Deriving a typology of resumption

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Abstract

This paper proposes a novel approach to deriving the distribution of resumptive pronouns across various languages. The focus will be on structures in which an argument is extracted from (embedded) subject and (embedded) object positions by means of relativization. A movement based mechanism will be presented which derives exactly when the extraction leaves behind a gap, and when the result is a resumptive pronoun. Using this mechanism, a crosslinguistic typology of resumptive patterns is established.

1. Introduction

The term *resumption* refers to an extraction process which does not leave behind a gap (G) at its foot, but a resumptive pronoun (R). This paper focuses on relativization structures and assumes that the element to be relativized moves from its base position to matrix SpecCP of the relative clause in order to become the relative operator. Note that this work is not concerned with *intrusive* resumption, i.e. the insertion of a pronoun to merely improve an otherwise illicit construction, a performative rescue mechanism which many languages display (cf. Keller and Alexopoulou 2005). In contrast, only cases of *grammatical* resumption will be investigated, where a language has fully accepted Rs into its grammatical repertoire.

In many languages, the base position of a relativized element is most commonly characterized as a gap, like in the English example (1):

(1)   This is the man that I saw ___.

However, there are a number of languages which allow for the insertion of a resumptive pronoun in this base position. English is not one of these languages (2):

(2)   *This is the man that I saw *him*.

In contrast, each of the languages investigated in this work allows for Rs in at least some extraction positions (Bulgarian: Krapova 2010, Czech: Toman 1998, Hausa: Crysmann 2012, Hebrew: Borer 1984, Shlonsky 1992, Suñer 1998, McCloskey 2006, Adger 2008, Irish: Shlonsky 1992, Suñer 1998, McCloskey 2002, 2006, Lebanese and Palestinian Arabic: Shlonsky 1992, Aoun 2000, Aoun et al. 2001, Polish: Lavine 2003, Spanish: Suñer 1998, Swedish: Engdahl 1985, Boeckx 2003, Tuki: Biloa 1990, Ukrainian: Lavine 2003, Vata: Boeckx 2003 via Koopman 1986, Welsh: Willis 2000, 2011, and Yiddish: Prince 1990). A number of factors influence the behavior of Rs (see below); this paper will focus on their position:

- **Position**: Rs can occur in every position or only in some.

- **Optionality**: Rs can alternate with gaps, be banned or obligatory.

- **Form**: Rs are regular pronouns and can be full, clitic or null.

- **Modality**: Rs can be preferred in spoken language or certain dialects.

- **A'-Type**: Rs occur more often in some A'-dependencies than others.

- **Semantics**: Rs can restrict certain readings as opposed to Gs.

2.   Resumptive / gap distribution patterns

As for the positioning of Rs, the following relativization examples will illustrate their appearance in subjects (S), embedded subjects (eS), objects (O) and embedded objects (eO). The resumptive elements are printed in bold (3-6):

(3)   Lebanese Arabic, subject

tʕaaSaS   l-walad yalli huwwe xazzaʔ   l-kteeb
punished-3-SG-M the-boy that **he**   tore-3-SG-M the-book

'The boy that tore up the book was punished.'   (Aoun 2000: 15)

(4)   Yiddish, embedded subject

    Di froy   vos du host gemeynt   az zi hot
    the woman that you have think.PAST.2SG that **she** have.PRF.3SG
    mikh gezen
    me   saw.PRT

    'the woman that you thought that she has seen me'

                                        (Itzik Gottesman p.c.)

(5)   Hebrew, object

    ha-ʾiš   še-   raʾiti ʾ*oto*
    the-man that-(I) saw   **him**

    'the man that I saw him'   (Shlonsky 1992: 444)

(6)   Hausa, embedded object

    gằ   yârân   dà Àli ya   raɗằ   minì   wai
    there.are children REL Ali 3.SG.CPL whisper 1.SG.IO COMP
    ya   gan-sù   gida-n giyằ
    3.SG.CPL see-**3.PL.DO** house-L beer

    'There are the children that Ali whispered to me that he saw in the bar.'
                      (Crysmann 2012: 53 / Tuller 1986)

These are the four positions with the most variation in terms of R distribution. Other extraction positions such as prepositional objects, indirect objects, and the entire realm of islands are not taken into consideration in this paper, because most of these can or must harbor a R. The following table (7) abstracts from the gathered language data and displays the distribution patterns of R pronouns in the relevant positons (S, eS, O, eO). Note that some languages allow for R/G optionality in some positions[1]. The patterns reflect a coherent decision for either a R or a G, wherever possible. This is why some languages are categorized as showing more than one pattern: (e.g. Spanish):

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[1]It is unclear as of now how true optionality could be handled in any coherent approach.

(7)   *Crosslinguistic R/G patterns*[2]

	S	eS	O	eO	
Pattern 1	G	R	R	R	Bu., Ha., He., Ir., PA, Po., Cz., Tu, Uk.
Pattern 2	G	G	G	G	Spanish, Irish, Hebrew
Pattern 3	G	R	G	G	Welsh, Swedish
Pattern 4	R	R	R	R	L. Arabic, Spanish, Yiddish
Pattern 5	R	G	G	G	Vata

Theoretically, a paradigm like this with four positions and a binary choice for each of them (resumptive or gap) should result in 16 possible combinations. In practice, as we can see, only five patterns of R/G distribution occur in the languages investigated here. The rest of the paper will be dedicated to explaining why the limit on patterns is to be expected and how these patterns can be derived.

3.   A derivational analysis of resumptive pronouns

3.1.   How Rs and Gs are born

The first step in deriving the patterns is to show how an individual R comes about in the course of a derivation. The foot of a relativization dependency needs to be connected to its head, the relative operator, in SpecCP. Within a minimalist framework, which centers around phase-based, local operations, the only option to account for this non-local dependency is to invoke Move (see also Boeckx 2003). Besides conforming to minimalist assumptions, this approach also does not treat R and G cases as fundamentally different (e.g. by using base generation, too, cf. Salzmann 2009, Rouveret 2011, among others) and is therefore conceptually attractive. A few core assumptions and their interaction are necessary for the movement account to work.

3.2. ϕP

The structural assumption is that a DP is essentially the complement of a ϕ head which hosts the ϕ features (see Sauerland 2008; for a related but not

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[2]Throughout this work, the distribution of resumptives and gaps in these four syntactic positions will be abbreviated as GRRR, GRGG etc.

identical idea cf. Déchaine and Wiltschko 2002). DP carries determiner information and the REL feature needed for relativization. ϕP is a phase (in the sense of Chomsky 2001), along with vP and CP, while DP is not. In order for a R to materialize after REL-induced movement, DP has to strand its ϕ shell in its base position (cf. Abels 2005). After DP has reached its final target position, the relative operator position, and the derivation is finished, the phonological component can translate these ϕ features into the matching R. If DP does not strand ϕ but instead pied-pipes it along, the result will be a G in base position. Pied-piping is assumed to apply as a last resort operation (cf. Chomsky 1995, Heck 2009, Roeper 2003). Otherwise, for reasons of derivational economy, it is assumed that only the smallest possible units are affected. In case of the REL feature, only the DP which carries it will be extracted, if possible (see below).

3.3. Phase extension via Agree

A second assumption concerns the nature of extraction processes. According to the Phase Impenetrability Condition (see Chomsky 2001), in order to strand ϕ, the contained DP has to move via ϕP's specifier. However, this gives rise to an anti-locality effect, because movement of a phase's complement to the specifier of this phase is too short; phase heads cannot be stranded by their own complements (cf. Abels 2003, 2012, Grohmann 2003). The solution for this dilemma is an extension of ϕ's phase domain to the next higher phase head's, be it v or C. In den Dikken (2006), it is proposed that domain extension of a phase x can be achieved by actual movement and adjunction of x's head to the higher head. At the same time, Roberts (2010) argues that head movement is an instance of the operation Agree. If one combines both notions, one arrives at a mechanism in which Agree of a higher phase head (v, C) with ϕ will extend ϕ's domain. Anti-locality is circumvented and subextraction of DP (REL) out of ϕP, thereby stranding ϕ, is possible. Note that an important assumption pertaining to Agree here is a Spec-head bias (Assmann et al. 2012). This can be construed as a middle ground between Spec-head agreement only (Chomsky 1986), and agreement under c-command only (Chomsky 2001), respectively. A head will agree with a suitable element in its specifier, even if another suitable element is in its complement.

3.4.   The place of Move

Second, an assumption regarding the order of operations is needed to distinguish between R cases (Agree extends ϕP, DP moves) and G cases (Agree fails to extend ϕP, and DP pied-pipes it along). If Agree always took place before Move, there would be no gap cases, contrary to fact. Vice versa, if Move always occured before Agree, there would be no resumption. In order to be able to derive both R and G, I therefore assume that operations on phase heads are ordered in different ways relative to each other.[3]

3.5.   How syntactic operations interact

If two (or more) operations are triggered by the same phase head, they cannot apply at the same time in a strictly derivational system[4] One operation has to take place first, possibly influencing the conditions on the following operation(s). Thus, if we only had to deal with Agree and Move on the v or C heads, respectively, two possible orders would arise: AGR > M (Agree before Move) and M > AGR. However, two orders are not enough to derive all five of the patterns shown in Table (7), because they can maximally result in two different R distribution patterns.

More than two operations are needed. As Georgi (2013, 2014) shows, it is necessary to distinguish between movement steps which are intermediate, successively targeting Specs along the way (Intermediate Move or IM), and movement steps which are final, placing an element in its ultimate target site (Final Move or FM). Splitting up Move in this way gives us three operations to order, resulting in six possible orderings (e.g. FM > AGR > IM, etc.). In terms of numbers, these should cover the five attested patterns. However, with respect to the phase extension mechanism, the order of FM and IM does not matter relative to AGR. More precisely: FM > IM > AGR and IM > FM > AGR yield the same result, as do AGR > FM > IM and AGR > IM > FM. With only four

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[3] *Operations* could also easily be translated into *feature stacks* as a notational variant. Instead of setting a language-specific order of operations in which certain operations on phase heads be triggered, one could also stack the operation-inducing features on phase heads in a specific order. The topmost feature would then correspond to the highest operation in the hierarchy and gets executed first.

[4] It is worth mentioning that, while I have nothing to say about case assignment here, it is independent of operations discussed here. It probably applies first, i.e. prior to any operational hierarchy.

distinguishable orders, the system still falls one order short of explaining the five patterns.

A fourth operation can be utilized which is necessary anyway: Subject Merge (SM)[5]. A subject in SpecvP is essentially also a ϕP. Due to the Spec-head bias, it can interfere with Agree between v and ϕP in v's complement: it can bleed the extension of ϕP by offering itself as a goal to v. Assuming that v can only agree with a ϕP in its specifier or its complement, but not with both, the point where subjects are merged (relative to Agree) matters. This, in turn, means that SM is an operation that needs to be ordered on the phase heads, too.

To sum up, ordering four operations – Agree, Intermediate Move, Final Move, Subject Merge – on the same phase head (v, C) yields 24 possible outcomes (n!=24 with n=4 operations): e.g. FM > IM > AGR > SM; IM > AGR > SM > FM etc. Before showing how these orders map onto a much smaller set of actual R/G distribution patterns, the basic derivation of R and G cases will be illustrated.

3.6.   R / G sample analysis

In (8), the v phase head is merged with the ϕP to be relativized. Non-phases such as VP have been omitted for clarity, because no relevant operations are triggered on their heads, nor are interventions expected. For this example, an order order of operations is assumed which triggers Agree before Intermediate Move (e.g. AGR > IM > SM > FM. As a result of Agree, the phasal domain of ϕP is extended to the domain of vP:

(8) $[_{vP}$ $v_{\phi,REL}$ ... $[_{\phi P}$ ϕ DP_{REL} $]]$
            $\llcorner$ AGR $\lrcorner$

DP (REL) can now be extracted in the subsequent Move step, triggered by an intermediate REL feature (= the operation IM) on v. I am assuming here that intermediate movement steps are triggered by non-final phase heads, possibly via intermediate REL features (following McCloskey 2002). It moves to the specifier of vP (9), effectively stranding the ϕ head. Its ϕ features can later be used to realize a resumptive pronoun, after DP has cyclically moved through

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[5]This term could possibly be abstracted to *External Merge* in order to cover more possible intervention scenarios. In this paper, though, only subjects are relevant.

phase head specifiers until it reaches matrix SpecCP and becomes the relative operator.

(9) $[_{vP}$ DP_{REL} $[_{vP}$ $v_{\phi,REL}$ ... $[_{\phi P}$ $\phi_{(RP)}$ $]]]$
       └─────────────── MOVE ───────────────┘

In (10), a different order is assumed: FM > IM > AGR > SM. This has the effect of triggering REL movement before ϕP was extended, so that DP (REL) pied-pipes ϕP along:

(10) $[_{vP}$ $\urcorner \phi, REL$ ... $\ulcorner _{\phi P}$ ϕ DP_{REL} $]]$
        └──────── MOVE ────────┘

After ϕP has moved to the specifier of vP, v can still Agree with it. However, since a moved phrase is an island on independent grounds (Wexler and Culicover 1980), extraction of DP out of ϕP is impossible, even if the domain of ϕP is extended to vP by Agree. Instead, ϕP will cyclically pied-pipe to matrix SpecCP as a whole, leaving behind no ϕ material, thus no resumptive, but a gap (11):

(11) $[_{vP}$ $\ulcorner _{\phi P}$ ϕ DP_{REL} $]$ $[_{vP}$ $v_{\phi\ REL}$ ... $[$ (GAP) $]]]$
          └────── AGR ──────┘

In (8, 9), only the ϕ-less DP arrives in SpecCP. In the data, overt inflected relative operators are not attested with resumption, but an invariant C element occurs. Vice versa, when the entire ϕP is in SpecCP (the gap cases), overt relative pronouns can arise. This finding lends independent to the ϕP/DP movement distinction proposed here.

4.   Deriving the R / G patterns

4.1.   Theoretical vs. actual patterns

This section will illustrate how the four relevant operations derive exactly the five attested R/G distribution patterns, plus one which still has to be attested empirically. Theoretically, 24 orders are possible. In practice, not every minimal change in the order results in a different distribution pattern: the four positions where the variation happens can only give rise to 16 different patterns (a binary choice of R/G for each). Still, not even all 16 patterns are derived by

the 24 possible orders of operation. The reason for this is that the operations interact in a complex, yet principled way. Let's look at the example order in (12):

(12)   FM > AGR > SM > IM

Whenever a phase head (v, C) is merged, it will carry out these four operations in this order[6] Additionally, these operations only have once chance to be triggered per cycle; if an operation cannot apply when the order allows it, it cannot apply again later. If an embedded object is to be relativized, the lowest v head would first Agree with ϕP in object position before REL is moved intermediately (AGR > IM). The result is a R in the embedded object position; further AGR operations on higher phase heads cannot change this.

  If we assume the same order but relativize an embedded subject or matrix object, the result is exactly the same. Every REL-induced movement before the final one to matrix SpecCP is intermediate, and Agree is always ordered first and extends ϕP to vP or CP.

  The situation is only different once we relativize the matrix subject, still assuming FM > AGR > SM > IM. Final Move is ordered before Intermediate Move, but, crucially, also before Agree. Thus, before a matrix subject ϕP phase can be extended to CP, movement will be initiated. The now pied-piped ϕP leaves a gap in matrix subject position. Since ideally an order is set per language, not per phase head, one and the same order is responsible for a gap in matrix subject position, but a resumptive in every other subject or object position ((13) as e.g. in Bulgarian, Irish, Hebrew etc.):

(13)   FM > AGR > SM > IM –> GRRR –> Pattern 1 in Table (7)

If this order is changed minimally by ordering IM before SM (FM > AGR > IM > SM), the relativization pattern of the respective language doesn't change. This is because Agree still happens before anything else but the final movement step. Inserting the subject later, but after AGR has occured, has no influence on the extension of the ϕP (14). Thus:

(14)   FM > AGR > SM > IM = FM > AGR > IM > SM –> GRRR

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[6]There probably are no FM and SM operations present on intermediate and non-subject phase heads, respectively.

4.2.   The effects of operations on R positions

Two (or more) orderings can yield the same distribution pattern. This is very systematic, once it is taken into account that each of the four operations fulfills a certain function with respect to the occurence of resumptives and gaps in the respective positions. The table below lists these functions that interact when put in a certain order (15):

(15)   *The syntactic functions of* AGR, FM, IM, SM

> • **Agree**: this operation can feed the occurence of a R, depending on where it is ordered relative to the movement operations.

> • **Final Move / Intermediate Move**: FM's position in the operation hierarchy distinguishes the matrix subject position from all other positions for extraction. Both movement operations can be fed by Agree if they follow it, or they can bleed Agree if they precede it.

> • **Subject Merge**: the subject is a possible intervener for Agree on v (spec-head bias). If an object is to be relativized, but the subject is in SpecvP when Agree is triggered, the object ϕP will not be extended. Thus, SM can influence the occurence of Rs in object position:

>> – Agree before Intermediate Move without an intervening subject (e.g. FM > AGR > IM > SM) yields Rs in object and embedded positions (XRRR)

>> – Agree before Intermediate Move with an intervening subject (e.g FM > SM > AGR > IM) bleeds the formation of Rs in object positions (XRGG)

>> – Thus, SM can never be ordered in such a way as to put a G in embedded subject positions but Rs in objects (*XGRR)

There are a few generalizations to be drawn with respect to Rs from these operations and their interplay:

- 1: Objects and embedded objects cannot pattern differently

- 2: Subjects and embedded subjects can pattern differently

- 3: Rs in embedded objects entail Rs in embedded subjects

- 4: Rs in embedded subjects do not have to entail Rs in objects

For a more detailed illustration of the interactions, let us take a closer look at generalizations 3 and 4. As for 3, if no subject interferes with Agree between v and the object in its complement, this object will leave behind a resumptive upon extraction. For this to happen, both SM and IM must not be ordered before AGR, as in e.g. FM > AGR > IM > SM. SM would intervene with agreement between v and the object (spec-head bias), while IM would bleed the same agreement relation by moving the object first. If agreement is not bled for objects, it will not be bled for embedded subjects, either.

In the case of generalization 4, if AGR is ordered before IM, but after SM (e.g. FM > SM > AGR > IM), movement will not bleed the formation of a R in embedded subject position. However, since the subject intervenes with v's agreement with its object, there will be no R in object position. This is why a resumptive in the embedded subject position does not have to entail a resumptive in object positions, while a resumptive in object position entails a resumptive in the embedded subject position (see above).

These generalizations, which are based on the systematic interaction of independently necessary operations, reflect and explain the empirical findings in Table (7).

4.3. All operational orders, possible and impossible patterns

All possible operational orders are listed below (16), together with the G and R distribution they yield in subjects, embedded subjects, objects and embedded objects, respectively. As we can see, different orders can in fact yield the same distribution patterns, because of the ways the operations interact:

(16)   *All possible orders of the four operations Final Move (F), Intermediate*
         Move (I), Agree (A) and Subject Merge (S):

Orders	Subject	e. Subject	Object	e. Object	Pattern
F > A > S > I	G	R	R	R	1
F > A > I > S	G	R	R	R	1
F > I > A > S	G	G	G	G	2
I > F > A > S	G	G	G	G	2
I > F > S > A	G	R	G	G	3
I > S > F > A	G	R	G	G	3
S > F > A > I	G	R	G	G	3
S > F > I > A	G	R	G	G	3
S > I > F > A	G	R	G	G	3
F > I > S > A	G	R	G	G	3
F > S > I > A	G	R	G	G	3
F > S > A > I	G	R	G	G	3
A > F > I > S	R	R	R	R	4
A > F > S > I	R	R	R	R	4
A > S > F > I	R	R	R	R	4
A > S > I > F	R	R	R	R	4
A > I > F > S	R	R	R	R	4
A > I > S > F	R	R	R	R	4
I > A > S > F	R	G	G	G	5
I > A > F > S	R	G	G	G	5
S > A > F > I	R	R	G	G	6
S > A > I > F	R	R	G	G	6
S > I > A > F	R	R	G	G	6
I > S > A > F	R	R	G	G	6

As this table shows, sometimes up to eight orders of operations yield the
same R/G distribution pattern (Pattern 2). Thus, not the theoretically possi-
ble amount of 24 patterns arises, but just six. A comparison with the attested
patterns (Table 7) reveals that the operations in their respective orders derive
five out of the six predicted patterns (Patterns 1-5). The current model also
explicitly rules out the remaining 10 patterns of the possible 16.

The following table (17) lists the five predicted and attested resumptive / gap patterns from Table (7) and adds the sixth pattern which still has to be discovered. Additionally, it lists ten more patterns which seem to be logically possible but are ruled out by the analysis. Indeed, patterns 7-16 have not come up in the language data. Patterns 7 and 8 both have an offending G in the embedded subject position, even though the objects are R, which counters generalization 3 in (15). Patterns 9 to 16 include differing objects (*XXRG or *XXGR) - violating generalization 1 in (15):

(17)   *Possible and impossible R/G patterns*

Patterns	S	eS	O	eO	Languages
P 1	G	R	R	R	Bu., Ha., He., Ir., PA, Po., Cz., Tu, Uk.
P 2	G	G	G	G	Spanish, Irish, Hebrew
P 3	G	R	G	G	Welsh, Swedish
P 4	R	R	R	R	L. Arabic, Spanish, Yiddish
P 5	R	G	G	G	Vata
P 6	R	R	G	G	**X - to be attested**
P 7	G	G	**R**	**R**	Mandalorian?
P 8	R	G	**R**	**R**	Tomanian?
P 9	R	G	**R**	**G**	Quenya?
P 10	R	G	**G**	**R**	Sindarin?
P 11	G	R	**R**	**G**	Klingon?
P 12	G	R	**G**	**R**	Syldavian?
P 13	R	R	**R**	**G**	Dothraki?
P 14	R	R	**G**	**R**	Na'vi?
P 15	G	G	**R**	**G**	Arkonidian?
P 16	G	G	**G**	**R**	Galach?

By way of illustration, the orders of operation approach correctly predicts and derives Lebanese Arabic (18-21 below, Pattern 4), with a resumptive pronoun possible in all subject and object positions. This is because Pattern 4 is derived from all operational orders which have Agree triggered first on phase heads. Thus, the phase extension mechanism always precedes and feeds any kind of movement, leaving behind a resumptive in any extraction position:

(18)   Subject extraction, R with optional pro drop

t͡ʃaaSaS   l-walad yalli (huwwe)
punish.PAST.3SG.MASC the-boy that (**he**)
χazzaʔ   l-kteeb
tear.PAST.3SG.MASC the-book

'The boy that tore up the book was punished.'   (Aoun 2000: 15)

(19)   Embedded subject extraction, null R due to pro drop

l-mʕallme ʔaaSaSit   l-walad yalli laila
the-teacher punish.PAST.3SG.FEM the-boy that Laila
ʔaalit   χazzaʔ   l-kteeb
say.PAST.3SG.FEM tear.PAST.**3SG.MASC** the-book

'The teacher punished the boy that Laila said tore up the book.'

(Aoun 2000: 17)

(20)   Object extraction, R clitic

l-kteeb   yalli tarayt**o**   mbeerifi Daaʕ
the-book that bought-1S-**it** yesterday is-lost.PRES.3SG.MASC

'The book that I bought yesterday is lost.'   (Aoun 2000: 15)

(21)   Embedded object extraction, R clitic

El-rijjel   yalli inta   ilit   inno ana
the-man that you.MASC say.PAST.2SG.MASC that I
shifto
see.PAST.1SG.MASC.**him**

'The man that you said that I saw him.'   (Dima Zeidan p.c.)

On the other hand, it does not predict a language like Syldavian (Pattern 12, (22)), with resumptives only in embedded positions. Intuitively, matrix and embedded positions seem to be good candidates for a clear asymmetry.

However, the way the operations interact cannot derive this GRGR pattern, and natural language also does not produce it:

(22)   *Syldavian (English glosses), G R G R*
    a.   This is the man that ____ hit me.
    b.   This is the man that Mary said that **he** hit me.
    c.   This is the man that I hit ____.
    d.   This is the man that Mary said that I hit **him**.

5.   Conclusion

The approach to resumption presented here has several benefits to it. First, it is truly crosslinguistic and not concerned with an analysis of resumption as an isolated phenomenon of one language (family). Second, it only relies on Move as the operation which connects the extracted relative DP with its operator position. It does not and, in fact, cannot resort to base generation or other non-local mechanisms, thus adhering to Minimalist demands. No operations or concepts are used which have not been shown to be relevant independently of resumption. The logically possible interactions of these operations yield the desired outcome, a list of possible resumption patterns. At the same time, the theory makes correct predictions about unexpected patterns.

Due to the crosslinguistic nature, the theory cannot account for as many language specific details as one that focuses on only one language (family). Since resumptive pronouns are regular pronouns, each language imposes independent requirements on their form (null, clitic, full) in certain contexts. The same goes for certain semantic effects, where Rs might narrow down reading choices in some languages. However, at this point nothing appears to prevent the current theory from being reconciled with suggestions which have been made for individual languages.

References

Abels, Klaus (2003): Successive cyclicity, anti-locality, and adposition stranding. PhD thesis, University of Connecticut.

Abels, Klaus (2005): Resumptive pronouns and the copy theory of movement. .

Abels, Klaus (2012): *Phases - an essay on cyclicity in syntax*. De Gruyter.

Adger, David (2008): Bare resumptives. Ms. UCL.

Aoun, Joseph (2000): 'Resumption and last resort', *DELTA* **16**, 13–43.

Aoun, Joseph, Lina Choueiri and Norbert Hornstein (2001): 'Resumption, movement, and derivational economy', *Linguistic Inquiry* **32**(3), 371–403.

Assmann, Anke, Doreen Georgi, Fabian Heck, Gereon Müller and Philipp Weisser (2012): Ergatives move too early - on an instance of opacity in syntax. .

Biloa, Edmond (1990): 'Resumptive pronouns in Tuki', *Studies in African Linguistics* **21**(2), 211–236.

Boeckx, Cedric (2003): *Islands and chains - resumption as stranding*. Benjamins.

Borer, Hagit (1984): 'Restrictive relatives in modern Hebrew', *Natural Language and Linguistic Theory* **2**(2), 219–260.

Chomsky, Noam (1986): *Barriers*. Vol. 13 of *LI Monograph*, MIT Press.

Chomsky, Noam (1995): *The minimalist program*. MIT Press, Cambridge, MA.

Chomsky, Noam (2001): Derivation by phase. *In:* M. Kenstowicz, ed., *Ken Hale - A life in Language*. MIT Press, pp. 1–52.

Crysmann, Berthold (2012): Resumption and island-hood in Hausa. *In:* P. de Groote and M.-J. Nederhof, eds, *Formal Grammar 2010/2011, LNCS 7395*. Springer, pp. 50–65.

Déchaine, Rose-Marie and Martina Wiltschko (2002): 'Decomposing pronouns', *Linguistic Inquiry* **33**(3), 409–442.

den Dikken, Marcel (2006): Phase extension - contours of a theory of the role of head movement in phrasal extraction. .

Engdahl, Elisabet (1985): 'Parasitic gaps, resumptive pronouns, and subject extractions', *Linguistics* **23**, 3–44.

Georgi, Doreen (2013): Opaque interaction of Internal Merge and Agree. *In:* A. Heck, Fabian Assmann, ed., *Rule interaction in grammar*. Vol. 90 of *Linguistische Arbeits Berichte*, University of Leipzig, pp. 413–461.

Georgi, Doreen (2014): Opaque interactions of Merge and Agree - on the nature of and order of elementary operations. PhD thesis, University of Leipzig.

Grohmann, Kleanthes K. (2003): *Prolific domains - on the anti-locality of movement dependencies*. Benjamins.

Heck, Fabian (2009): 'On certain properties of pied-piping', *Linguistic Inquiry* **40**(1), 75–111.

Keller, Frank and Theodora Alexopoulou (2005): A cross-linguistic, experimental study of resumptive pronouns and that-trace effects. *In:* B. Bara, L. Barsalou and M. Bucciarelli, eds, *Proceedings of the 27th Annual Conference of the Cognitive Science Society*. Vol. 27, pp. 1120–1125.

Koopman, Hilda; Sportiche, Dominique (1986): 'A note on long extraction in Vata and the ECP', *Natural Language and Linguistic Theory* **4**, 357–374.

Krapova, Iliana (2010): 'Bulgarian relative and factive clauses with an invariant complementizer', *Lingua* **120**(5), 1240–1272.

Lavine, James E. (2003): Resumption in Slavic: phases, cyclicity and case. *In:* W. E. Browne, ed., *Formal approaches to Slavic Linguistics*. Vol. 11, pp. 355–372.

McCloskey, James (2002): Resumption, successive cyclicity, and the locality of operations. *In:* S. Epstein and T. Seely, eds, *Derivation and explanation in the minimalist program*. Blackwell, chapter 8.

McCloskey, James (2006): Resumption. *In:* M. Everaert and H. van Riemsdijk, eds, *The Blackwell Companion to Syntax*. Blackwell, pp. 94–117.

Prince, Ellen F. (1990): Syntax and discourse - a look at resumptive pronouns. In: *Proceedings of the Sixteenth Annual Meeting of the Berkeley Linguistics Society*. pp. 482–497.

Roberts, Ian (2010): *Agree and head movement. Clitics, incorporation, and defective goals.*. LI Monograph, MIT Press.

Roeper, Tom (2003): Multiple grammars, feature attraction, pied-piping, and the question: Is AGR inside TP?. *In:* N. Müller, ed., *(In)vulnerable domains in multilingualism*. Benjamins, Amsterdam, pp. 335–360.

Rouveret, Alain (2011): *Resumptive pronouns at the interfaces*. Benjamins.

Salzmann, Martin (2009): When movement and base-generation compete - on the definition of the reference set, the typology of resumption, and ranked economy constraints. In: *Groninger Arbeiten zur Germanistischen Linguistik*. Vol. 48, pp. 27–63.

Sauerland, Uli (2008): Pseudo-sloppy readings in flat binding. *In:* O. Bonami and P. C. Hofherr, eds, *Empirical Issues in Syntax and Semantics*. Vol. 7, pp. 331–349.

Shlonsky, Ur (1992): 'Resumptive pronouns as last resort', *Linguistic Inquiry* 23(3), 443–468.

Suñer, Margarita (1998): 'Resumptive restrictive relatives: a crosslinguistic perspective', *Language* 74(2), 335–364.

Toman, Jindrich (1998): A discussion of resumptives in colloquial Czech. *In:* Ž. Bošković, ed., *Formal Approaches to Slavic Linguistics. The Connecticut Meeting 1997*. Michigan Slavic Publications, pp. 303–318.

Tuller, Laurice A. (1986): Bijective relations in Universal Grammar and the syntax of Hausa. PhD thesis, UCLA.

Wexler, Kenneth and Peter Culicover (1980): *Formal principles of language aquisition*. MIT Press.

Willis, David (2000): 'On the distribution of resumptive pronouns and wh-trace in Welsh', *Journal of Linguistics* 36, 531–573.

Willis, David (2011): The limits of resumption in Welsh wh-dependencies. *In:* A. Rouveret, ed., *Resumptive pronouns at the interfaces*. Benjamins, pp. 189–222.