

# Resumption

James McCloskey

## Phenomena and Issues

The italicized pronouns in (1) (cited from Prince (1990), and attributed there to Tony Kroch) are conventionally known as ‘resumptive’ pronouns.

- (1) a There are guests who I am curious about what *they* are going to say.  
b The only one we could see *her* figure was Number Two.

Compare the pronouns in (1) with those in (2):

- (2) a Sally said that *she* would resign.  
b Most people think that *they* have a right to a decent job.  
c Every kid in my class who has a VCR knows how to program *it*.

What distinguishes the two cases? The pronouns in (1) appear in positions where one would, in a certain sense, have expected to find a gap. The expectation is reasonable because the variable position in a relative clause or question in English is normally defined by the presence of a gap, as in (3):

- (3) a There are guests that everyone wants to invite \_ .  
b the only one (who/that) we could see \_ was Number Two.

For the cases in (2), on the other hand, there is no sense at all in which the possibility of a pronoun alternates with the possibility of a gap.

This first contrast between (1) and (2) is closely linked with a second. The pronouns in (1) are obligatorily bound (as gaps, of course, would be in the same positions). The pronouns in (2), on the other hand, are free to find their antecedents in pragmatic or discourse context.

Putting these observations together in an initial way, then, we can say that a resumptive pronoun is a pronominal element which is obligatorily bound and which appears in a position in which, under other circumstances, a gap would appear. The binder of the pronoun is the same, apparently, as the element which binds the gap in the corresponding filler-gap construction.

I use the term ‘pronominal element’ in this informal definition (rather than the simpler ‘pronoun’) because the range of elements which can serve the resumptive function is in fact quite broad. Besides including all categories of pronoun—tonic and clitic, overt and nonovert—it also includes epithets, which seem to be sufficiently pronominal that they can serve the resumptive function in certain languages and under certain conditions. This is

shown, for example, by the informal English (4) (from Kroch (1981); see also Safir (1996), Sells (1984b) and especially Aoun and Choueiri (1996), Aoun et al. (2001)): <sup>1</sup>

- (4) There was one prisoner who we couldn't even figure out why *the poor guy* was in jail.

Most discussion of resumption has centred on cases in which the pronoun appears in the variable position of an unbounded dependency construction—relative clauses, constituent questions, clefts, comparative clauses, infinitival null-operator constructions and the like. The phenomenon is almost certainly broader than this would suggest, but this review will follow tradition in focussing on this set of cases.<sup>2</sup>

Characterized in this way, the phenomenon of resumption is very widespread, as is illustrated briefly in (5)–(9).<sup>3</sup>

- (5) an ghirseach ar ghoid na síogaí í  
*the girl c stole the fairies her*  
 'the girl who the fairies stole' **Irish**
- (6) es un país que hablan tanto de él  
*is a country c they-talk a-lot about it*  
 'It's a country that they talk a lot about.' **(Informal) Spanish**
- (7) l-kteeb yalli ftarayto mbeerii Daa,  
*the-book c bought [S1]-it yesterday is-lost*  
 'The book that I bought yesterday is lost.' **Lebanese Arabic**
- (8) Ten chłopak co go tak bardzo nie lubisz okazał się bardzo sympatyczny.  
*this boy c him so much dislike turned out very nice*  
 'The boy that you dislike so much turned out to be very nice.' **Polish**
- (9) ha-biš še- raḅ ʔoto  
*the-man c saw [S1] him*  
 'the man that I saw' **Hebrew**

<sup>1</sup> There is a certain sense in which it is unsurprising that this possibility should exist. Epithets exhibit a number of other 'pronominal' properties—they give rise to robust Condition C effects in languages (Thai, Vietnamese for instance) in which only pronouns give rise to such effects (Lasnik (1989)). In addition, as noted more than once, epithets may be bound by quantifiers:

(i) Each delegation's leader spoke on its behalf.

(ii) Each prisoner's lawyer had to witness the poor bugger's punishment.

The point can only be made with examples in which the quantifier does not command the epithet (as in (ii)), since one would otherwise have Condition C effects. However, when allowance is made for this, the effect seems clear enough. The examples in (i) and (ii) seem to be equivalent in acceptability.

<sup>2</sup> Discussion of resumption in the domain of A-movement has focussed on the phenomenon of 'Copy Raising.' For representative discussions in a range of languages, see, for instance, Joseph (1976), McCloskey and Sells (1988), Deprez (1992), Ura (1996), Moore (1998), Potsdam and Runner (2001), Asudeh (2002).

<sup>3</sup> (5) is from McCloskey (1990). (6) is from Suñer (1998). (7) is from Aoun and Choueiri (1996). (8) is from Bondaruk (1995), and (9) is from Borer (1984).

Within the broad category of unbounded dependency constructions, attention has tended to focus on the case of relative clauses, but the phenomenon of resumption extends (at least in certain languages) to the entire range of unbounded dependency constructions. This is illustrated for constituent questions in two languages in (10) and (11), and for clefts in the Irish example in (12).

- (10) Céacu fear ar labhair tú leis?  
*which-of-two man c spoke you with* [MS3]  
 ‘Which man did you talk to?’ **Irish**
- (11) ʕayya rəʕʕeel ʕabbartu-u ʕenno ...  
*which man told [2P]-him c*  
 ‘Which man did you tell that ...?’ **Lebanese Arabic**
- (12) Tigh beag caol gur mhaireamar ann.  
*house little narrow c we-lived in-it*  
 ‘It was a narrow little house that we lived in.’ **Irish**

McCloskey (1990) provides a much more thorough discussion of the range of constructions in Irish in which resumptive pronouns may figure.

These initial observations are enough to set the scene for the major questions which have shaped work on the phenomenon of resumption. Since resumptive pronouns are pronouns (at least in their apparent form), a series of questions can be asked about where they fit in the context of the general theory of pronominal anaphora. To what extent do they share the properties of other classes of pronouns (those in (2), for instance)? But since they simultaneously appear in positions which are canonically associated with the appearance of gaps, one can also ask a series of questions about how resumptive elements interact with the processes which create gaps. If we follow much recent work in assuming that gaps in relative clauses and questions are always created by movement operations, this second question then becomes the following: to what extent does the relation between a resumptive element and its binder exhibit the properties of movement?

Most work on resumption attempts to answer these two questions and tries to understand the Janus-like nature of resumptive elements—one face towards the domain of pronouns and anaphoric elements, the other towards the theory of movement.

A fundamental question, which has not often been explicitly addressed, but which lies behind much of the discussion is why resumptive elements have the form that they do. That is, resumptive pronouns simply are (formally) pronouns. I know of no report of a language that uses a morphologically or lexically distinct series of pronouns in the resumptive function. If we take this observation to be revealing, there can be no syntactic feature which distinguishes resumptive pronouns from ‘ordinary’ pronouns, and any appeal to such a feature must be construed as, at best, an indication of the limits of understanding.

## Early Treatments

Work of the second half of the 1970’s addressed these fundamental questions by assuming that unbounded dependency constructions were frequently derived by way of a rule which deleted bound pronouns in certain contexts—when bound by the head of a relative clause

construction, for instance (Perlmutter (1972), Morgan (1972), McCloskey (1979), Bresnan and Grimshaw (1978)). An example like (13a), on this account, would derive by way of deletion of the pronoun from an underlying structure which more resembled (13b):

- (13) a the guy that I talked to \_  
 b the guy that I talked to *him*

Resumptive pronouns, on this account, are the surface manifestation of the failure of this rule to apply—either because the targeted pronoun occupies a position that was inaccessible for one reason or another (possessor position, say, in most languages, or prepositional object position, or within an island), or else because the rule is optional. The synonymous Irish pair in (14), for example, would be taken to reflect optional application of the rule of bound pronoun deletion:

- (14) a an ghirseach a ghoid na síogaí \_  
       *the girl           c stole the fairies*  
       ‘the girl who the fairies stole’     **Irish**  
 b an ghirseach ar ghoid na síogaí í  
       *the girl           c stole the fairies her*  
       ‘the girl who the fairies stole’     **Irish**

The larger framework of assumptions here is that:

- (i) Unbounded dependency constructions need to contain a bound variable, to be semantically well-formed.
- (ii) Pronouns are the devices which natural language canonically makes available for the expression of bound variables.
- (iii) The gaps characteristic of unbounded dependency constructions can be produced either by movement or by deletion.

On this view, then, resumptive pronouns have the form of pronouns because they mark variable positions and pronouns are the canonical linguistic expression of variables (even when those pronouns are not apparent in the pronounced string). And the widely-noted tendency for resumptive pronouns to appear in inaccessible positions (inside islands particularly) can be understood as reflecting the island-sensitivity of the bound pronoun deletion rule.

A core assumption of course, was that movement and deletion are equally available in unbounded dependency constructions. On this view, for instance, (15a) in English would be derived by way of WH-movement, while (15c) would reflect application of a rule deleting the pronoun of (15b).

- (15) a the guy who I talked to \_  
 b the guy that I talked to *him*  
 c the guy that I talked to \_

Since it depended on the postulation of unbounded and island-sensitive deletion rules (as in Ross (1967)), this set of ideas formed one part of the debate in the second half of the

1970's about the nature of islands and the typology of transformational operations. As a consequence, as that debate moved towards resolution and as the hypothesis of successive-cyclic rule-application (Chomsky (1973)) came to be widely-accepted, the foundation on which these ideas rested (assumption (iii) above in particular) came to seem untenable.

In the new context, the relations among (15a, b, and c) look rather different. (15a) and (15c) are both derived by movement of a relative pronoun. (15c) differs from (15a) only in that the fronted pronoun is subsequently deleted (or was phonologically null to begin with). Given this, the fundamental challenge becomes that of understanding how the presence of a pronoun (as in (15b)) can serve the same function as, or in some sense stand in for, a gap derived by movement. The relation between resumption and movement—what they share and how they differ—thus becomes central.

## Issues

Within that broad context, work on resumption can be seen as addressing the following sharper questions:

- (i) What mechanisms license the appearance of resumptive pronouns, and what is the place of those mechanisms in the typology of anaphoric interactions?
- (ii) How do those mechanisms relate to, and interact with, the movement mechanism?
- (iii) What defines the difference between languages which make productive use of resumptive elements and those which do not? How can this difference be understood within the larger setting of work on the parameters that define differences among languages?
- (iv) Is the pre-theoretical category 'resumptive pronoun' theoretically unitary? Or are there rather distinct types of elements and devices which are grouped under this rubric?
- (v) In what sense (if any) is resumption a last resort mechanism?

A way of broaching these issues is to look at what have been thought to be the core properties of resumptive pronoun constructions. Looking at those properties, and the attempts that have been made to understand them, will lead us to the kind of consensus that emerged in work of the middle and late 80's—a consensus that embodied a set of answers to questions (i)–(v) above. We will at that point be in a position to look at the various theoretical and empirical challenges that have arisen to subvert that consensus, or at least to bring it into question.

## Properties

### Immunity from Constraints on Movement

The single most celebrated property of the binding relations that resumptive pronouns enter into is that they show no sensitivity to general constraints on movement. (We will consider exceptions and objections to this very general claim shortly.) This property has been familiar at least since the work of Ross (1967), where it was discussed as a sensitivity to the difference between 'chopping' rules (movement and deletion) and 'copying' rules (those

which leave a pronominal copy in the origin site).<sup>4</sup> I will illustrate the effect here with (attested) examples from Irish. In all cases, the resumptive element is underlined.

Examples (16) and (17) demonstrate immunity from the WH-island constraint:

- (16) na hamhráin sin nach bhfuil fhios  
*the songs DEMON NEG C is knowledge*  
 cé a chum iad  
*who C composed them*  
 ‘those songs that we don’t know who composed them’ Irish

- (17) teach nach n-aithneochthá cá rabh sé  
*house NEG C recognize [COND][S2] where was it*  
 ‘a house that you wouldn’t recognize where it was’ Irish

Examples (18) and (19) illustrate immunity from the Complex Noun Phrase Constraint:

- (18) an fánaidhe a n-abradh daoine nár thuig é  
*the wanderer C would-say people NEG C understood him*  
 go rabh sé éadrom sa cheann  
*C was he light in-the head*  
 ‘the wanderer that people who didn’t understand him would  
 say that he was soft in the head’ Irish

- (19) seanchasóg ar dócha go bhfuil an táilliúir  
*old-jacket C<sub>pro</sub> probable C is the tailor*  
 a dhein í sa chré fadó  
*C made it in-the earth long-ago*  
 ‘an old jacket that the tailor who made it has probably  
 been in the grave for ages’ Irish

In (20) we have a case of the cleft subcase of the WH-island constraint:

- (20) cathracha nach sibh a chuir suas iad  
*cities NEG C you C put up them*  
 ‘cities that it wasn’t you that built them’ Irish

And in (21) we have an instance in which a resumptive pronoun appears inside an adjunct island:

- (21) Nérée Caron, nach bhfuil ann ach tamall beag  
*NEG C is in-it but time small*  
 ó bhí sí dóigheamhail feiceálach  
*since was she beautiful attractive*  
 ‘Nérée Caron, who it is only a short time since she was  
 beautiful and attractive’ Irish

<sup>4</sup> This property of resumptive pronouns has played an important part in the investigation of weak island phenomena. Much work on the topic (see especially Cinque (1990) and Postal (1998), anticipated by Perlmutter (1972)) argues that under certain conditions the apparent trace of  $\bar{A}$ -movement is in fact a silent resumptive pronoun. Given the amnestying effect of resumption on island violations, one can in this way understand why certain cases of (apparent) extraction from island configurations are relatively well-formed.

The examples cited in (16)–(21) illustrate a lack of sensitivity to subjacency effects, but it is well known that resumptive pronouns also amnesty ungrammaticalities attributed to the Empty Category Principle (ECP), as can be seen in the (informal) English examples in (22):

- (22) a He's the kind of guy that you never know what he's thinking.  
 b \*He's the kind of guy that you never know what  $\_$  is thinking.  
 c They're the kind of people that you can never be sure whether or not they'll be on time.  
 d \*They're the kind of people that you can never be sure whether or not  $\_$  will be on time.

### Strong Crossover

The relation between a resumptive pronoun and its binder, then, does not show sensitivity to the locality conditions thought to be diagnostic of the movement relation. It does, however, exhibit a number of properties characteristic of  $\bar{A}$ -binding. Specifically, the bound element itself behaves like a variable (understood for present purposes as being an element whose most local binder occupies an  $\bar{A}$ -position). There are at least two senses in which this is true.

Most fundamentally, it is the resumptive element which is the syntactic correlative of the semantic variable which is found in every  $\bar{A}$ -binding construction.

But there is also a more specific sense in which resumptive pronouns 'behave like variables'. A property of the traces left by movement to  $\bar{A}$ -positions is that they are subject to the Strong Crossover effect (Postal (1971), Wasow (1974)):

*Strong Crossover Effect:* The trace of movement to an  $\bar{A}$ -position may not be anaphorically linked with a c-commanding pronoun.

In (23):

- (23) \*Who did she<sub>j</sub> claim [ t<sub>j</sub> had arrived earliest]?

the trace in embedded subject position is c-commanded by, and co-indexed with, the pronoun *she*, resulting in ungrammaticality. A now widely accepted proposal by Chomsky (1981) derives this effect from Condition C of the Binding Theory, which requires that a certain class of elements (non-pronominal DP's and WH-traces) not be bound by an element in an A-position. Whether or not this proposal is right (see Lasnik (1989) for a proposed refinement and Postal (1997) for an argument that the whole approach is misguided), the phenomenon itself provides us with a question to ask about resumptive pronouns—do they resemble WH-traces in giving rise to Strong Crossover effects?

The question has been addressed for a number of languages (those languages for which the most complete descriptions of resumptive pronouns are available), and the answer so far seems to be that resumptive pronouns do trigger Strong Crossover effects. Demonstrating this requires some ingenuity. One cannot simply take (23) and replace the trace with a pronoun as in (24):

- (24) Who<sub>j</sub> did she<sub>j</sub> claim [that she<sub>j</sub> had arrived earliest]?

This does not provide a test case for Strong Crossover because the possibility remains open that the higher of the two pronouns functions as the required variable, in which case the second (lower) pronoun has the same (unproblematic) status as the pronoun in (25):

- (25) Who<sub>j</sub> t<sub>j</sub> claimed [that she<sub>j</sub> had arrived earliest]?

To overcome this difficulty, one can use, instead of the higher pronoun in (23), some element which is known to give rise to robust Strong Crossover effects but which cannot itself be used as a resumptive element. Epithets may be used for this purpose in many languages. Lasnik (1989) has shown that they give rise to clear Strong Crossover effects (even in languages in which lexical DP do not) and in many languages at least in which resumptive pronouns figure, epithets may not in general serve the resumptive function. McCloskey (1990) conducts this test for Irish and demonstrates that the Strong Crossover effect does indeed emerge:

- (26) \*Sin an fear ar dhúirt an bastard go maródh sé muid.  
*that the man c said the bastard c kill [COND] he us*  
 ‘That’s the man<sub>j</sub> that the bastard<sub>j</sub> said that he<sub>j</sub> would kill us.’ **Irish**

The experiment was subsequently replicated in a number of Semitic languages—see Shlonsky (1992) on Hebrew and Palestinian Arabic, Aoun and Choueiri (1996), Aoun et al. (2001) on Lebanese Arabic.

### Weak Crossover

Although resumptive pronouns share with variables a sensitivity to Strong Crossover, it was established early (Sells (1984a), Sells (1984b), McCloskey (1990), Shlonsky (1992)) that they quite generally show no Weak Crossover effects. Weak Crossover (Wasow (1974)) arises when a variable is coreferent with a pronoun which does not c-command it. The Irish example in (27), however, is fully grammatical (see also (18) above), in contrast with its English translation, which is degraded to some degree (Safir (1984, 1986, 1996):

- (27) an fear<sub>j</sub> ar fhág a<sub>j</sub> bhean é<sub>j</sub>  
*the man c left his wife him*  
 ‘the man<sub>j</sub> that his<sub>j</sub> wife left –<sub>j</sub>’

### Antilocality and the Highest Subject Restriction

But if resumptive pronouns show some of the distinctive properties of variables, they also betray their origins by exhibiting at least one important pronominal property as well.

One of the core properties of pronouns is that their binding is subject to an antilocality requirement—a pronoun and its antecedent cannot occupy the same local domain. In the area of A-binding, this requirement is encapsulated in Condition B of the Binding Theory (Chomsky (1981)), which renders ungrammatical an example like (28):

- (28) a \*Charles<sub>j</sub> is proud of him<sub>j</sub>.  
 b \*Each actress<sub>j</sub> nominated her<sub>j</sub>.



Resumptive pronouns in a number of languages show what is arguably a similar kind of restriction. In these languages, a resumptive pronoun cannot occupy a subject-position immediately subjacent to its binder. This condition, known as the *Highest Subject Restriction* (McCloskey (1990)), is illustrated with the contrasting Irish examples in (29) and (30):

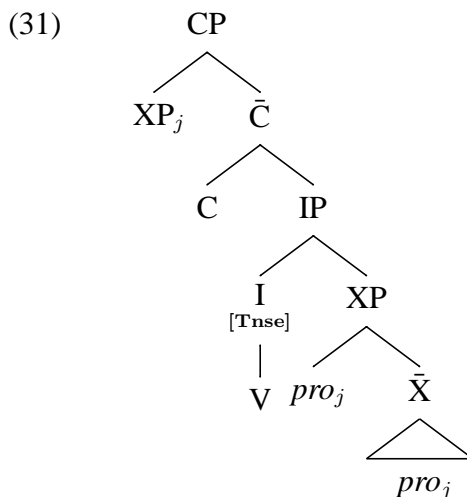
- (29) a \*fear nár fhan sé sa bhaile  
*man C NEG-PAST remained he at-home*  
 ‘a man that didn’t stay at home’ **Irish**
- b fear nár fhan \_ sa bhaile  
*man C NEG-PAST remain at home*  
 ‘a man that didn’t stay at home’ **Irish**

Similar facts have been documented for a variety of languages and language-types (Ouhalla (1993), Borer (1984), Doron (1982), Shlonsky (1992), Schafer (1994), Bondaruk (1995)).

Various approaches to the analysis of this phenomenon have been suggested. One thread that runs through many of them is that the ungrammaticality of local subject resumptives is best seen as an aspect of the kind of antilocality property typical of pronouns (Borer (1984), McCloskey (1990), Aoun and Choueiri (1996)). One way of implementing the general idea is presented in McCloskey (1990), drawing on earlier work by Aoun and Li (1989). There it is proposed that the disjointness requirement defined by Principle B of the Binding Theory (which in its original formulation governs only binding by an element in an A-position) should be extended to the domain of  $\bar{A}$ -binding. A formulation like the one below has the required consequences (Aoun and Li (1989), Aoun and Li (1990), McCloskey (1990), Aoun and Li (1993), Aoun and Choueiri (1996)):

- (30) *The  $\bar{A}$ -Disjointness Requirement:* A pronoun must be  $\bar{A}$ -free in the least complete functional complex containing the pronoun and a subject distinct from the pronoun.

To see how this will work, consider the schematic structure in (31).



Assume for present purposes that the specifier of XP in (31) is the ‘subject position’ in the language in question. If the element in specifier of CP binds the occurrence of  $pro_j$  within

$\bar{X}$  (a non-subject), then the binding is not in violation of (30), since the relevant CFC in this case is IP, and the pronoun is in fact  $\bar{A}$ -free within IP. When the element in specifier of CP binds  $pro_j$  in the specifier of XP, on the other hand, the structure stands in violation of (30) since here the least CFC containing the pronoun and a subject distinct from the pronoun is the higher IP (or the root) and the pronoun is not  $\bar{A}$ -free in this domain.

There are numerous known difficulties for this approach,<sup>5</sup> but it is not irrational to hope that those difficulties could be resolved without sacrificing the essence of the proposal.

Summarizing then,  $\bar{A}$ -bound resumptive elements show the following mix of properties in many languages:

- (i) the binding relation they enter into shows no sensitivity to the locality constraints which characterize movement
- (ii) they share with variables the property of triggering Strong Crossover effects
- (iii) the binding relation they enter into does not show Weak Crossover effects
- (iv) the binding relation they enter into is constrained by an antilocality requirement reminiscent of Principle B of the binding theory.

### An Understanding

If these general lines of thought could be sustained, a pleasingly consistent overall view could be seen to emerge:

- (i) Transformational theories of the origin of pronouns have been thought to be deeply flawed,<sup>6</sup>
- (ii) therefore pronouns have to be regarded as base-generated rather than as being derived by transformation.
- (iii) Resumptive pronouns look just like ordinary pronouns. Therefore the null hypothesis is that resumptive pronouns should also be taken to be base-generated.
- (iv) The binding relation between the resumptive pronoun and its binding operator is therefore not created by movement, so
- (v) no sensitivity to constraints on movement is expected in the binding of resumptive pronouns.

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<sup>5</sup> For some difficulties internal to Irish, see McCloskey (1990: footnote 14). The difficulty here revolves around an equivocation in (30) concerning use of the term ‘subject’—which is not well-defined. An additional concern is that languages which have the Highest Subject Restriction in some form seem to differ in how they treat embedded subjects. In Irish, subjects of embedded clauses may freely serve the resumptive function (McCloskey (1990: pp 210, 240)). But in Lebanese Arabic (Aoun and Choueiri (1996), Aoun and Choueiri (2000), Aoun et al. (2001)) they cannot. Certain languages (literary Welsh, Russian) require that neither subjects nor objects in the highest clause be resumptive (Harlow (1981), Sells (1984b), Deprez and Hale (1986), Pesetsky (1998), Broihier (1995)). Finally, not all languages which exhibit resumptive pronouns exhibit the HSR effect. We will consider a suggestion about one such group of languages shortly, but that suggestion will leave a number of cases untouched (see Suñer (1998), for instance, on (informal) Spanish, and Prince (1990) on Yiddish). Perhaps in such cases, there is no  $\bar{A}$ -binder at all and the pronoun trivially satisfies the  $\bar{A}$ -Disjointness Requirement. For alternative approaches to the HSR effect, see Deprez and Hale (1986), Shlonsky (1992), Pesetsky (1998).

<sup>6</sup> But see Kayne (2002) for an argument that this consensus view should be re-considered.

- (vi) But it has been independently argued by Safir (1986) that the notion of ‘variable’ should be defined contextually (a variable is an element whose most local binder occupies an  $\bar{A}$ -position).
- (vii) That being so, resumptive pronouns must be variables and should be subject to Condition C. We therefore expect Strong Crossover effects.
- (viii) But resumptive pronouns are also pronouns. Therefore it is natural that they should exhibit the antilocality requirement which is a fundamental constraint on the binding of pronouns; from this we derive the Highest Subject Restriction.
- (ix) The absence of Weak Crossover effects is also consistent with the overall conception. Safir (1984, 1986, 1996) argues that Weak Crossover is to be understood as a violation of a general parallelism constraint which requires that all the variables bound by a single operator be of the same type—all pronominal or all non-pronominal. This requirement is respected in the Irish example in (27) (since both variables are pronouns) but violated in its English translation.

Standing back from the specifics, the intuition here is that unbounded dependency constructions are characterized by the presence of a bound variable, and that natural language provides two distinct ways to realize variable binding relationships—either by way of a bound pronoun or by way of movement from the bound to the binding position. In the language of ‘chains’: the sense in which resumptive pronouns and traces can serve many of the same functions is that both can serve the function of being the bottom-most position in an  $\bar{A}$ -chain, an abstract theoretical notion which subsumes both certain movement relations and certain binding relations, both linking binding positions with bound positions.

## Open Issues

It would be an overstatement to call the understanding just sketched a ‘consensus’. But something like it guided a good deal of work on resumption in the middle and late 80’s and into the early 90’s, and generated a research-agenda—one that grappled with the important issues which it left unresolved.

One of those issues concerns the level of representation at which resumptive pronouns are defined as variables, the two candidates most often considered being S-structure and LF.<sup>7</sup>

A second issue is whether or not the use of resumptive pronouns represents a last resort mechanism. The conception of resumption just outlined provides no reason to expect that it might in any sense represent a reach for the last resort. Resumption simply represents (on this view) one of the ways in which an  $\bar{A}$ -binding relation can be established. But many theoreticians have had the intuition that resumption is in fact a last resort mechanism, and have striven to design theories in which it would follow that resumption would be avail-

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<sup>7</sup> Chomsky (1982) argued that resumptive pronouns in English were identified as such (by being bound) only at the level of Logical Form. McCloskey (1990) presents an argument from Irish that resumptive pronoun’s in that language must be distinguishable from other pronouns at the level of S-structure. Shlonsky (1992) counters the argument and suggests a return to the position of Chomsky (1982). One of the principal empirical issues at stake here is the question of whether or not resumptive pronouns license the appearance of parasitic gaps (an indicator of S-structure  $\bar{A}$ -binding). Sells (1984b) argued that, at least in Hebrew, resumptive pronouns do license the appearance of parasitic gaps and concluded that they must represent S-structure variables. Shlonsky (1992) challenges both the empirical claim and the conclusion derived from it.

able only if movement (the unmarked way, on this view, to establish an operator-variable binding) were unavailable.

For anyone whose native language is English, the intuition is strong and clear that this is how things work. Resumptive pronouns in English appear—if not exclusively then at least in the general case—in positions from which movement would be impossible (see (22) above, for instance). But for many languages in which the resumptive strategy is more productively used, the situation seems to be very different.<sup>8</sup> The apparent fact in Irish, for instance, is that resumptive pronouns and gaps are in free variation in all positions except those from which movement is impossible (in which resumption is the only option) and those affected by the Highest Subject Restriction (see (29) and (30)), in which only a gap is possible. Similar facts appear to hold in Hebrew.<sup>9</sup>

### The Identity of the Binding Element

The issues considered so far have been the focus of a great deal of discussion. In this section I want to highlight an issue which is, in view, of central importance, but which has been less discussed.

There is strong evidence (as we have seen) that resumptive pronouns function as ‘variables’ in the technical sense. Given the theoretical context in which we are working, this means that they must have a binder (a coindexed element in a c-commanding  $\bar{A}$ -position). There has also seemed to be strong evidence that the local binder of the resumptive element cannot be the overt element with which it is ultimately linked—the head of a relative clause, the interrogative phrase of a question, the focussed phrase of a cleft and so on (McCloskey (1990), Safir (1986)). The evidence seems rather to suggest that that ultimate binding is mediated by a more local binding—between the resumptive pronoun and an element in CP. The Irish evidence, as we will see below, seems to be particularly clear on this point.

But what then should the binder of the resumptive pronoun be taken to be? The answer that has usually been given is that the binding element must be a null operator base-generated in the specifier-position of CP. The null operator is linked in turn with the ultimate binder by way of the relation called ‘R-Binding’ by Safir (1984). For the case of an interrogative structure, then, we will have the schematic structure in (32a) and for a relative clause, the schematic structure in (32b):

- (32) a  $[\text{DP}]_{[\text{Q}]j} [\text{CP Op}_j \text{C} [\text{IP} \dots \text{pro}_j \dots ]]$   
 b  $[\text{DP NP}_j [\text{CP Op}_j \text{C} [\text{IP} \dots \text{pro}_j ]]]$

<sup>8</sup> Prince (1990) cites a great deal of naturally occurring data which might suggest that the usual claim is not in fact correct for English either. McDaniel and McKee (1997) report experimental data suggesting that children learning English (unlike adults) accept resumptive pronouns in positions in which traces are also possible.

<sup>9</sup> The qualifying ‘appear’ is important here, because many of those who have argued for the last resort character of the resumption mechanism (Shlonsky (1992), Pesetsky (1998)) have argued for the existence of hidden factors which block movement (and hence force the appearance of resumptive pronouns) in all the cases in which resumptive pronouns appear. I know of no suggestion about what these hidden factors might be in the case of Irish. This issue is closely connected with the issue of how to understand the Highest Subject Restriction. If movement is freely available from subject-position, and if resumption is possible only when movement is impossible, then it will follow that resumptive pronouns will never appear in subject position. See Shlonsky (1992) in particular for a development of this line of thought.

There is a worry here, though—a worry that one might label ‘the problem of eternal silence’. I mean by this that there are no cases, as far as I have been able to determine, in which the postulated operator is other than null. No language, I believe, has an element *foo* such that one finds relative clauses analogous to (33):

(33) [DP the guy [CP *foo* that [IP I spoke to him ]]]

What one finds over and over again is some equivalent of (34), with no audible element occupying the specifier-position of CP:

(34) [DP the guy [CP that [IP I spoke to him ]]]

The conception of resumption as we have outlined it so far has no explanation for the absence of (33)—an absence which can hardly be accidental. If invariant binding operators exist, it is not obvious what principle would force such operators to be phonologically null in every case.

The only set of proposals in this general family, as far as I know, which is not subject to this objection is that developed by Demirdache (1991), who argues that the specifier position of CP is empty until LF. In the derivation of LF representations, the resumptive pronoun itself is taken to move into the specifier of CP. As long as movement between S-structure and LF is not subject to the same locality requirements as overt movement (Huang (1982) and much subsequent work), this analysis is tenable.

## Parameterization

A remaining open issue concerns how language-particular differences in this domain are to be characterized. For some languages (Hebrew, Lebanese Arabic, Irish) resumption is a fully-integrated aspect of the grammatical system. For others (English, for instance), it is typically regarded as an auxiliary phenomenon, not part of the grammar proper, but rather a device that speakers resort to under certain performance conditions (increased processing load in particular—Erteschik-Shir (1992), Dickey (1996)). Chao and Sells (1983) and Sells (1984b) present evidence from English that the distinction between the two language-types is necessary, delineate some of the distinctive characteristics of the two types, and introduce the term ‘intrusive resumption’ for the English type. They point out in particular that resumption in English relative clauses is degraded if the ultimate antecedent of the resumptive pronoun is quantificational:

(35) \*I’d like to meet every linguist that Mary wondered if she should invite *him* to the party.

If this position is correct, as is widely assumed, then the theory of parameterization has to provide a way to draw a distinction between the two language-types. One proposal within the larger framework just sketched is that the relevant property is a property of the functional head C. If resumptive pronouns are bound by null operators in the specifier of CP, then it is natural that the heads which host such binding operators in their specifiers should bear a distinctive morphosyntactic feature, a feature which has an overt morphophonological

consequence in the Irish complementizer-system, as seen in (14), repeated here as (36):

- (36) a an ghirseach a ghoid na síogaí \_  
           *the girl c stole the fairies*  
           ‘the girl who the fairies stole’   **Irish**
- b an ghirseach ar ghoid na síogaí í  
           *the girl c stole the fairies her*  
           ‘the girl who the fairies stole’   **Irish**

Here there are distinct complementizers (*a* versus *ar* in the case in point) depending on whether the clause contains a gap or a resumptive pronoun (see McCloskey (1990, 2001, 2002) for discussion). If this position turns out to be defensible, then this instance of parameterization falls into line with the emerging consensus that parametric differences derive from featural properties of functional lexical items.

## Movement and Resumption

The open issues just summarized are serious and substantial; some seem soluble, some seem deeper. Overall, though, the conception is reasonably attractive and could make some claim to crosslinguistic generality. But we must now look at a series of cases and issues which pose more fundamental problems for the conception just outlined and which ultimately threaten to subvert it completely, or at least to force radical revisions. Interestingly, all have to do with the interplay between resumption and movement. I want to look at these cases in order of ascending difficulty.

## Swedish, Vata and Gbadi

Engdahl (1985) provides one of the earliest comprehensive studies of the resumptive pronoun phenomenon in a given language—Swedish in this case. A typical example is given in (37):

- (37) Vilket ord visste ingen hur det stavas \_ ?  
       *which word knew no one how it is-spelled*  
       ‘Which word did nobody know how it is spelled?’   **Swedish**

Engdahl demonstrates that resumptive pronouns in Swedish have the following range of properties:

- (i) they license parasitic gaps; see (38)
- (ii) they give rise to weak crossover effects;
- (iii) they satisfy the ATB requirement on extraction from coordinate structures; see (39)
- (iv) they worsen, rather than improve, subjacency violations; see (40)
- (v) they ‘are used systematically only in the subject position of tensed clauses’—in fact, to void what would otherwise be ‘COMP-trace’ violations (p. 11)

- (38) Vilken fånge var det läkarna inte kunde avgöra  
*which prisoner was it the-doctors not could decide*  
 om han verkligen var sjuk utan att tala med – personligen?  
*if he really was ill without to talk with in-person*  
 ‘Which prisoner was it that the doctors couldn’t decide if he really  
 was ill without talking to in person’ **Swedish**
- (39) Det finns vissa ord som jeg ofta träffar på –  
 EXP *are certain words that I often meet*  
 men inte minns hur de stavas.  
*but not remember how they are-spelled*  
 ‘There are certain words that I often come across but  
 never remember how they are spelled.’ **Swedish**
- (40) ?\*Vilken bil åt du lunch med någon som körde den?  
*which car ate you lunch with someone that drove it*  
 ‘Which car did you have lunch with someone that drove?’ **Swedish**

Engdahl concludes from these observations that resumptive pronouns in Swedish ‘behave just like WH-traces’ and are ‘phonetically realized traces’. At about the same time, and I believe independently, Hilda Koopman (1982) (see also Koopman (1984: sections 2.3.3.2 and 6.2.4)) made an almost identical set of observations and drew similar conclusions about the behavior of resumptive pronouns in two Kru languages of North Africa (Vata and Gbadi).

In the face of these observations and proposals, it is impossible to maintain the simplest view of the relation between resumptive pronouns and gaps in  $\bar{A}$ -binding constructions. One cannot maintain, that is, that the presence of a gap indicates that movement has applied and that the presence of a pronoun indicates that movement has not applied. Simple inspection of a string will never be enough to establish whether a given instance of  $\bar{A}$ -binding is established by way of movement or by way of base-generation followed by binding.

There is a sense, though, in which these results do not challenge what I have called here the consensus view in any very deep way. The two sets of properties (properties of movement-derived constructions and properties of non movement-derived constructions) still line up in neat opposition. In Swedish, Vata and Gbadi, those  $\bar{A}$ -binding relations which terminate in a pronoun show the complete constellation of properties associated with  $\bar{A}$ -movement. In Irish and similar languages, resumptive pronoun constructions show none of those properties. As long as we can make sense of the idea that a pronoun can be the ‘spell-out’ of a trace (as in the former group of languages), the larger conceptual architecture is not severely threatened.

Two points are worth making however. The first is that, interpreted in this way, the observations imply that the phenomenon of resumption is not theoretically uniform ((iv) of p. 5 above).

The second is that in the theoretical context in which such proposals were first made, it was not clear that the notion ‘spellout of a trace’ made much sense. Two strands of development, however, changed that. One has to do with our understanding of the movement operation, and the other has to do with our understanding of the category ‘pronoun’.

One of the innovations of the minimalist program (Chomsky (1993), Chomsky (1995)) has been to reintroduce, or re-emphasise, a certain understanding of movement which was standard in work of the 60's and 70's—namely that the movement operation, rather than being a primitive, is in fact a composition of two more fundamental operations—copying and deletion. A copy of the moved element is first created; it is inserted in the target position; then the occurrence of the moved phrase in the origin site is deleted. Given this re-discovery or re-emphasis, it becomes easier to understand what it might mean to 'spell out' a trace. A trace, on this general view, is simply the silence that remains after the lowest occurrence of a copied phrase is deleted. Chomsky (1993) proposes that the deletion takes place on the 'phonological' side of the derivation (that is, in a derivational sequence which follows SPELLOUT and is inaccessible to the operations which create and interpret logical forms). Given that overall conception, it is easy to imagine that deletion of the original copy of the phrase might be partial rather than complete. That is, for a WH-question like (*I wonder which word they are not sure how it's spelled?*), we will have a sequence of representations like that illustrated schematically in (41):

- (41) a [IP they are not sure [CP how [IP [DP *which* [NP *word*]] is spelled ]]]  
 b [CP [DP *which* [NP *word* ]][IP they are not sure [CP how [IP [DP *which* [NP *word*]] is spelled ]]]]  
 c [CP [DP *which word*][IP they are not sure [CP how [IP [DP *which*[NP  $\emptyset$  ] ] is spelled ]]]]  
 d [CP [DP *which word*][IP they are not sure [CP how [IP [DP *it* [NP  $\emptyset$  ] ] is spelled ]]]]

In (41b), we have the immediate aftermath of movement (copying of the WH-phrase and its merger into the specifier position of CP). In (41c), the NP-portion of the lower copy has been deleted. In (41d), the WH-feature on D has been eliminated, and D is as a consequence realized as the default 3rd singular pronoun, namely *it*.

Furthermore, given the view that pronouns are in fact determiners (Postal (1970), Abney (1987), Koopman (1999)), it becomes easy to imagine derivations in which the NP-part of a moved phrase would be deleted stranding a D—that is, a 'resumptive' pronoun.

Two theoretical developments combine to make this set of ideas as plausible as they now are. One is the (re)introduction of the copy-and-delete theory of movement. The second is the articulation of a complex internal structure for nominal phrases—a development which in turn opens the possibility of viewing pronouns also as having complex internal structures. This last move (on which see especially Koopman (1999)) opens up a range of new possibilities and options in debates about base-generation versus derivation by movement. The pronoun in (41d), for instance, can be said to be both base-generated and transformationally derived.

Numerous difficulties and puzzles remain of course. What mechanism forces or permits partial deletion following movement? Why exactly is it that the results of partial deletion systematically resemble pronouns? How is the theory of islandhood and of ECP effects to be re-thought in this context?

However these questions are ultimately answered, the type of resumptive documented by Engdahl and Koopman (which exhibits all the properties of a trace but involves pronunciation of D) seems to demand an understanding along these lines.



If this line of thought is roughly correct, then certain consequences follow which are unexpected within more traditional perspectives. Engdahl documents for Swedish, and Koopman documents for the Kru languages, that resumptive pronouns are found only in positions in which a trace would be in violation of the ECP. More exactly, resumptive pronouns are found in these languages only in subject positions immediately subjacent to a WH-phrase, much as in English examples such as (42):

- (42) They're the kind of people that you never know who *they* might insult.

The ungrammaticality of the corresponding examples with gaps rather than resumptive pronouns, such as (43):

- (43) \*They're the kind of people that you never know who *t* might insult.

has generally been attributed to the Empty Category Principle, standardly taken to be a condition on representations at the level of Logical Form. But this interpretation cannot be right if the perspective just developed is on the right track. Given that perspective, the difference between the (Swedish equivalent of) (42) and (the Swedish equivalent of) (43) emerges only at the point where deletion applies, and the difference is a function only of whether that deletion is complete or partial. But when that conclusion is in turn embedded within the general framework of Chomsky (1993) or Chomsky (1995: Chapter Four), it follows in turn that whatever makes the difference between (42) and (43) cannot be an LF principle. Whatever it is, it must rather do its work on the 'phonological' side of the derivation (where the deletion subcomponent of movement does its work). It is only on that side of the derivation that (42) and (43) are distinguishable at all, on this view of matters. Put more crudely, it follows that subject ECP effects must be 'phonological' phenomena, in the broad sense. This conclusion in turn now makes contact with the strand of more recent work which suggests that many traditional island and ECP effects may find their explanation in the syntactic space between the syntax proper and the linearized prosodic and phonological string—a move driven in part by study of cases in which ellipsis makes good what would otherwise have been an island violation (Ross (1969), Merchant (2001), Lasnik (2000), Fox and Lasnik (2003,2004), Boeckx (2003)).

## Reconstruction

A more complex set of facts has been documented for Lebanese Arabic in an important series of papers by Joseph Aoun, Lina Choueiri, and Norbert Hornstein (Aoun and Choueiri (1996), Aoun and Choueiri (2000), Aoun et al. (2001)).

This pattern of facts is of importance because of the complex interplay it exhibits between resumption and reconstruction. This interaction is in turn crucial in assessing to what extent resumption shows the characteristics of movement. Reconstruction is the phenomenon whereby a moved phrase exhibits properties or interactions attributable to its occupying a syntactic position other than the one in which it is pronounced. A strong (but not universal) consensus in recent work attributes reconstruction effects in general to syntactic movement. A phrase 'acts as if' it occupies a position other than that in which it is pronounced because it has been moved from that position. One of the virtues of the copy-and-delete understanding of movement is that it provides a particularly simple understanding of the phenomenon. A phrase 'acts as if' it occupied a lower position than that

in which it is pronounced because there is an occurrence of that phrase (deleted in the pronounced string but not in the representation submitted to interpretive mechanisms) in the lower position.

This account makes a very tight connection between the phenomenon of reconstruction and the operation of movement. If it is correct, then reconstruction effects constitute as reliable a diagnostic as there can be that a movement operation has applied.

The question of whether or not one gets reconstruction effects under resumption was asked early (Zaenen et al. (1981)) and answered positively. The investigation was fairly brief, however, and centered on a language (Swedish) for which the movement analysis of resumptive pronouns was already well supported. The work of Aoun, Choueiri and Hornstein is important because the investigation went farther empirically, was embedded in a richer theoretical context, and centered on a language (Lebanese Arabic) for which the movement theory of resumption was initially much less plausible because resumptive pronouns in the language appear routinely inside islands.

What emerges, briefly, from this body of work is the following. Resumptive elements (strong pronouns or epithets) which appear inside islands behave differently from resumptive elements which are not inside islands, even though the two are formally identical (Aoun and Choueiri (1996) suggest the terms ‘true resumption’ and ‘apparent resumption’ respectively for the two cases). In particular, resumptive elements which are not trapped within islands exhibit reconstruction effects, but resumptive elements inside islands show no reconstruction effects.<sup>10</sup> In (44), for example ((25b) in Aoun et al. (2001)), in the absence of an island boundary, the clitic pronoun inside the fronted nominal phrase may be bound by the negative quantifier:

- (44)    təlmiiz-a    l-kəsleen ma    baddna    nχabbir    wala mʔallme ʔanno huwwe  
*student-her the-bad NEG want-1.PL tell-1.PL no teacher that he*  
           zaʔbar                            b-l-faḥṣ  
           *cheated-3.SG.MASC in-the-exam*  
           ‘Her bad student, we don’t want to tell any teacher that *he* cheated on the exam.’

Leban

That is, the pronoun contained within the fronted phrase can apparently be reconstructed to the position of the resumptive pronoun, a position from which it can be bound by the negative quantifier *no teacher*. Such reconstruction, however, is systematically impossible if the resumptive element (pronoun or epithet) is contained within an island which excludes its ultimate binder.

If reconstruction is a true diagnostic for movement, then it follows from these observations that (at least in Lebanese Arabic) resumptive pronouns outside islands are formed by movement, but those inside islands are not. It follows in turn that both mechanisms (movement and base-generation) must be available within the same language, and the fact that the two outcomes are formally indistinguishable becomes very puzzling.

Further research on the interaction between resumption and reconstruction is urgently needed.

<sup>10</sup> There are in addition a set of correlated effects involving obviation and the possibility of having quantificational antecedents.

## Conclusion

What we have called here (in a deliberate over-simplification) the ‘consensus view’ of resumption found in work of the 1980’s and early 1990’s is, then, now difficult to maintain, at least in its entirety or in its simplest form. It has been subverted by a number of developments—the re-thinking of what the movement operation is, the new centrality of reconstruction as a diagnostic tool, and the ongoing re-thinking of islandhood and ECP phenomena.

It is hard to predict how of all of this will be resolved, but the area is ripe for further work, and there is a rich base of observation and analysis upon which to build.

There is also a deep mystery lying at the bottom of it all. It is known that resumptive elements may serve the purpose of marking variable positions in unbounded dependency constructions. It is known that resumptive elements may occur in positions from which movement is impossible (hence apparently allowing greater expressive power than is permitted by movement alone). It is also known that resumption imposes a considerably lighter burden on the human sentence processor than does the production and resolution of syntactic movement configurations. Why, then, is movement used at all in the creation of these structures?

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