_{D}$ [*ya:*$_{D}$] [~~*ha*~~$_{\varphi}$ *Su:ra*$_{N}$]] [$_{C}$ [*iða*$_{C}$] [$_{I}$ [*kull mraya*$_{D}$] [$_{I}$ I [$_{V}$ [*kull mraya*$_{D}$] [$_{V}$ [*ʃagagat*$_{V}$ *ha*$_{\varphi}$] [$_{D}$ [~~*ya:*~~$_{D}$] [~~*ha*~~$_{\varphi}$ ~~*Su:ra*~~$_{N}$]]]]]]]]]]]]

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

g. CP phase:

i. Merge <C,I>

[$_C$ C [$_I$ [*Samer*$_D$] [$_I$ I [$_V$ [~~*Samer*~~$_D$] [$_V$ [*ys?al*$_V$] [$_C$ [$_D$ [*ya:*$_D$] [~~*ha*~~$_\varphi$ *Su:ra*$_N$]] [$_C$ [*iða*$_C$] [$_I$ [*kull mraya*$_D$] [$_I$ I [$_V$ [~~*kull mraya*~~$_D$] [$_V$ [*fagagat*$_V$ *ha*$_\varphi$] [$_D$ [~~*ya:*~~$_D$] [~~*ha*~~$_\varphi$ ~~*Su:ra*~~$_N$]]]]]]]]]]]]]

ii. Copy [$_D$ [*ya:*$_D$] [~~*ha*~~$_\varphi$ *Su:ra*$_N$]] and Merge <D,C>

[$_C$ [$_D$ [*ya:*$_D$] [~~*ha*~~$_\varphi$ *Su:ra*$_N$]] [$_C$ C [$_I$ [*Samer*$_D$] [$_I$ I [$_V$ [~~*Samer*~~$_D$] [$_V$ [*ys?al*$_V$] [$_C$ [$_D$ [*ya:*$_D$] [~~*ha*~~$_\varphi$ *Su:ra*$_N$]] [$_C$ [*iða*$_C$] [$_I$ [*kull mraya*$_D$] [$_I$ I [$_V$ [~~*kull mraya*~~$_D$] [$_V$ [*fagagat*$_V$ *ha*$_\varphi$] [$_D$ [~~*ya:*~~$_D$] [~~*ha*~~$_\varphi$ ~~*Su:ra*~~$_N$]]]]]]]]]]]]]

iii. Delete [$_D$ [*ya:*$_D$] [~~*ha*~~φ *Su:ra*N]]

[$_C$ [$_D$ [*ya:*$_D$] [~~*ha*~~$_\varphi$ *Su:ra*$_N$]] [$_C$ C [$_I$ [*Samer*$_D$] [$_I$ I [$_V$ [~~*Samer*~~$_D$] [$_V$ [*ys?al*$_V$] [$_C$ [$_D$ [~~*ya:*~~$_D$] [~~*ha*~~$_\varphi$ ~~*Su:ra*~~$_N$]] [$_C$ [*iða*$_C$] [$_I$ [*kull mraya*$_D$] [$_I$ I [$_V$ [~~*kull mraya*~~$_D$] [$_V$ [*fagagat*$_V$ *ha*$_\varphi$] [$_D$ [~~*ya:*~~$_D$] [~~*ha*~~$_\varphi$ ~~*Su:ra*~~$_N$]]]]]]]]]]]]]

The derivation of the content question with D-linked locative adjunct employing the resumptive strategy converges, because the resumptive pronoun φ of the D-linked interrogative adjunct can cliticize to the verb.

Consider the ungrammatical example (67a) and its numeration (67b). Notice that the numeration (67b) does not have a resumptive pronoun and the structure of the D-linked interrogative is D–N.

(67) a. *Wh-Island with gap strategy:*

*Samer ya: Su:ra ys?al iða kull mraya ʃagagat _
Samer which picture.FEM ask.3.MASC.SG if every woman tore.3.FEM.SG _
*'Which photo did Samer wonder if every woman tore _?'

b. Numeration:

{C, *iða*$_C$, I$_\emptyset$, *fagagat*$_V$, *ya:*$_D$, *Su:ra*$_N$, *kull mraya*$_D$}

The derivation of (67a) is shown in (68). During the embedded VP phase, the DP is built by merging the D-linked interrogative *ya:* 'which' with the noun *Su:ra* 'picture' (68bi). Then the verb *fagagat* merges with the direct object *ya: Su:ra* (68bii). The subject of the embedded clause *kull mraya* 'every woman' is merged at Spec-V (68biii). During the embedded IP phase, the inflectional head merges with the VP (68ci), then the subject DP *kull mraya* 'every woman' is moved to Spec-IP via successive application of Copy and Delete (68cii–iii). At the CP phase (68d), the complementizer *iða*$_C$ 'whether' is merged at C (68di) and then the DP *ya: Su:ra* is moved to Spec-CP via successive application of Copy and Delete (68dii–iii). At this point the derivation crashes, because there is no clitic to remain cliticized to the verb.

(68) *Derivation of (67a):*

a. Numeration:

{C, I, *fagagat*$_V$, *ya:*$_D$, *Su:ra*$_N$, *kull mraya*$_D$}

b. VP phase:

i. Merge <D, N>

[$_D$ [*ya:*$_D$] [*Su:ra*$_N$]]

ii. Merge <V, D>

[$_V$ [*fagagat*$_V$] [[$_D$ [*ya:*$_D$] [*Su:ra*$_N$]]]]

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

iii. Merge <D, V>
$[_V$ [*kull mraya*$_D$] $[_V$ [*fagagat*$_V$] $[_D$ [*ya:*$_D$] [*Su:ra*$_N$]]]]

c. IP phase:
i. Merge <I, V>
$[_I$ I $[_V$ [*kull mraya*$_D$] $[_V$ [*fagagat*$_V$] $[_D$ [*ya:*$_D$] [*Su:ra*$_N$]]]]]
ii. Copy *kull mraya*$_D$ and Merge <D, I>
$[_I$ [*kull mraya*$_D$] $[_I$ I $[_V$ [*kull mraya*$_D$] $[_V$ [*fagagat*$_V$] $[_D$ [*ya:*$_D$] [*Su:ra*$_N$]]]]]]
iii. Delete *kull mraya*$_D$
$[_I$ [*kull mraya*$_D$] $[_I$ I $[_V$ [~~*kull mraya*~~$_D$] $[_V$ [*fagagat*$_V$] $[_D$ [*ya:*$_D$] [*Su:ra*$_N$]]]]]]

d. CP phase:
i. Merge <C,I>
$[_C$ [*iða*$_C$] $[_I$ [*kull mraya*$_D$] $[_I$ I $[_V$ [~~*kull mraya*~~$_D$] $[_V$ [*fagagat*$_V$] $[_D$ [*ya:*$_D$] [*Su:ra*$_N$]]]]]]]
ii. Copy $[_D$ [*ya:*$_D$] [*Su:ra*$_N$]] and Merge <D, C>
$[_C$ $[_D$ [*ya:* $_D$] [*Su:ra*$_N$]] $[_C$ [*iða*$_C$] $[_I$ [*kull mraya* $_D$] $[_I$ I $[_V$ [~~*kull mraya* $_D$~~] $[_V$ [*fagagat*$_V$] $[_D$ [*ya:* $_D$] [*Su:ra*$_N$]]]]]]]]
iii. Delete $[_D$ [*ya:* $_D$] *Su:ra*$_N$]]
$[_C$ $[_D$ [*ya:* $_D$] [*Su:ra*$_N$]] $[_C$ [*iða*$_C$] $[_I$ [*kull mraya* $_D$] $[_I$ I $[_V$ [~~*kull mraya* $_D$~~] $[_V$ [*fagagat*$_V$] $[_D$ [~~*ya:* $_D$~~] [~~*Su:ra*~~$_N$]]]]]]]]

At step (68d) the derivation crashes because there is no pronoun available to cliticize to the verb.

5. Conclusions

In this article, I presented a parallel between genitive interrogatives and D-linked content questions in Iraqi Arabic. I argued that genitive interrogatives are inherently D-linked and that it is the syntactic structure which causes genitive interrogatives and D-linked interrogatives to pattern together with respect to local extraction, long-distance extraction, and superiority, and that this D-linking nature arises whenever there is an overt domain restriction. Thus, genitive interrogatives have a D–N structure in content questions which employ the gap strategy and a D–φ–N structure in content questions which employ the resumptive strategy. This has consequences for our understanding of how D-linking interacts with the resumptive strategy.

References

Ackema, Peter and Ad Neeleman. 2003. Context-sensitive spell-out. *Natural Language and Linguistic Theory* 21:651–685.

Ackema, Peter and Ad Neeleman. 2012. Agreement weakening at PF: A reply to Benmamoun and Lorimor. *Linguistic Inquiry* 43:75–96.

Adger, David and Gillian Ramchand. 2001. Phases and interpretability. In *Proceedings of the 20th West Coast Conference on Formal Linguistics (WCCFL)*, ed. Karine Magerdoomian and Leora Anne Bar-el, 1–14. Somerville, MA: Cascadilla Press.

https://doi.org/10.1017/S0008413100000232 Published online by Cambridge University Press

Adger, David and Gillian Ramchand. 2005. Merge and Move: *Wh*-dependencies revisited. *Linguistic Inquiry* 36:158–193.

Alexopoulou, Theodora and Frank Keller. 2003. Linguistic complexity, locality and resumption. In *Proceedings of the 22nd West Coast Conference on Formal Linguistics (WCCFL)*, ed. Gina Garding and Mimu Tsujimura, 15–28. Somerville, MA: Cascadilla Press.

Alkalesi, Yasin M. 2006. *Modern Iraqi Arabic with MP3 files*. Washington, DC: Georgetown University Press.

Aoun, Joseph and Lina Choueiri. 1999. Modes of interrogation. Ms., University of Southern California, Los Angeles.

Aoun, Joseph and Audrey Li. 2003. *Essays on the representational and derivational nature of grammar: The diversity of wh-constructions*. Cambridge, MA: MIT Press.

Aoun, Joseph, Lina Choueiri, and Norbert Hornstein. 2001. Resumption, movement and derivational economy. *Linguistic Inquiry* 32:371–403.

Benmamoun, Elabbas. 2000. *The feature structure of functional categories: A comparative study of Arabic dialects*. Oxford: Oxford University Press.

Benmamoun, Elabbas and Heidi Lorimor. 2006. Featureless expressions: When morphophonological markers are absent. *Linguistic Inquiry* 37:1–23.

Boeckx, Cedric. 2003. *Islands and chains: Resumption as stranding*. Amsterdam: John Benjamins.

Borer, Hagit. 1984. Restrictive relatives in Modern Hebrew. *Natural Language and Linguistic Theory* 2:219–257.

Borer, Hagit. 1999. Deconstructing the construct. In *Beyond principles and parameters*, ed. Kyle Johnson and Ian Roberts, 43–89. Dordrecht: Kluwer.

Brustad, Kristen E. 2000. *The syntax of spoken Arabic: A comprehensive study of Moroccan, Egyptian, Syrian and Kuwaiti dialects*. Washington DC: Georgetown University Press.

Cardinaletti, Anna and Michal Starke. 1999. The typology of structural deficiency. In *Clitics in the languages of Europe*, ed. Henk van Riemsdijk, 145–233. Berlin: Mouton de Gruyter.

Chomsky, Noam. 1968. Conditions on transformations. In *A Festschrift for Morris Halle*, ed. Stephen Anderson and Paul Kiparsky, 232–286. New York: Holt, Reinhart and Winston.

Chomsky, Noam. 1995. Bare phrase structure. In *Evolution and revolution in linguistic theory*, ed. Hector Campos and Paula Kempchinsky, 51–109. Washington, DC: Georgetown University Press.

Chomsky, Noam. 2000. Minimalist inquiries, the framework. In *Step by step: Essays on Minimalist Syntax in honor of Howard Lasnik*, ed. Roger Martin, David Michaels, and Juan Uriagereka, 89–153. Cambridge, MA: MIT Press.

Chomsky, Noam. 2007. Approaching UG from below. In *Interfaces + recursion = language?*, ed. Uli Sauerland and Hans-Martin Gärtner, 1–29. Berlin: Mouton de Gruyter.

Déchaine, Rose-Marie and Martina Wiltschko. 2002. Decomposing pronouns. *Linguistic Inquiry* 33:409–442.

Demirdache, Hamida. 1991. Resumptive chains in restrictive relatives, appositives and dislocation structures. Doctoral dissertation, Massachusetts Institute of Technology.

Demirdache, Hamida and Orin Percus. 2008. When is a pronoun not a pronoun? The case of resumptives. In *Proceedings of the 38thth Annual Meeting of the Northeastern Linguistic Society*, ed. Anisa Schardl, Martin Walkow, and Muhammad Abdurrahman, 231–245. Chicago: Graduate Linguistic Student Association (GLSA).

Demirdache, Hamida and Orin Percus. 2011. Resumptives, movement and interpretation. In *Resumptive pronouns at the interfaces*, ed. Alain Rouveret, 364–394. Amsterdam: John Benjamins.

Elbourne, Paul. 2002. *E-Type anaphora as NP-deletion*. The Netherlands: Kluwer.

Erteschick-Shir, Nomi. 1992. Resumptive pronouns in islands. In *Island constraints: Theory, acquisition and processing*, vol. 15, *Studies in theoretical psycholinguistics*, ed. Helen Goodluck and Michael Rochemont, 89–108. Dordrecht: Kluwer.

Evans, Gareth. 1980. Pronouns. *Linguistic Inquiry* 11:337–359.

Fassi Fehri, Abdelkader. 1988. Case inflection, VS order and X′-Theory. In *Proceedings of the 1st International Conference of the Linguistic Society of Morocco*, ed. Abdelkader Fassi Fehri, unpaginated. Rabat: Oukad.

Guilliot, Nicolas. 2006. La reconstruction à l'interface entre syntaxe et sémantique. Doctoral dissertation, Université de Nantes.

Guilliot, Nicolas. 2008. To reconstruct or not to reconstruct: That is the question. In *Proceedings of the Workshop on What Syntax Feeds Semantics*, ed. Maribel Romero, 25–35. A Association for Logic, Language and Information (FoLLI) publication of the 20th European Summer School in Logic, Language, and Information (ESSLLI). Available at: ling.uni-konstanz.de/pages/home/romero/essIli/synsem-proceedings-v7.pdf.

Guilliot, Nicolas and Nouman Malkawi. 2006. When resumption determines reconstruction. In *Proceedings of West Coast Conference on Formal Linguistics (WCCFL)25*, ed. Donald Baumer, David Montero, and Michael Scanlon, 165–176. Somerville, MA: Cascadilla Press.

Guilliot, Nicolas and Nouman Malkawi. 2009. When movement fails to reconstruct. In *Merging features*, ed. José M. Brucart, Anna Gavarró, and Jaume Solà, 156–169. Oxford: Oxford University Press.

Guilliot, Nicolas and Nouman Malkawi. 2011. Clitic versus strong resumption: Covarying differently. In *Resumptive pronouns at the interfaces*, ed. Alain Rouveret, 395–424. Amsterdam: John Benjamins.

Haywood, John A. and H.M. Nahmad. 1990. *A new Arabic grammar of the written language*. Lund: Humphries.

Hornstein, Norbert and Jairo Nunes. 2008. Adjunction, labelling and bare phrase structure. *Biolinguistics* 2:54–86.

Hornstein, Norbert, Jairo Nunes, and Kleanthes K. Grohmann. 2006. *Understanding Minimalism*. Cambridge: Cambridge University Press.

Malkawi, Nouman. 2009. Sur la syntaxe de quelques expressions anaphoriques: Epithètes et pronoms résomptifs. Doctoral dissertation, Université de Nantes.

McCloskey, James. 1990. Resumptive pronouns, Ā-binding and levels of representation in Irish. In *The syntax of the modern Celtic languages*, ed. Randall Hendrick, 199–248. San Diego: Academic Press.

Owens, Jonathan, Robin Dodsworth, and Trent Rockwood. 2009. Subject–verb order in spoken Arabic: Morpholexical and event-based factors. *Language Variation and Change* 21:39–64.

Pesetsky, David. 1987. Wh-in-situ: Movement and unselective binding. In *The representation of (in)definiteness*, ed. Eric J. Reuland and Alice G.B. ter Meulen, 98–129. Cambridge, MA: MIT Press.

Pesetsky, David. 2000. *Phrasal movement and its kin*. Cambridge, MA: MIT Press.

Reinhart, Tanya. 1983. Coreference and bound anaphora: A restatement of the anaphora questions. *Linguistics and Philosophy* 6:47–88.

Ritter, Elizabeth. 1988a. A case study in the syntax of agreement: Hebrew noun phrases and Benoni verb phrase. Doctoral dissertation, Massachusetts Institute of Technology.

Ritter, Elizabeth. 1988b. A head movement approach to construct state noun phrases. *Linguistics* 26:909–929.

Roberts, Ian. 2010. *Agreement and head movement: Clitics, incorporation and defective goals*. Cambridge, MA: MIT Press.

Rouveret, Alain. 2002. How are resumptive pronouns linked to the periphery? In *Linguistic variation yearbook*, vol. 2, ed. Pierre Pica, 123–184. Amsterdam: John Benjamins.

Rouveret, Alain. 2008. Phasal agreement and reconstruction. In *Foundational issues in linguistic theory*, ed. Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, 164–195. Cambridge, MA: MIT Press.

Rouveret, Alain. 2011. *Resumptive pronouns at the interfaces*. Amsterdam: John Benjamins.

Salem, Murad. 2010. Bare nominals, information structure and word order. *Lingua* 120:1476–1501.

Sells, Peter. 1984. Syntax and semantics of resumptive pronouns. Doctoral dissertation, University of Massachusetts at Amherst.

Sharvit, Yael. 1999. Resumptive pronouns in relative clauses. *Natural Language and Linguistic Theory* 17:557–582.

Shlonsky, Ur. 1992. Resumptive pronouns as a last resort. *Linguistic Inquiry* 23:443–465.

Shlonsky, Ur. 1997. *Clause structure and word order in Hebrew and Arabic*. Oxford: Oxford University Press.

Shlonsky, Ur. 2004. Enclisis and proclisis. In *The structure of CP and IP*, ed. Luigi Rizzi, 329–351. Oxford: Oxford University Press.

Sterian, Laura-Andreea. 2011. The syntax and semantics of gap and resumptive strategies in Iraqi Arabic D-linked content questions. Master's thesis, University of British Columbia.

Sterian, Laura-Andreea. 2014. Pronominal resumption in Baghdadi Arabic: A case for Movement. In *Romano-Arabica XIV*, ed. George Grigore and Laura Sitaru, 319–336. Bucharest: Editura Universităţii Bucureşti.

Tsimpli, Ianthi Maria. 1999. Null operators, clitics and identification: A comparison between Greek and English. In *Studies in Greek syntax*, ed. Artemis Alexiadou, Geoffrey Horrocks, and Melita Stavrou, 241–259. Dordrecht: Kluwer.

Wojdak, Rachel. 2005. The linearization of affixes: Evidence from Nuu-chah-nulth. Doctoral dissertation, University of British Columbia.

Wright, William. 1996. *A grammar of the Arabic language*. Beirut: Librairie du Liban.