Silent resumptives in Zurich German possessor relativization[1]

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Abstract

Zurich German relative clauses feature a gap strategy for subject and direct object and a resumptive strategy for oblique relations such as indirect object and object of preposition as well as for all positions inside islands. While a movement analysis is straightforward for gap relatives, there is conflicting evidence concerning the syntax of resumptive relatives: Reconstruction effects suggest a movement analysis while the insensitivity to locality constraints is more compatible with a base-generation account. Recent approaches have proposed ways of implementing reconstruction under base-generation while movement approaches have severe difficulties accounting for the insensitivity to locality. After dismissing most movement approaches to resumption on empirical and conceptual grounds, we finally consider the possibility that it is the overtness of the tail in resumption that makes movement out of islands possible. Resumptives are normally overt in Zurich German and therefore seem to support this view. Possessive relatives, which on the surface do not employ a resumptive pronoun, are an ideal test case to distinguish movement from base-generation. A thorough investigation of the underlying possessor doubling construction reveals that a small pro *can be licensed in the position of the possessor. Possessor relativization can then be shown to necessarily involve an empty resumptive pronoun that is bound*

by a base-generated operator. A movement analysis which makes movement out of ==islands== possible because of an overt tail crucially fails in this case because the resumptive is silent. Given that base-generation is required for possessor relativization, it is most economical to extend it to resumptive relatives in general. Resumptives thus act as a last resort when grammatical principles bar movement derivations. But since base-generation is in principle available, one needs to explain why there are no resumptives for subjects and direct objects. The base-generation option seems to be blocked by the movement option, which implies that they compete. This in turn has important implications for the definition of the ==reference set.== To explain the Zurich German facts one has to assume that the reference set is based on identical LFs rather than identical numerations.

The paper is organized as follows: Section one introduces Zurich German relative clauses and possible analyses. Section two is devoted to the possessor doubling construction. In section three resumptive relatives are implemented by means of base-generation. Section four discusses the wh-/ relativization asymmetry with respect to resumption. Section five presents a matching analysis for relative clauses in Zurich German, and section six concludes this paper.

1. The syntax of relativization in Zurich German

This section first introduces the basic facts about Zurich German relative clauses. Thereafter, the distribution of resumptive pronouns is explained as a last resort. In the last subsection, movement and base-generation approaches to resumption are compared.

1.1. The distribution of resumptive pronouns in Zurich German

In this section I will present the basic facts about relativization in Zurich German (ZG), a High Alemannic dialect spoken in the greater Zurich area, cf. Weber (1964) for a traditional, but still very informative source. The focus will be on the distribution of resumptive pronouns.

1.1.1. Relative clauses

Zurich German relatives are post-nominal and head external. Importantly, there are no relative pronouns (except for certain adverbial relations),[2] but

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2. See Salzmann (2009b: 155, fn. 1) for qualifications.

instead an invariant complementizer *wo* (*won* before vowel-initial clitics) introduces relative clauses. In certain grammatical relations, a resumptive pronoun appears instead of a gap. In the default case the resumptives behave like weak personal pronouns and are fronted to the Wackernagel position or are cliticized onto C (or, in case of oblique relations, onto the governing preposition). The distribution of resumptive pronouns in local relativization follows the Accessibility Hierarchy by Keenan & Comrie (1977) in that resumptive pronouns are found from the dative object on downwards, but crucially not for subjects and direct objects (cf. Weber 1964, van Riemsdijk 1989):[3,4]

3. Most of the data from non-possessive relativization are taken from Salzmann (2006b), unless indicated otherwise. The facts described here hold for most Swiss German dialects, the only area of variation being datives, cf. the next footnote. I am very grateful to the following people for providing judgments: Barbara Bächli, Silvio Bär, Kathrin Büchler, Petrea Bürgin, Martin Businger, Peter Gallmann, Martin Graf, Beatrice Hartmann, Maja Hermann, Andreas Henrici, Roland Litscher, Michael Mente, Heinz Moser, Marlys Moser, Franziska Näf-Vosnjak, Christian Rapold, Didier Ruedin, Etienne Ruedin, Marianne Ruedin, Michel Ruedin, Claudia Schmellentin, Charlotte Schweri, Guido Seiler, Roman Sigg, Benjamin Stückelberger, Rafael Suter, Kathrin Würth, Martina Würth, Lukas Zaugg, Silvia Zaugg-Coretti, Tobias Zimmermann, Regula Zimmermann-Etter, Hans-Jürg Zollinger, Serena Zweimüller.

  The data from possessive relativization, most of which are uncontroversial, are largely based on my judgments. I would like to thank Kathrin Würth for discussing many of the examples with me in detail.

4. The transcription largely follows the guidelines of Dieth (1938). See Salzmann (2006b: 320, fn. 259) for details. Long-distance relativization, where resumptives appear across the board, can be argued to instantiate a different construction, cf. Salzmann (2006b), van Riemsdijk (2008). Free relativization requires wh-relative pronouns that leave gaps, cf. van Riemsdijk (1989). Appositive relatives seem to behave like restrictive relatives with respect to resumption, except for the indirect object.

  The syntax of dative relativization is more complex. With certain verbs (especially experiencer verbs), neither a gap nor a resumptive leads to a completely well-formed result, cf. Salzmann (2006b: 323–326). Additionally, there is generally a lot of intra-speaker variation: Many speakers accept both gap and resumptive. Since these facts are orthogonal to the goal pursued in this paper, I will ignore them in what follows. But see Salzmann (2008/2009b/to appear) and Salzmann & Seiler (2010) for detailed discussion.

(1) a. *d   Frau,   wo* (*si) *immer z   spaat chunt*
         the woman C (she) always too late   comes
         'the woman who is always late'   (subject: *wo* + gap)

     b. *es Bild,   wo niemert* (*s) *cha zale*
         a picture C nobody (it) can pay
         'a picture that nobody can afford'   (direct object: *wo* + gap)

     c. *de Bueb, wo mer* *(***em***)   *es Velo versproche händ*
         the boy   C we (he.DAT) a bike promised have.1PL
         'the boy we promised a bike'   (indirect object: *wo* + res.)

     d. *d   Frau,   won i von* *(***ere***) *es Buech überchoo han*
         the woman C   I from (she) a book got   have.1SG
         'the woman from whom I got a book'   (P-object: *wo* + res.)

     e. *d   Frau,   won i mit* *(***ere***) *is   Kino ggange bin*
         the woman C   I with her in.the move went   am
         'the woman that I went to the movies with'
                                                (P-adjunct: *wo* + P + res.)

Resumptives are also found inside islands. In that case, subjects and direct
objects also require resumptives (islands are indicated by angled brackets,
cf. Salzmann 2006b: 330):[5]

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5. Importantly, unembedded PPs like those in (1)d–e also represent non-
   transparent domains: There is no preposition stranding in Zurich German;
   pied-piping is obligatory:

   (i) *Wem[1] *häsch   geschter mit __*[1] *gredt?*
       who   have.2s yesterday with   talked
       'Who did you talk to yesterday?'

   (ii) [*Mit wem*][1]   *häsch   geschter __*[1] *gredt?*
        with who.DAT have.2s yesterday   talked
        'Who did you talk to yesterday?'

   Not even R-pronouns allow stranding. Instead, the R-pronoun is doubled in
   the base-position (cf. Fleischer 2002 for preposition stranding and related con-
   structions in varieties of German):

   (iii) *Daa   han i nüüt   **(***de***)*voo verschtande.*
         There have I nothing   there.of understood
         'I didn't understand anything of it.'

(2) a. *de Maa, won i <mit enere Schwöschter von*
the man C I with a   sister   of

(em**) i d Schuel bin>*
 him in the school am

'the man with a sister of whom I went to school'   (PP island)

b. *de Sportler, wo <d Biografie über *(**in**)> vil*
the athlete C   the biography about him much

Erfolg ghaa hät
success had has

'the athlete such that the biography about him had a lot
of success'   (subject island)

c. *de Autor, wo d Marie <jedes Buech won *(**er**) schriibt>,*
the author C the Mary   every book C   he writes

sofort   chaufft
immediately buys

'the author such that Mary immediately buys
every book he writes'   (CNPC)

d. *de Sänger, won i mi fröi,*
the singer C I me be.happy

*<wänn mer *(**en**) im Fernseh bringt>*
 when one him on TV   brings

'the singer such that I am happy when they show him
on TV'   (adjunct island)

Importantly, such structures are not perceived as repairs and should there-
fore not be equated with intrusive pronouns in English, cf. Chao & Sells
(1983). Corresponding wh-extractions are strongly ungrammatical (and
would not improve with resumptives), cf. Salzmann (2006b: 331):

(3) a. *[**Vo wen**]₁   *bisch <mit enere Schwöschter __₁> i d Schuel?*
of who.DAT are   with a   sister   in the school

lit.: 'Who did you go with a sister of to school?'   (PP-island)

b. *[**Über wele Sportler**]₁ *hät <d biografie __₁> vil Ergolg ghaa?*
about which athlete   has the biography   much success has

lit.: 'Which athlete did the biography about have a lot of
success?'   (subject island)

c. *[**Wele Autor**]$_1$ chauft d   Marie < jedes Buech, wo __$_1$ schriibt>?*
  Which author buys the Mary   every book C   writes

  lit.: 'Which author does Mary buy every book that

  writes?'   (CNPC)

d. *[**Wele Sänger**]$_1$ fröisch   di,   <wänn mer __$_1$ im Fernseh bring>?*
  which singer   be.happy.2s you when one   on TV   brings

  lit.: 'Which singer are you happy when they show

  on TV?'   (adjunct island)

1.1.2.   Other types of A'-movement

Comparative deletion shows the same distribution of resumptive pronouns as relativization, cf. Salzmann (2006b). Here is a pair contrasting direct and indirect object:

(4) a. *Es   sind mee Patiente choo als   de Tokter*
       there are more patients come than the doctor

       (*___**sie**___)   *hät chöne behandle.*
       (them) has could treat

       'There came more patients than the doctor could treat.'   ACC

    b. *Es   sind mee Lüüt choo als   *(___**ine**___)*
       there are more people come than   they.DAT

       de Tokter hät chöne Medikamänt gëë.
       the doctor has could medicine   give

       'There came more people than the doctor could give

       medicine to.'   DAT

Wh-movement and topicalization, however, pattern differently. Resumption is categorically ruled out in local dependencies for all grammatical relations. The following pair illustrates extraction of a dative object (Salzmann 2006b: 376f.):[6]

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6. In long-distance movement, PPs and indirect objects leave gaps while with subjects and direct objects there is some variation, cf. Weber (1965: 304). The latter may, however, be an instance of the so-called A'-splits discussed in Salzmann (2006b: 376: fn. 297) and also in 4.2 below.

(5) a. ***Welem   Maa*** *häsch   __|*em   es Buech ggëë?*
         which.DAT man have.2s   he.DAT a book given?

     'To which man did you give a book?'

   b. ***Dem   Bueb*** *han i __|*em   es Buech ggëë.*
         that.DAT boy have I   he.DAT a book given

     'To that boy I gave a book.'

1.2. Resumption as a last resort

In the analysis of resumption one can, in principle, distinguish two per-
spectives: According to the first, resumption is simply taken to be a possi-
bility in a given language (e.g. McCloskey 1990, Suñer 1998, Willis 2000,
Bianchi 2004); in languages of this type, resumptive and gap relatives exist
side by side, at least in certain environments. None of the strategies is thus
privileged. Alternatively, resumption is analyzed as a last resort that only
comes into play when other syntactic mechanisms (leading to gap rela-
tives) fail (e.g. Shlonsky 1992, Pesetsky 1998, Toman 1998, Boeckx 2003,
Alexopoulou 2006, Guilliot 2006, Rouveret 2008). I believe that both
perspectives are necessary to account for cross-linguistic variation. In
languages where gaps and resumptives have the same distribution the first
position seems more adequate (but see Shlonsky 1992) while in languages
where gaps and resumptives are in complementary distribution the second
view seems preferable (cf. also Salzmann 2009a).

   In ZG the situation is quite clear. Resumptives and gaps are in comple-
mentary distribution (but recall fn. 4), which is an argument for a last
resort approach. Next to the asymmetry subject/direct object vs. the other
positions there is a similar contrast when non-individual-denoting types
are relativized. In the following pair a predicate is relativized on; in one
case originating in a non-oblique position, in the second case within a PP
(i.e. within an island). While resumption is impossible in the first case, it is
obligatory in the second (cf. also Salzmann 2006b):[7]

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7. In the b-example the resumptive is an R-pronoun, the pronominal part of a
   pronominal adverb. Pronominal adverbs occur if prepositions take an inani-
   mate pronominal complement (cf. Salzmann 2006b for a more careful state-
   ment). Consequently, *de*-appears instead of *das*.

(6)　a.　*Er isch de gliich Idiot, wo scho　　sin Vatter* (****das***) *gsii　isch.*
　　　　he is　the same idiot　C　already his father　　that been is

　　　　'He is the same idiot his father already was.'

　　b.　*Isch de Hans würkli de Trottel, won en　all* *(***de***) *füür haltet?*
　　　　is　the John really the idiot　　C　him all　there.for hold

　　　　'Is John really the idiot everyone regards him as?'

If resumptives occur as a last resort, we need to identify the factor that triggers their appearance. For Zurich German there are two different factors that will be discussed in turn.

1.2.1.　*Resumptives amnesty locality violations*

Of the contexts surveyed so far, resumptives inside PPs and other islands can be captured by the following generalization: They all occur in positions from where movement is (normally) impossible. Thus, they somehow amnesty locality violations (cf. the data in (2) vs. (3) and fn. 5).

1.2.2.　*Dative resumptives make oblique case visible*

The solution of the previous subsection cannot be extended to indirect objects because they do not represent an non-transparent domain, as shown by (5)a. Instead, the occurrence of dative resumptives can be traced back to a language-internal constraint that requires the overt realization of oblique case: The case system of ZG is reduced compared to the Standard German one. The genitive has been lost and nominative and accusative have fallen together (being distinct only in the personal pronoun paradigm). As a consequence, we obtain a system that distinguishes direct and oblique, the dative being the only morphologically oblique case.

Bayer at al. (2001) have shown that the direct-oblique distinction plays an important role in the grammar of German and its dialects: Like genitives, datives are subject to special morphological licensing conditions. Bayer et al. (2001) discuss a number of contexts two of which we will repeat here.[8] First, complement clauses in German cannot directly fill the slot of a dative argument:

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8. Matching effects in ZG dative relatives provide additional evidence, cf. Salzmann (2006a/b, 2009b, section 5.4).

(7) a. *Wir bestritten,* (*die   Behauptung*)
we denied   the.**ACC** claim

[*dass wir verreisen   wollten*].
that we travel.away wanted

'We denied (the claim) that we wanted to go away.'

b. *Wir widersprachen* *(*der   Behauptung*),
we objected   the.**DAT** claim

[*dass wir verreisen   wollten*]].
that we travel.away wanted

'We rejected the allegation that we wanted to go away.'

(Bayer et al. 2001: 471)

Since CPs cannot realize morphological case in German, a DP has to be inserted to rescue (7)b. The non-oblique cases nominative and accusative do not require this extra licensing, inserting a DP is optional (7)a. Second, Topic Drop is only possible with nominatives and accusatives, but not with datives, cf. Bayer et al. (2001: 489):

(8) a. [$_{acc}$] *Hab' ich schon   gesehen.*
have I   already seen

'I have already seen (it).'

b. *[$_{dat}$] *Würde ich nicht vertrauen.*
would I   not   trust

'I wouldn't trust (him).'

All these facts hold for Zurich German as well and other German and Swiss German dialects in general (see Salzmann 2006b: 374ff. for more empirical evidence). Consequently, the fact that the dative also stands out in ZG relativization does not come as a surprise, dative resumptives are simply another reflex of the constraint that requires oblique morphological case to be visible.[9] The fact that there are no resumptives for subjects and

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9. There are alternative possibilities to motivate dative resumptives. Some explanations (Boeckx 2003, Bianchi 2004) have linked their occurrence to inherent case. Van Riemsdijk (1989) has argued that datives are in fact PPs, so that dropping the resumptive would violate recoverability. See Salzmann (2006b, 2009b: 139–142) and Salzmann & Seiler (2010) for clear evidence that an explanation in terms of the morphological notion "oblique case" is superior.

direct objects follows automatically: Since nominative and accusative are not oblique cases, no special morphological licensing is necessary.[10]

1.3.   Movement or Base-Generation?

Gap relatives can be straightforwardly analyzed as involving movement since they show the usual movement effects (but cf. also fn. 61). The analysis of resumptive relatives, however, is less straightforward. Until the 1990ies it was more or less taken for granted that resumption involves base-generation. In recent years, however, there have been a number of approaches that have claimed that resumption sometimes involves movement, e.g.: Demirdache (1991), Pesetsky (1998), Aoun et al. (2001), Boeckx (2003), Bianchi (2004). As a matter of fact, the empirical facts in ZG are equivocal; some favor movement while others point towards base-generation.

1.3.1.   Locality

As shown in (1)d–e and (2)–(3), resumptive relatives in ZG are completely insensitive to locality. This is a frequent though not universal property of resumptive constructions.[11] It argues against movement analyses.

1.3.2.   Reconstruction

Reconstruction effects are a classical diagnostic for movement. The following pairs show reconstruction for variable binding and Principle A in both gap and dative resumptive relatives (the external head is enclosed in brackets, the reconstruction site is indicated by means of underline; see Salzmann 2006b for more details):[12]

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10. The Zurich German pattern is by no means exotic. The same has been observed for a number of languages in Keenan & Comrie (1977: 93), also for colloquial registers of Slavic languages, e.g. Czech (Toman 1998: 305); restrictive relatives in Greek also show the same pattern, cf. Alexopoulou (2006: 63).

11. See Boeckx (2003: 108ff.) on Vata and Swedish where resumptives are sensitive to locality. The same is observed by Goodluck & Stojanovic (1996) for Serbo-Croatian, by Georgopoulos (1991) for Palauan, by Rouveret (2008: 179) for Welsh, by Adger & Ramchand (2005) for Scottish Gaelic, and by Alexopoulou (2006: 85) for restrictive relatives in Greek.

12. As Josef Bayer has correctly pointed out to me, in (10) the resumptive is fronted to the Wackernagel position so that its surface position does not coincide with the reconstruction site. This implies that approaches based on NP-ellipsis, as discussed below, must assume that pronoun fronting is post-syntactic and thus irrelevant for reconstruction. This problem does not arise for semantically-based approaches to reconstruction. Cf. also 1.3.4.2 and 3.2.2.2 for the relevance of pronoun fronting.

(9) a. *Ich wett s   [Fotti   vo **sinen**$_i$ Eltere] gsee,*
I   want the picture of his   parents see

*wo **jede   Schüeler**$_i$ __ am beschte findt.*
C   every pupil   the best   likes

'I would like to see the picture of his$_i$ parents that every pupil$_i$
likes best.'   DO

b. *s   [Grücht über **siich**$_i$], wo **de Peter**$_i$ __ nöd chan ignoriere*
the rumor about self   C   the Peter   not can   ignore
'the rumor about himself$_i$ that Peter$_i$ cannot ignore'   DO

(10) a. *de [Pricht über **sini**$_i$ Frau], won **em   kän Politiker**$_i$*
the story   about his wife C   he.DAT no politician

__ würd Glaube schänke
would believe give

'the story about his$_i$ wife that no politician$_i$ would believe'   IO

b. *s   [Buech über **siich**$_i$], won **em   de Peter**$_i$*
the book about self   C   he.DAT the Peter

__ jede   Wert abgsproche hät
every value denied   has

'the book about himself$_i$ that Peter$_i$ denied any value'   IO

Since much of the literature on resumption took base-generation for
granted, the issue of reconstruction under resumption has only recently
become a major point of discussion. By now it seems widely accepted
that reconstruction effects can occur under resumption: Aoun et al. (2001)
on Lebanese Arabic, Bianchi (2004/2008) on Romance, Belletti (2006) on
Italian, Guilliot (2006) on Breton, Guilliot & Malkawi (2006) on Jordanian
Arabic, Guilliot (2007) on French, Boeckx & Hornstein (2008) on Lebanese
Arabic, and Rouveret (2008) on Welsh have all documented that resump-
tion allows at least some reconstruction effects, especially reconstruction
for anaphor binding and variable binding.

Aoun et al. (2001) and Boeckx & Hornstein (2008) have argued that
reconstruction effects with resumption require more care. They show that
in Lebanese Arabic, the possibility of reconstruction in resumptive con-
structions correlates with locality: If the resumptive is in a position from
where extraction is in principle possible – e.g. indirect objects as in (10)
(and compare wh-extraction in (5)a. – reconstruction is possible, while in

cases where the resumptive is inside an island there is no reconstruction. Resumption is called 'apparent' in the first case and 'true' in the latter.[13]

In ZG, however, there is no evidence for such an asymmetry. Reconstruction effects are also found when the resumptive is located inside plain PPs, inside PPs which are embedded within another PP and even within classical strong islands such as a noun complement clause:[14]

(11) a. *D* [*Ziit vo* **sim**$_i$ *Läbe*], *wo* **niemert**$_i$ *gern* <u>*drüber*</u>
      the time of his life C nobody likes.to there.about

      redt, isch d Pubertät.
      talks is the puberty

      'The time of his$_i$ life that nobody$_i$ likes to talk about is puberty.'

   b. *s* [*Fotti vo* **sinere**$_i$ *Frau*], *wo* **kän Politiker**$_i$ <*mit em*
      the picture of his wife C no politician with the

      Gschwätz <u>*drüber*</u>> *glücklich isch*
      gossip there.about happy is

      lit.: 'the picture of his$_i$ wife that no politician$_i$ is happy about
      the gossip about'

   c. *de* [*Abschnitt vo* **sim**$_i$ *Läbe*], *won i* <*d Behauptig,*
      the period of his life C I the claim

      dass **jede Politiker**$_i$ *stolz* <u>*druf*</u> *isch*> *nöd cha glaube*
      that every politician proud there.on is not can.1SG believe

      lit.: 'the period of his$_i$ life that I cannot believe the claim that
      every politician$_i$ is proud of'

We can conclude from these facts that gap and resumptive relatives work the same way with respect to reconstruction.

1.3.3. Strong Crossover Effects

Strong Crossover Effects (SCO) are often taken to be a diagnostic for movement in A'-dependencies. They are very robust in gap relatives:

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13. This distinction is, of course, only relevant in languages where resumption is not sensitive to locality. See Bianchi (2004) for similar observations.
14. Reconstruction does become difficult in cases like (11)c, but I do not think that there are grammatical reasons for this so that the bifurcation of resumption proposed in Aoun et al. (2001) is unwarranted for ZG. Reconstruction into islands has also been observed in Jordanian Arabic by Guilliot & Malkawi (2006) and in French by Guilliot (2007).

(12)   **de* [*Maa*]$_i$, *won* **er**$_i$ __$_i$ *gern hät*
       the man   C   he   likes

       lit.: 'the man$_i$ who$_i$ he$_i$ likes'

Testing SCO effects in resumption requires some care, as discussed in McCloskey (1990: 211f.) and Shlonsky (1992: 46), see also Salzmann (2006b: 346ff.): One has to make sure that the pronoun that is putatively crossed cannot be interpreted as a resumptive. In Zurich German, this can be easily done if the pronoun that is crossed is a subject because subjects do not allow resumptives, cf. (1). Once this is taken into account, SCO effects also occur in resumptive relatives, in principle irrespective of how deeply embedded the resumptive is:

(13)   a.   **de* [*Bueb*]$_i$, *won* **er**$_i$ *mit emene Fründ vo* <u>*im*</u>$_i$ *es*
            the boy   C   he with a   friend of him a

            Auto gschtole hät
            car   stolen   has

            lit.: 'the boy$_i$ who$_i$ he$_i$ stole a car with a friend of'

       b.   **de* [*Maa*]$_i$, *won* **er**$_i$ *d Frau, won* <u>*en*</u>$_i$ *geschter*
            the man   C   he the woman C   him yesterday

            verlaa hät, vertüüflet
            left   has condemns

            lit.: 'the man$_i$ who$_i$ he$_i$ condemns the woman that left'

Again, gap and resumptive relatives pattern identically.

1.3.4.   Possible implementations

The data above do not straightforwardly argue for either base-generation or movement. While the insensitivity to locality argues in favor of base-generation, the reconstruction and SCO effects are classical diagnostics of movement. I will therefore discuss both approaches in some detail to determine which of the two is more viable.

1.3.4.1.   Base-generation

Under a base-generation analysis, the insensitivity to locality falls out directly: The relationship between a base-generated operator and a re-sumptive involves binding, which is generally not thought to be sensitive to locality.

The reconstruction effects, on the other hand, may seem rather surprising, especially if reconstruction is analyzed in terms of interpretation of the lower copy of a movement chain (e.g. Chomsky 1995). While it is indeed standardly assumed that reconstruction implies a movement relationship, there are a number of phenomena that show that this is arguably not always correct. Reconstruction effects are also found in constructions without a direct movement relationship between the reconstructee and the reconstruction site. This holds e.g. generally for relative clauses (unless a Head Raising Analysis is adopted) and pseudoclefts (den Dikken et al. 2000: 42):

(14)   What **nobody**$_i$ bought was a picture of **his**$_i$ house.

Nobody and the bound pronoun *his* are not part of the same clause and there is no obvious movement relationship that could reconstruct *nobody* into the same clause as *his* (see den Dikken 2006, section 6 for an overview over possible analyses). Furthermore, certain instances of scope reconstruction in relative clauses can be explained without the interpretation of the lower copy of a movement chain, cf. e.g. Sharvit (1999: 588), Cecchetto (2005), Hulsey & Sauerland (2006):

(15)   The woman every man$_i$ loves is his$_i$ mother.

The multiple-individual reading (a different woman for every man) does not necessarily result from interpreting the external head of the relative inside the relative clause since the QP binds a pronoun in the matrix clause. Obviously, a mechanism is available for the QP to get scope over the bound pronoun in the matrix clause (this could be Quantifier Raising of the QP, cf. Hulsey & Sauerland 2006 or an analysis in terms of indirect binding, cf. Sharvit 1999, Cecchetto 2005). These mechanisms are also sufficient for the universal to gain wide scope with respect to the external head. But once such mechanisms are necessary anyway and thus in principle available, modeling reconstruction effects by means of the copy theory of movement is no longer necessary.[15]

The parallel between movement and reconstruction is thus obviously not perfect; reconstruction under base-generation becomes less surprising than it may initially seem since alternative mechanisms are available. Semantic reconstruction is one such possibility, cf. the overview in Sternefeld

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15. See also Cecchetto (2005) for convincing arguments that reconstruction in relative clauses should generally not be accounted for in terms of the copy theory of movement.

(2000). Alternatively, Guilliot (2007), Guilliot & Malkawi (2006), and Rouveret (2008) suggested that reconstruction in (base-generated) resumption can be captured straightforwardly if Elbourne's (2001) NP-ellipsis analysis of pronouns is adopted for resumptives: A third person pronoun is reanalyzed as a transitive determiner whose NP-complement has been elided under identity with an antecedent (outline stands for PF-deletion): [$_{DP}$ D NP]. Reconstruction – even into strong islands – will then follow without any extra assumptions.[16] For an example like (11)b we would get the following schematic LF-representation for the relative clause (I use English words for ease of presentation):

(16)   ... that no politician$_i$ is happy about the gossip about
          [$_{DP}$ it [**picture of his$_i$ wife**]]

I conclude from this that reconstruction effects are in principle compatible with a base-generation analysis. See section 5 for a detailed exemplification of how reconstruction works in Zurich German relative clauses.[17]

SCO effects under resumption have been documented for several languages. Whether they really are a diagnostic for movement is not so clear. If reconstruction can be handled under base-generation, there seems to be no reason not to claim the same for SCO effects. This is the position in McCloskey (1990) and Shlonsky (1992) where SCO effects are defined on the basis of the A'-chain linking the operator with the resumptive: An SCO effect in an example like (13)a would then be due to the fact that the chain between the base-generated operator and the resumptive crosses a pronoun with the same index (again, I use English words for ease of presentation):

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16. See Rouveret (2008: 192, fn. 27) for evidence that reconstruction of this type may be blocked in non-A-bar contexts.

17. The test case to tell apart movement and base-generation would involve reconstruction into intermediate positions. Such interpretations cannot be derived by base-generation plus semantic reconstruction or NP ellipsis since the external head is not related to such positions under base-generation. Under successive-cyclic movement, on the other hand, such interpretations are expected to occur. I discussed a number of cases in Salzmann (2006b: 341–345), but the result is not clear enough to derive any conclusions from it. The problem is more general in that reconstruction into intermediate positions is generally degraded in German and its varieties, cf. Salzmann (2006b: 92ff.). For resumption in other languages it has been claimed that cyclicity effects disappear, i.e. reconstruction is always to the tail of the A'-dependency, cf. Rouveret (2008: 186) for Welsh.

(17)   *the boy$_i$, **Op**$_i$ C **he**$_i$ with a friend of **him**$_i$ a car stolen has

Under the NP-ellipsis of resumptives, SCO effects in resumption are actually just a trivial example of a Condition C violation: In (13)b, for instance, the LF would correspond to something like: *He$_i$ condemns the women who left* [*the man*]$_i$.

One can conclude therefore that a base-generation analysis is in principle compatible with all movement effects.

1.3.4.2.   *Movement*

SCO and reconstruction effects fall out nicely under a movement approach. What is more interesting is that they (sometimes) also occur if the resumptive is inside an island. This would imply that resumptive relatives always involve movement, even out of islands. Since this is normally taken to be impossible, it must be the presence of the resumptive that makes this possible. There are three basic types of approaches that have tried to reconcile the insensitivity to locality with movement: LF-movement (Demirdache 1991), the PF-theory of locality (Pesetsky 1998), and movement without Agree (Boeckx 2003). I will discuss them in turn (cf. Salzmann 2006b: 290ff., Salzmann 2009a for detailed discussion).

Demirdache (1991) claims that resumptive pronouns are operators that undergo movement at LF. This is supposed to explain the insensitivity to locality under the assumption that LF-movement is less restricted than overt movement. However, even though LF-movement is indeed generally assumed to be subject to less strict locality constraints than overt movement, it is still usually taken to be sensitive to adjunct islands (cf. Aoun & Li 1993). As a consequence, sentences like (2)c/d should be ungrammatical, contrary to fact. Consequently, Demirdache's (1991) approach cannot be correct for resumption in Zurich German relatives.

Boeckx (2003) has developed a very elaborate approach to resumption a full discussion of which is beyond the scope of this paper (but see Salzmann 2006b: 285ff., 292ff., Bianchi 2008). For present purposes it suffices to evaluate his proposal why movement out of islands is possible under resumption: According to him (2003: 97ff.) movement is in principle unbounded and there is nothing inherently wrong about extracting from an island. However, the Agree operation that normally takes place between a Probe and a Goal is sensitive to locality. Locality constraints can be avoided exactly in those cases where movement is possible without Agree (Boeckx 2003: 109ff.). Movement without Agree is possible if the

phi-features of the Goal are not activated. This, Boeckx argues, is possible if some other element checks the phi-/case-features of v. Resumption is such a case: Assuming a Big-DP headed by the resumptive with the operator as its complement, it is the entire Big-DP that checks/values the case- and phi-features of v. The operator, however, can be attracted by the C-probe under Match:

(18)   C . . . [$_{ISLAND}$ v   [$_{DP}$ D$_{RP}$ [Op]]]

the Big-DP checks case-/phi-features on v.
C attracts operator under pure Match

Importantly, movement under Match is only possible if the C-Probe is of a particular type, namely of the so-called non-agreeing type, i.e. a C-probe that can probe without Agree (in practice, this will tend to be complementizer-like/zero probes).

   While Boeckx (2003) must be given credit for attempting to reconcile movement out of islands with our assumptions about locality, there are a number of problems with his assumptions: First, the theory is to a large extent tailored around the facts; many assumptions are not independently motivated such as *wh*-movement without Agree and especially the classification of C-probes into agreeing and non-agreeing complementizers: Non-agreeing C-probes will always be those that co-occur with resumptives and are insensitive to islands while agreeing ones will be only compatible with gaps (and will be sensitive to locality). But if the facts one is trying to explain are the only diagnostics to determine the type of probe, the analysis becomes somewhat descriptive. Secondly, postulating a Big-DP is unattractive in a language which does not otherwise make use of such a structure. Given these difficulties I refrain from endorsing Boeckx' system.

   The third type of approach is the one by Pesetsky (1998: 365), which is based on a PF-theory of locality: Locality is not a constraint on movement as such but rather restricts the distribution of traces. Adapting an idea from Perlmutter (1972), he proposes that locality prohibits chains with unrealized bottom copies inside islands. In his OT-account this is formulated as a constraint: *β [island β]. Resumption is the result of spelling out the bottom copy of a movement chain. The following difficulties arise with this type of approach: First, the claim that locality just regulates the distribution of traces is very strong and lacks independent evidence. Secondly, a problem specific to ZG resumptive relatives, resumptives that are not governed by prepositions undergo weak pronoun fronting in ZG,

cf. e.g. (10). For this movement to comply with cyclicity, spell-out of the resumptive has to take place right away, basically after the first movement step of the operator. But even then it is not clear how an element that is the result of spell-out can participate in the syntactic derivation.[18]

So far movement approaches to resumption are confronted with rather serious difficulties since there does not seem to be a straightforward way of deriving the island-insensitivity (cf. also McCloskey 2002). While I take Demirdache's (1991) and Boeckx' (2003) approach to be inadequate on both conceptual and empirical grounds, it remains to be shown that a PF-approach to locality is empirically wrong, before a base-generation approach can be endorsed. In the subsequent sections I will provide evidence from possessor relativization that the PF-theory of locality makes incorrect predictions for resumptive relatives so that a base-generation approach emerges as superior.

1.4. Possessor relativization

Relativizing on a possessor in Zurich (and more generally Swiss) German can be done in two ways: Either there is a resumptive pronoun appearing as the complement of the preposition *vo* 'of'. Alternatively, and this will be the point of interest, the possessor is expressed by means of a possessive pronoun (cf. also Weber 1964):

(19) a. *Das deet isch de Schüeler, won i geschter de Vatter*
          that there is the student C I yesterday the father

          *von **em**   käne gleert han.*
          of he.DAT got.to.know have

          'There is the student whose father I met yesterday.'

      b. *Das deet isch de Schüeler, won i geschter **sin** Vatter*
          that there is the student C I yesterday his father

          käne gleert   han.
          got.to.know have

          'Over there is the student whose father I met yesterday.'

Both variants are based on different constructions that serve to express possessive relationships in Zurich German. Either the possessor is realized post-nominally as the complement of the preposition *vo* 'of' or it occurs

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18. If pronoun fronting is phonological, the problem does not occur. See also 3.2.2.1 for discussion.

pre-nominally together with a possessive pronoun in the so-called pos-
sessor doubling or external possessor construction (the terminology varies
in the literature, cf. e.g. Koptjevskaja-Tamm 2002/2003, Haegeman 2003/
2004, Weiss 2008 etc.):

(20)　a.　*de Vatter vo **dem**　**Schüeler***
　　　　the father of this.DAT student

　　　　'the father of this student'

　　b.　**dem**　**Schüeler sin** *Vatter*
　　　　this.DAT student his father

　　　　'the father of this student/this student's father'

Relativization based on the *vo*-construction is structurally identical to
relativization of objects of prepositions as in (1)d and will therefore not
be discussed separately here. The construction in (19)b, however, is more
interesting since in that case it is less clear how the possessor doubling
construction and the relative clause are related to each other: There is
one major difference namely that in relativization the possessor is no longer
represented. On the surface, all there is is the possessive pronoun. Since
relativization of peripheral/oblique participants in ZG has been shown to
involve resumptive pronouns (cf. (1)), the question arises whether there is
a resumptive pronoun at all in possessor relativization as in (19)b. To be
able to answer this question, we first need to look at the properties of the
underlying possessor doubling construction.

2.　The possessor doubling construction in Swiss German

2.1.　Marked or unmarked?

The possessor doubling construction is (probably) found in all non-
standard varieties of German (Weiss 2006/2008) and in many Germanic
languages (Delsing 1998). It is also found in many non-Germanic Euro-
pean and non-European languages, cf. Koptjevskaja-Tamm (2002/2003).
Still, at least in the German literature, there has been a tendency to regard
it as aberrant/stylistic/redundant, especially in comparison with the Stan-
dard German variant: In Standard German there is either a pre-nominal
genitive but no possessive pronoun or just a possessive pronoun but no
(dative or genitive) possessor:

(21) a. *Peters* (*sein) *Haus*   b. (*dem   *Peter*) *sein Haus*
       Peter's   his   house   the.DAT Peter his   house
       'Peter's house'   'his house'

This perspective can still be detected in some generative analyses as e.g. Olsen (1989/1996), Lindauer (1995), Demske (2001: 262ff.) and even Sternefeld (2006) where the Standard German construction forms the basis of the analysis while the possessor doubling construction is regarded as an exception that somehow needs to be accommodated. Given its pervasive distribution, however, I believe it is much more straightforward to regard the doubling construction as basic and the Standard German variant as exceptional, especially concerning the co-occurrence of possessor and possessive pronoun. Recent work on doubling constructions strengthens this view: Doubling is pervasive in non-standardized languages (cf. the contributions in Barbiers et al. 2008) and can often be straightforwardly analyzed as a formal expression of syntactic dependencies such as specifier-head configurations, negative concord being a particularly illustrative case in point, cf. the discussion in Weiss (2006/2008).[19]

2.2.   The possessive pronoun heads the DP

The various analyses that have tried to accommodate the possessor doubling construction can be classified into two major groups, which primarily differ in the analysis of the possessive pronoun. In one approach the possessive pronoun is treated as a determiner heading the DP (Corver 1990, Authier 1992, Haider 1992, Delsing 1998, Weiss 1998/2006/2008, Kappus 1999, Weerman & de Wit 1999, Haegeman 2003/2004, Strunk 2004/2005, de Vries 2006, Sternefeld 2006, Heck & Müller 2007). In the other type of approach it is either treated as a determiner (Olsen 1989/ 1996) or as an adjective (Lindauer 1995, Löbel 1996) which crucially does not head the DP. The different analyses can be schematically represented as follows:

(22) a. [$_{DP}$ possessor [$_{D'}$ possessive pronoun [$_{NP}$ possessum]]]
                                        possessive pronoun in D

     b. [$_{DP}$ D [$_{NP}$ [$_{DP}$ possessor [$_{D'}$ possessive pronoun]] [$_{N'}$ possessum]]]
                                        Olsen (1996: 132)

     c. [$_{DP}$ [$_{AP}$ [possessor] possessive pronoun] D [$_{NP}$ possessum]]
                                        Lindauer (1995)

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19. For a sketch of the development of the construction see Demske (2001: 259ff.).

2.2.1.   The (putative) problem with the theta-role: pro-drop in the DP

I believe that there are no good reasons (anymore) to follow the latter approaches. The original motivation for not treating the possessive pronoun as the head of the DP had to do with the Standard German situation and assumptions about theta-role assignment. Theta-roles can only be assigned to a phrasal constituent. And since the Standard German possessive construction in (21)b only features a possessive pronoun as a potential recipient of that theta-role it had to be generated in (or moved to) Spec, DP (cf. Olsen 1989, Lindauer 1995).

This problem does not arise with the possessor doubling construction, of course, if the dative possessor occupies Spec, DP. The possessive pronoun can then simply be analyzed as an agreement marker. This is a welcome result given the fact that the possessor is not restricted to definite DPs. It may be a non-specific indefinite or even a bare quantifier:[20]

(23)   a.   *Das isch sicher   **emene Maa** sis Auto.*
            this is   certainly a.DAT man his car

            'This is certainly a man's car.'

        b.   *Das isch **niemertem**   sin Koffer.*
            this is   nobody.DAT his suitcase

            'This is nobody's suitcase.'

These facts clearly argue against analyzing the possessor as some kind of left-dislocated topic that is resumed by the possessive pronoun as in Demske (2001: 262ff.) or as some kind of loose apposition; it also argues against adopting a topic feature to trigger movement of the possessor as in de Vries (2006: 23) or Leu (2008: 152); see also the discussion in Haegeman (2004: 228f.). The question remains, however, what happens if the possessor is omitted:

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20. Pace Demske (2001: 262). The same has been pointed out for West Flemish in Haegeman (2004: 229). Statistically though, such possessors will be rare, cf. the figures in Strunk (2004: 198f.) on Low Saxon. The possessor doubling construction is thus more flexible than its Standard German equivalent (21)a, which is restricted to proper names and kinship terms. This is another indication that the possessor doubling construction is the unmarked case, as correctly pointed out by an anonymous reviewer.

(24)   *sis   Huus*

his   house

'his house'

A straightforward solution to the problem involves a *pro*-drop analysis of possessor constructions. Olsen (1989), attributing the idea to Gisbert Fanselow, Haider (1992: 315, attributing it to Thilo Tappe), Authier (1992), Delsing (1998), Haegeman (2003/2004), de Vries (2006) and Sternefeld (2006) have postulated an empty pronoun in such cases, a small *pro*:

(25)   [$_{DP}$ *pro* [$_{D'}$ sis Huus]]

This takes care of the theta-role problem: it is assigned to *pro*.[21] The features of *pro* are identified by the possessive pronoun (it agrees with it in gender, number and person, see 2.2.2). As in *pro*-drop languages, the possessor argument is interpreted pronominally in the absence of an overt DP. Conversely, the pronoun can be overt in contrastive contexts (cf. also Strunk 2005b: 460 on Low Saxon):[22]

(26)   **im**   *sis   Huus*

he.DAT   his   house

'HIS house.'

Postulating a small *pro* inside the DP in fact goes back to at least Chung (1982). In many languages with rich agreement such a solution is certainly less surprising than in a variety of German, which is definitely not a *pro*-drop language in the verbal domain (perhaps except for the second person singular). Furthermore, it may seem somewhat unusual that the agreement marker is a pronoun rather than a bound morpheme/clitic. But apart from that the parallelism is quite close.

Adopting a *pro*-drop analysis opens up a new possibility to explain why an overt possessor cannot co-occur with the possessive pronoun (21)b in Standard German: Apparently, the *pro* is obligatory while in the varieties with possessor doubling it is optional. This contrast is reminiscent of the observation made in Bresnan & Mchombo (1987) about agreement markers in Chichewa: While the subject marker can either license a small *pro* or co-occur with a full DP subject, the object marker is obligatorily

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21. This means that the possessive pronoun is simply a functional element. It never bears a theta-role in Zurich German, and arguably neither in Standard German.

22. Importantly, a strong pronoun has to be used here. The weak/clitic one would be *em*.

pronominal: an overt object is impossible (unless it is dislocated). I would like to argue that the Standard German possessive pronoun behaves like the Chichewa object marker: It is obligatorily interpreted as pronominal, i.e. there is always a *pro* occupying Spec, DP so that an overt possessor is impossible. In possessor doubling languages, however, the possessive pronoun behaves like the Chichewa subject marker in that it is ambiguous between grammatical (when it co-occurs with a possessor) and pronominal agreement (*pro*-drop).

While the possessor doubling construction allows overt third person pronouns, it is incompatible with overt first and second person pronouns, a fact that seems to hold throughout the German speaking area:

(27) a. (*miir)   *mis Huus*   b. (*diir)   *dis Huus*
          me.DAT my house   you.DAT your house

      c. (*öis)   *öises Huus*   d. (*öi)   *öies Huus*
          our.DAT our house   you.PL.DAT your house

A very suggestive explanation (e.g. Weiss 2006/2008) relates this impossibility to the fact that first and second person possessive pronouns are directly referential (i.e. count as R-expressions) while third person pronouns are anaphoric (thus count as anaphors for the binding theory). Overt 1st/2nd person possessors would therefore be ruled out by Principle C in the doubling construction. Unfortunately, this explanation does not work. First, treating first and second person possessive pronouns as R-expressions predicts all sentences to be ungrammatical where the possessive pronouns are c-commanded by a 1st/2nd person pronoun, contrary to fact:

(28) *Ich*$_i$ *ha   min*$_i$ *Vatter gsee.*
       I   have my   father seen
       'I have seen my father.'

Secondly, the explanation will not work cross-linguistically, because overt first and second person possessors do sometimes occur in doubling constructions, cf. e.g. the following Turkish example (Kornfilt 1997: 185):[23]

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23. Admittedly, the Turkish possessive marker is a bound morpheme, but since it can license a *pro* DP-internally it can have pronominal function just like the German possessive pronoun so that one would expect the same co-occurrence restriction, contrary to fact.

   Weiss (2008: 395, n. 25) acknowledges that not all languages prohibit DP-possessors with 1st/2nd person possessive markers and gives Hittite and the French construction *ma voiture à moi* as examples.

(29)   (*sen*) [(**biz-im**) *kitab-ımız*]-ı   *oku-du-n   mu?*
       you   we-GEN   book-1.PL.POS-ACC read-PST-2s Q

       'Have you read our book?'

An explanation based on a universal property of pronouns such as the
one above therefore does not work. Instead, languages seem to differ as
to whether first and second person agreement markers licensing a *pro*
also allow an overt pronoun. In the verbal domain, *pro*-drop languages
generally allow this (cf. Italian [*io*] *vengo*). The restriction in the German
possessive construction therefore seems to be a fact peculiar to German
rather than a universal property. The simplest way of handling the facts
in the doubling varieties is to assume that first and second person posses-
sive pronouns are markers of pronominal agreement, i.e. they obligatorily
license an empty *pro* just like their 3rd person equivalents in the Standard
language (See Struck 2004: 82 for the same solution within an LFG-
approach).[24]

2.2.2.   Case and agreement

The possessor doubling construction is characterized by a relatively com-
plex case and agreement system: The possessor always bears dative case in
ZG while the possessive pronoun bears the case assigned to the entire DP:

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24. As correctly pointed out by an anonymous reviewer, the restriction might be
    reducible to phonetic similarity: Third person pronominal possessors are also
    degraded in the feminine singular and in the plural, arguably because they are
    too similar to the possessive pronoun (cf. also Weber 1964: 213, the same
    holds for colloquial German):

    (i) **ire   ires Huus*   (ii) ??*ine   ires Huus*
        she.DAT her house   they.DAT their house
        'her house'   'their house'

    Potentially corroborating evidence for the phonetic approach comes from an
    observation in Weiss (2008: 393) about Berlin German where it is possible to
    have a first/second singular pronoun together with a third person possessive
    pronoun: *meiner/deiner + seiner* = my/your + his 'my/your'. Interestingly, a
    similar construction seems to be found in Western Norwegian dialects,
    cf. Delsing (1998: 106, fn. 11). See Leu (2008: 160ff.) for a very different
    approach.

(30) a. *Em   Hans sin   Vatter isch choo.*
          the.**DAT** John his.**NOM** father is   come

          'John's father came.'

      b. *Ich han em   Hans sim   Vatter ghulffe.*
          I   have the.**DAT** John his.**DAT** father helped

          'I helped John's father.'

In (30)a, the possessive DP functions as the subject of the clause; con-
sequently, the possessive pronoun bears nominative case. In (30)b, the
possessive DP is assigned dative by the verb *hälffe* 'help'. This is reflected
by dative case on the possessive pronoun.

   The fact that the possessive pronoun bears the case assigned to the
entire DP is directly compatible with the proposal that it heads the DP,
but it does not rule out analyzing it as an adjective or some other modifier
within the DP as these would also bear the case assigned to the entire DP.
The same holds for the agreement facts: The possessive pronoun entertains
agreement relationships with two elements: It agrees with the possessor in
number and gender[25] and with the possessum in number and gender. This
would be rather unusual for an adjective, but it would be equally unique
in the German determiner system.[26] The following examples show that the
stem of the possessive pronoun varies according to the number and gender
of the possessor (the pronoun bears nominative case in these examples, the
possessum is always singular neuter):

	singular possessor		plural possessor
(31) a.	*em Maa **si**s Huus*	b.	de *Mane **ir**es Huus*
	the man his house		the men their house
			masculine possessor

(32) a.	*de Frau **ir**es Huus*	b.	de *Fraue **ir**es Huus*
	the woman her house		the woman.**PL** their house
			feminine possessor

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25. In older stages of Swiss dialects it used to be possible to use the masculine
    stem for feminine and plural possessors as well, cf. Idiotikon (VII: 1016);
    apparently this is still possible for some speakers of Bavarian (Weiss 1998:
    79) and Swabian (Ellen Brandner, p.c.).
26. In fact the data discussed in 2.5 below where a possessive adjective co-occurs
    with a determiner show that double agreement is independent of syntactic
    category.

(33) a. *em Mäitli **si**s Huus*   b. de *Mäitli **ir**es Huus*
     the girl   his house   the girls   their house
                                              neuter possessor

The following examples show that the suffix of the possessive pronoun varies according to gender and number of the possessum (the pronoun bears nominative case in all examples, the possessor is always masculine singular):

         singular possessor   plural possessor

(34) a. *em Maa sin Huus*   b. em *Maa sin**i** Hünd*
     the man his dog   the men his dogs
                                     masculine possessum

(35) a. *em Maa sin**i** Tochter*   b. em *Maa sin**i** Töchter*
     the man his daughter   the man his daughters
                                   feminine possessum

(36) a. *em Maa si**s** Huus*   b. em *Maa sin**i** Hüüser*
     the man his house   the man his houses
                                   neuter possessum

This state of affairs suggests that the possessive pronoun entertains a structural relationship with both the possessor and the possessum, e.g. with the possessor in Spec, DP, the possessive pronoun in D and the possessum as the NP complement of D. Since the precise implementation of this idea involves a number of complexities, it is deferred to 2.5 where the various strands of analysis are brought together.

2.2.3.   The possessive pronoun is a determiner

Although the German possessive pronoun is sometimes classified as an adjective (Lindauer 1995, Löbel 1996, Leu 2008), there is convincing evidence that it behaves like a determiner.

2.2.3.1.   The possessive pronoun inflects like a determiner

In Standard German the possessive pronoun can be shown to inflect like a determiner (Demske 2001: 148ff., Sternefeld 2006: 224), not like an adjective (the same holds for West Flemish, cf Haegeman 2004: 216 and several Dutch dialects, cf. Corver & van Koppen 2007, section 3.1). In fact, it shows the same behavior as *kein* 'no' and *ein* 'a'. Its paradigm differs from that of strongly inflected adjectives in that it features *-es* in the geni-

tive instead of -*en*. The situation in Zurich German is somewhat different: there is no genitive anymore and the possessive pronoun does not inflect exactly like the indefinite article and the negative indefinite pronoun. Still, it is clear that the possessive pronoun does not inflect like a (strong) adjective. The following table shows that there are systematic differences, especially in the masculine singular and the dative singular feminine:[27]

			'his'	**adjective *guet* 'good'**	
				strong	*weak*
singular	masculine	nominative/accusative	sii**n**	guet**e**	guet(i)
		dative	siim	guetem	guete
	feminine	nominative/accusative	siini	gueti	guet(i)
		dative	siin**ere**	guet**er**	guete
	neuter	nominative/accusative	siis	guets	guet(e/i)
		dative	siim	guetem	guete
plural	all genders	nominative/accusative	siini	gueti	guete
		dative	siine	guete	guete

Many features, especially the ending in the dative singular, are found in virtually all pronominal paradigms; another case in point are dative plural forms where an -*n*- appears in pronominal, but usually not adjectival paradigms (in some dialects and for some speakers, such *n*'s do appear on adjectives, but in contrast to pronouns the *n* then also appears in other cells of the paradigm, e.g. in the dative singular). The possessive *ir* 'her' thus patterns with *ali* 'all', but not with e.g. *still* 'quiet':

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27. The possessive pronoun agrees with a masculine singular possessor. These are the forms of modern everyday speech, which differ somewhat from some of the forms in Weber (1964). For the other paradigms of the possessive pronoun (where there is some variation), see Weber (1964: 137–139).

There is some variation in the form of the weak adjective, which to my knowledge has not been investigated. The forms used here are from the modern variety and differ somewhat from the ZG described in Weber (1964).

(37) a. *ir-**ne***   *Hünd*   b. *all-**ne***   *Hünd*
          her-DAT.PL dogs   all-DAT.PL dogs
          'to her dogs'   'to all dogs'

      c. *still-**e***   *Hünd*
          quiet-DAT.PL dogs
          'to quiet dogs'

Cf. Weber (1964: 135–167) for the paradigms. It seems warranted, there-
fore, not to assign the possessive pronoun to the category adjective, but
rather to the category determiner/pronoun.

2.2.3.2.   *The possessive pronoun determines adjectival agreement*

Further strong evidence in favor of the determiner status of the possessive
pronoun comes from adjectival inflection: As in Standard German (Gall-
mann 1996, Demske 2001: 146ff., Sternefeld 2006: 225ff.), the possessive
pronoun determines the inflection of pre-nominal adjectives, just like other
determiners: A possessive with a strong ending triggers the weak form of
the adjective, just like e.g. the definite article (the determiner system in
Swiss German is somewhat intricate, there are also exceptional cases
where a strong adjective appears after a strong determiner):

(38) a. *em*   *guete/*guetem*   *Fründ*
          he.DAT.STR good.WK/good.STR friend
          'to the good friend'

      b. *siim*   *guete/*guetem*   *Fründ*
          his.DAT.STR good.WK/good.STR friend
          'to his good friend'

2.2.3.3.   *Distributional evidence*

The possessive pronoun is in complementary distribution with other deter-
miners and precedes adjectives, as in Standard German (Sternefeld 2006:
128f.):

(39) a. **de siin Fründ*   b. **siin de Fründ*
          the his friend   his the friend

      c. (*siin*) *guete* (**siin*) *Fründ*
          his   good   his   friend

These ordering restrictions remain mysterious if the possessive pronoun is treated as an adjective (unless, of course, one can derive them from semantic co-occurrence/ordering restrictions). The facts follow if the possessive pronoun is the determiner that heads the DP.[28]

2.3. The possessor is in Spec, DP

Constituency facts have also played an important role in the discussion of the structure of possessor doubling. While certain facts such as binding and possessor extraction clearly favor the constituency advocated here, other data allow for more than one interpretation. Importantly though, all facts are compatible with the assumption that the possessive pronoun heads the DP and that the possessor is in Spec, DP.

I will begin with a number of uncontroversial facts. First, possessor + possessive pronoun + possessum form a constituent. For instance, they can be topicalized together, a clear indication of constituenthood in any German variety (and V2-languages more generally):

(40) [*Em   Hans sini Frau*]$_1$ *han   i nöd* __$_1$ *gsee.*
      the.DAT John his wife   have I not   seen
      'John's wife I haven't seen.'

Secondly, the possessor can be quite complex: it can be modified postnominally by PPs, relative clauses and appositions:[29]

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28. Löbel (1996) has argued in favor of the adjectival status of the possessive on the basis of the following example where a demonstrative precedes the possessive pronoun:

    (i) *diese meine grösste Sorge*
        this   my   biggest worry
        'this biggest worry of mine'

    However, Sternefeld (2006: 224) has convincingly shown that the possessive pronoun following a demonstrative does not inflect like an adjective so that one is rather dealing with two determiners. More important in the present context is the fact that corresponding examples in ZG are ungrammatical:

    (ii) **dëë/desäb/dise miin guete Fründ*
          this/that/that my   good friend

29. Cf. Strunk (2004: 68) for similar and even more complex cases in Low Saxon, Haegeman (2004: 217) for West Flemish and Weerman & de Wit (1999: 1171) for Dutch. There is, of course, a preference for heavy and complex possessors to occur post-nominally, cf. Strunk (2004: 188f.) on Low Saxon.

170   *Martin Salzmann*

(41) a. [*miinere Schwöschter us   Basel*] *ires Buech*
          my.DAT sister   from Basel   her book
          'the book of my sister from Basel'   PP

      b. [*miinere Schwöschter, wo us   Basel chunt,*] *ires Buech*
          my.DAT sister   C   from Basel comes her book
          'the book of my sister who is from Basel'   relative clause

      c. [*em   Hans, em   Metzger,*] *sis Gschäft*
          the.DAT John the.DAT butcher   his business
          'the business of John, the butcher'   apposition

Possessors can also be recursively embedded:

(42) [*em   Hans* [*sinere   Schwöschter* [*ires Huus*]]]
      the.DAT John his.DAT sister   her   house
      'John's sister's house'

These data do not, however, differentiate between the bracketing options
in (22). There are two options: The possessive pronoun forms a con-
stituent with the possessum or the possessor forms a constituent together
with the possessive pronoun:

(43) a. [possessor [possessive pron + possessum]]

      b. [[possessor + possessive pron] possessum]

The first bracketing is the one advocated here. The following subsections
discuss various facts that support this view.

2.3.1.   C-command

Pre-nominal possessors (and arguments of N, cf. 2.4 below) can bind
anaphors/pronouns and license PRO (for postnominal possessors cf. (70)
below):

(44) a. *em   Hans$_i$/*pro$_i$ *siini Fröid über   siich$_i$*
          the.DAT John   his joy   about self
          'John's$_i$ joy about himself$_i$'

      b. *jedem   Maa$_i$/*pro$_i$ *siini Fröid über   siin$_i$ Soon*
          every.DAT man   his joy   about his son
          'every man's$_i$ joy about his$_i$ son'

a. *em   Hans*_i/pro_i *sin Versuech,* [PRO_i *s   Fäischter z   putze*]
the.DAT John   his attempt   the window   to clean

'John's attempt to clean the window'

This implies that the possessor c-commands the anaphor/the pronoun/the PRO. This follows if they occupy Spec, DP. At the same time, these facts argue against approaches where dative possessor and pronoun form a constituent together (as in Lindauer 1995 or Olsen 1996): Since the possessor is embedded within a DP/AP, it cannot c-command out of it and therefore should be unable to bind a pronoun/control a PRO, contrary to fact:

(45)   a.   [$_{DP}$ [$_{AP}$ *em Hans siini*] [$_{D'}$ D *Fröid über siich*]]

Lindauer (1995: 158)

b.   [$_{DP}$ D [$_{NP}$ [$_{DP}$ *em Hans siini*] [$_{N'}$ *Fröid über siich*]]]

Olsen (1996: 132)[30]

2.3.2.   *Possessor extraction*

Probably the simplest diagnostic for constituency is extraction. The two bracketing options in (43) make clear predictions. However, the empirical facts are somewhat inconclusive. What is clear is that movement of the entire DP is the preferred option:

(46)   [*Wem   sin Vatter*]$_1$ *hät de Peter geschter   ___$_1$ käne gleert?*
who.DAT his father   has the Peter yesterday   got.to.know

'Whose father did Peter get to know yesterday?'

It is also uncontroversial that the possessor cannot be extracted with the possessive pronoun:

(47)   *[*Wem   sin*]$_1$ *hät de Peter geschter* [___$_1$ *Vatter*] *käne gleert?*
who.DAT his   has the Peter yesterday   father   got.to.know

'Whose father did Peter get to know yesterday?'

---

30. These approaches are also incompatible with the assumption to be introduced in 2.5 below that the possessor is initially merged below within the projection of N and then moved to the left periphery of the noun phrase: Movement from below into the complement/specifier of a specifier would violate the extension condition. On such an approach one is compelled to treat the possessive pronoun as the true possessor and the dative possessor as some kind of adjunct to the pronoun, but this is exactly what we have argued against here.

This argues against the bracketing in (43)b. As for possessor extraction, the situation is somewhat puzzling. In a sentence like the one above where the possessive phrase is the direct object possessor extraction is ungrammatical or at least strongly degraded in ZG:[31]

(48)   *[*Wem*]$_1$ *hät de Peter geschter*   [__$_1$ *sin Vatter*] *käne gleert?*
        who.DAT has the Peter yesterday   his father   got.to.know

        'Whose brother did Peter get to know yesterday?'

This restriction seems to hold throughout Germanic (Corver 1990, Delsing 1998, Haegeman 2003: 235f.). Interestingly, however, possessor extraction seems possible in some Germanic languages if the possessive phrase is a predicate. Here is an example from Norwegian (Fiva 1986: 49f.):

(49)   *Hvem er det* [__ *sin tante*]?
        who   is it   his aunt

        'Whose aunt is it?'

While Corver (1990: 183) and Haegeman (2003: 225) claim that this is ungrammatical in colloquial Dutch and West Flemish, respectively,[32] possessor extraction out of predicates does not seem to be categorically ruled out in some varieties of German. Kappus (1999: 207) argues it is possible in Swabian, Simon (in press) shows in a detailed study that it is less preferred than pied-piping, but still judged as marginally acceptable by speakers in Lower Austria, Northern Bavaria and Thuringia (the construction is rated slightly below 3 on a scale 1–5 while pied-piping is rated 4). The situation seems to be the same in Swiss German, one does find a number of examples on the internet:[33]

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31. As Josef Bayer has correctly pointed out to me, even for speakers who reject (48), it is still much more acceptable than (47), which is simply word salad.
32. In West Flemish, this only holds if the possessor occurs in the same clause. Once the possessor is separated from the possessum by a clause-boundary, what looks like possessor extraction becomes possible, but this is arguably a different construction, see section 4.2.
33. One also finds an example in the grammatical description of Lucerne German (Fischer 1960: 321):

   (i)   *Wëmm*   *esch daas si Häntsche?*
          Who.DAT is   this his glove?

(50) a. *aja und **wem**   isch das daa **sii stinkefinger**?=) hmmm...*
        ah, and who.DAT is   that there his finger   hm.

   da   isch nid gad   lieb!
   that is   not really nice

   'Ah, and whose one-finger salute is that over there? That's not
   really nice.' partyguide.ch/partypictures/latest_comments.php?
   c=&ref=location&pic_dir=2006/22466/img

   b. *und **wem**   sind das **sini fiess** im hintergrund??*
       and who.DAT are that his feet in background

   ich sag nur enrique=)
   I   just say Enrique

   'And whose feet are those in the back? I just say Enrique.'
   http://209.85.129.104/search?q=cache:pVTrb91IvIJ:
   www.festzeit.ch/viewpic.php%3Fid%3D6921579+%22wem+
   sind%22+sini&hl=de&ct=clnk&cd=7&gl=ch&client=firefox-as

Possessor extraction argues in favor of the constituency in (43)a. At the
same time, this leaves unexplained why possessor extraction from argu-
ments is not possible, a fact I will leave for further study.

2.3.3. Coordination

Coordination facts are discussed for Standard German in Zifonun (2003),
with equivocal results; the same holds for ZG: Most of the facts are
compatible with both bracketing options.

A.   Coordination involving the Possessor

The possessor can be coordinated, the stem of the possessive pronoun
showing plural agreement thus agreeing with the conjoined possessor
phrase:

(51) [*em   Hans und em   Peter*] *ires   Huus*
     the.DAT John and the.DAT Peter   their house
     'John and Peter's house'

This possibility follows under both bracketing options: It can either be a
conjoined complement of the possessive pronoun or simply a conjoined
specifier:

(52) a.   [[*em Hans und em Peter*] *ires*] *Huus*

     b.   [[*em Hans und em Peter*] [*ires Huus*]]

The next type of coordination is more interesting: Here possessor +
possessive pronoun are coordinated with either possessor + possessive
pronoun or just with a possessive pronoun:

(53) a. ?[*em   Hans siin und em   Peter siin*] *Chef*
          the.DAT John his and the.DAT Peter his   boss
          'John's and Peter's boss'

      b. ?[*em   Hans siin und miin*] *Chef*
          the.DAT John his and my   boss
          'John's and my boss'

      c. ?[*miin und em   Hans siin*] *Chef*
          my   and the.DAT John his   boss
          'my and John's boss'

The examples are degraded for some speakers, but arguably sufficiently
acceptable to consider them.[34] At least on the surface, these examples are
not compatible with the bracketing (43)a argued for here. Rather, they
seem to prefer an analysis where the possessive pronoun forms a con-
stituent together with the possessor as in Lindauer (1995) and Olsen
(1996). There is one aspect of these examples, though, that points in a dif-
ferent direction: They all have the intonation characteristic of Right Node
Raising (cf. also Strunk 2004: 95) and therefore probably do not constitute

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34. Strunk (2004: 93f.), who only considers the cases in b/c, observes that they are
    marginal in Low Saxon; Haegeman (2004: 217, fn. 10) judges the a-example
    ungrammatical. The b/c examples are similar to data discussed for Standard
    German where the coordination of the possessive pronoun with a pre-nominal
    genitive has been taken to show that the possessive pronoun is an AP in Spec,
    DP (Lindauer 1995):

    (i) [*meine und Vaters*] *Schuhe*
        my   and father's shoes
        'my and father's shoes'

    Some people reject such examples, but I think they are similar in acceptability
    to those in the main text. Interestingly, they also have the intonation of Right
    Node Raising, cf. the argument in the main text.

any counter-evidence. Since detailed discussion of such constructions is beyond the scope of this paper, I will leave this issue unresolved here.[35]

B.   Coordination involving the possessum

Coordinating two possessums is possible as well; this is compatible with both bracketings:

(54)   *em   Hans siini* [*Eltere   und   Grosseltere*]
     the.DAT John his   parents and grandparents
     'John's parents and grandparents'

(55)   a.   [[*em Hans siini*] [*Eltere und Grosseltere*]]

     b.   [[*em Hans*] [*siini* [*Eltere und Grosseltere*]]]

---

35. The examples are best if the first conjunct can be interpreted as involving *pro*-drop of the possessum:

 (i) *de   Petra ire und em   Hans sin Chef*
    the.DAT Petra her and the.DAT John his boss
    'Petra's and John's boss'

(ii) *de   Petra ire*
    the.DAT Petra her
    'Petra's'

In such a case a different structural analysis is possible: One would simply be dealing with coordination of two full DPs: [$_{DP}$ de Petra ire [$_{NP}$ Ø]] und [$_{DP}$ em Hans sin Chef]. In (i) this is possible because the pronoun is formally ambiguous between the transitive and the intransitive variant: it could be either a determiner (that requires a possessum) or a pronoun (that disallows the possessum). In the examples in (53), the form can only be used attributively. See Strunk (2004: 93, fn. 53) for a similar observation for Low Saxon. Josef Bayer (p.c.) has pointed out to me that extraposition facts argue against this interpretation: If the second conjunct is extraposed, the putative *pro*-drop variant in the first conjunct is unacceptable:

 (ii) **Der   Petra ihre* __₁ *sind gekommen* [*und dem   Hans seine Eltern*]₁.
    the.DAT Petra her   are come   and the.DAT John his   parents
    lit.: 'Petra's have come and John's parents.'

(iii) *Der   Petra ihre Eltern* __₁ *sind gekommen* [*und dem   Hans seine*]₁.
    the.DAT Petra her parents   are come   and the.DAT John his
    'Petras parents have come and John's.   (Colloquial German)

This suggests that *pro*-drop of the possessum is dependent on a preceding antecedent (as in (iii)); this renders the *pro*-drop analysis of (i) unlikely.

The last example to be considered is the following where possessive pronoun + possessum are coordinated (cf. also Haegeman 2004: 217, fn. 10):

(56) *em   Hans* [*siini Eltere   und siini Grosseltere*]
      the.DAT John his   parents and his   grandparents
      'John's parents and grandparents'

This example is only compatible with my bracketing, at least on the surface. One would be dealing with D'-coordination. However, a different structural analysis is possible in this case: The second conjunct can be argued to include a small *pro* in Spec, DP so that one would no longer be dealing with D'-coordination, but rather with coordination of two full DPs (cf. also Strunk 2004: 91; for some speakers, using the overt pronoun *im* 'he.DAT' in the second conjunct is preferred):

(57) [*em   Hans*ᵢ *siini Eltere*] *und* [*pro*ᵢ *siini Grosseltere*]
      the.DAT John his   parents and   his   grandparents

I conclude from the coordination data that they do not argue in favor of one of the bracketing options. Essentially, all the facts seem compatible with both structural analyses.

2.3.4.   Quantifier floating

Haider (1992: 315f.) and Olsen (1996: 117) discuss the positioning of the quantifier *all* in colloquial German. They claim that it is compatible with determiners and possessive pronouns, but not with DP-specifiers such as pre-nominal genitives or dative possessors:

(58) a.   *mit   all* **den** *guten Einfällen*
           with all the good ideas
           'with all the good ideas'

      b.   *mit   all* **ihren** *guten Einfällen*
           with all her   good ideas
           'with all her good ideas'

(59) a.   **mit   all* **Susannes** *guten Einfällen*
           with all Susan's   good ideas
           'with all the good ideas of Susan'

      b.   **all* **dem** *Fritz seine Häuser*
           all the.DAT Fritz his   houses
           'All Fritz' houses'

If these facts are correct, they provide evidence that the pronouns occupy different positions than the possessors, in line with what is advocated here. However, (59)b is very problematic for the *pro*-analysis: Given our assumptions, Spec, DP is filled in both (58)b and (59)b so that we do not expect a contrast. However, I think that things are more complex. As pointed out by an anonymous reviewer, (59)b is arguably not completely ungrammatical. For reasons that are not fully clear to me, the construction seems best as a subject (the contrast is, however, not quite as strong for me):

(60) a. ?*All/alle **dem** Fritz seine Häuser müssen renoviert werden.*
      all   the.DAT Fritz his houses must   renovated become

      'All of Fritz' houses must be renovated.'

   b. **Er kaufte all/alle **dem** Fritz seine Häuser.*
      he bought all   the.DAT Fritz his houses

      'He bought all of Fritz' houses.'

Whatever the cause for this asymmetry, the facts in (59) are not particularly problematic for the analysis advocated here since the equivalents of (59)b and (60), though marked compared to (58)b, are well-formed in Swiss German. The following example is taken from the internet:[36]

(61) *Für **all em** Swen sini Fans, und lut*
    for all the.DAT Swen his fans and according.to

    Gäschtebuech si   das es par ...
    guest.book   are this a few

    'For all of Swen's fans, and according to the guest book there are quite a few ... :

    'www.volewa.ch/webapps/opencpf/guestBookList.do; jsessionid=7FDC4A7C44C60D96840D402BA1CA

---

36. The same holds for Low Saxon (Strunk 2004: 71f.) and West Flemish (Haegeman 2003: 222). As Josef Bayer pointed out to me, the possessor can also precede the quantifier (the same holds for ZG):

   (i) *Dem   Fritz all(e) seine Häuser sind verkauft worden.*
      the.DAT Fritz all   his   houses have sold   become

      'All of Fritz' houses have been sold.'   (Colloquial German)

   Depending on one's treatment of floating quantifiers, one may interpret data like (i) as evidence for another functional projection above Spec, DP, cf. Haegeman (2009) for discussion.

To summarize this subsection, even though the facts are not unambiguous, they favor an approach where the possessor is in Spec, DP.[37]

2.4.   The Case of the possessor

The pre-nominal possessor always bears dative case in Zurich German. Cross-linguistically the case that appears in the possessor doubling construction always corresponds to the most oblique case of the language in

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37. This conclusion could be problematic for approaches like Georgi & Müller (2010) that attempt to replace the DP-hypothesis entirely by means of re-projection of N where NP-internal modifiers including determiners and possessors occupy (multiple) specifiers of N. Since the possessive pronoun cannot be the head of the entire noun phrase, it has to be a specifier of N. But then since the possessor depends on the possessive pronoun, it has to be merged as a complement/specifier of the possessive pronoun:

(i) [$_{NP}$ [$_{PosP}$ [Possessor] Pos] N]

This leads to a structure similar to those in (22)b/c, which, as discussed in 2.3.1, is in conflict with binding facts showing that the possessor c-commands the possessum (unless one claims that agreement between the pronoun and the possessor leads to feature percolation up to the maximal projection of the pronoun). The structure is also problematic in the light of the possessor extraction facts since extracting specifiers of specifiers is generally taken to be impossible. Furthermore, extraction of the possessor of a pre-nominal dative possessor (thus from the specifier of a specifier) is ungrammatical:

(i) *Wem   isch   das siinere   Tochter   ires Auto?
     who.DAT is   this his   daughter her   car
     'Whose daughter's car is this?'

Furthermore, the structure is incompatible with the assumption that the possessor is base-generated in a lower position and then moved into the left periphery of the noun phrase as proposed in 2.5 below; if it did come from below, it would have to move into the complement/specifier of a complement, thereby violating the extension condition. The only structure for the possessor doubling construction that is compatible with reprojection is the following where the possessor in a higher specifier of N:

(iii) [$_{NP}$ possessor [$_{N'}$ pronoun [N]]]

Assuming that the possessor originates below the pronoun (cf. 2.5), this is sufficient to have agreement between the two. The problem is rather how to trigger the movement of the possessor to a higher specifier. On the one hand, this seems to depend on the presence of the pronoun, but if the pronoun had an EPP-feature, the possessor would end up in the specifier of the pronoun instead of in Spec, NP. Rather, it would have to be a feature of N that triggers

question, where obliqueness is to be understood according to the following hierarchy (cf. Strunk 2004, Weiss 2006/2008: 384):[38],[39]

(62)   genitive > dative > accusative > zero

---

the fronting of the possessor and that is somehow sensitive to the presence of the possessive pronoun. This is certainly not innocuous, one would probably need a feature co-occurrence restriction to derive this.

   Importantly, this problem only obtains with the possessor doubling construction of the Germanic type discussed here, but not e.g. with the possessor constructions in Hungarian where there is also some kind of doubling, but there the possessor co-occurs with an agreement affix on the noun:

(iv) *az   en   vendeg-em*
     the I.NOM book-POS.1s

Such constructions are compatible with a complete reprojection approach: Both the possessor and the determiner occupy specifiers of N, and the agreement affix on N is simply the result of an agreement process between N and the possessor:

(v) $[_{NP}$ as $[_{N'}$ en $[_N$ vendeg-em]]]

38. Weiss (2008: 383) gives an example with genitive from Northern Bavarian (Egerländer dialect). Apparently, the same was possible in older stages of Swiss dialects. Brandstetter (1904: 75) gives the following example from Lucerne German (genitive was already strongly restricted back then):

(i) *s   Wärnis si   Frau*
    the.GEN W.GEN his wife
    'Werner's wife'

Examples of this type can also be found in Stalder (1819: 81/82). Unfortunately, he does not indicate whether this type of construction was possible in all Swiss German varieties. More examples from other Swiss varieties can be found in the Idiotikon (XII: 1015), examples from all varieties of German can be found in Schirmunski (1962: 434f.) and historical data in Demske (2001: 263) and Grimm (10/1: 361f.). Apparently, genitive is also possible nowadays for speakers of (sub-)standard German; a recent example was uttered by detective Schmügge in the sequel *Rot ist eine schöne Farbe* (1998) of the *Polizeiruf* series:

(ii) *Wer würde **anderer   Leute** ihr   Büro streichen?*
     who would other.GEN people their office paint
     'Who would paint other people's office?'

39. The fact that some varieties use genitive argues against de Vries' (2006: 24) analysis where the possessive pronoun results from incorporating an empty counterpart of *von* 'of', which introduces the postnominal possessor, into D. The PP including the possessor then moves to Spec, DP. By assumption, the possessor is case-licensed by the abstract preposition:

Consequently, the possessor can also be accusative in some languages (e.g. Low Saxon, cf. Strunk 2004) or unmarked (colloquial Dutch, West Flemish, Norwegian etc.).[40]

An important question in the present context is the nature of the dative case. Morphologically, it is certainly an oblique case. But when looking at abstract case, is it a structural or an inherent/lexical case? I believe there are good reasons to assume that it is a structural case, despite its morphological obliqueness: The term *possessor doubling* or *external possessor* construction is actually kind of a misnomer in that the pre-nominal dative can bear just about any relation to the possessum (cf. e.g. *em Hans sini Angst* lit. the John his fear = 'John's fear', where the relation is experiencer-like). Particularly relevant are arguments of derived nouns bearing the agent or theme role (the situation is thus basically the same as with pre-nominal genitives in Standard German, cf. Lindauer 1995/1998).[41,42,43]

(i) D $[_{NP}$ N $[_{PP}$ P DP$]] \rightarrow [_{DP1} [_{PP}$ __$_1$ DP$]_2$ P$_1$ + D $[_{NP}$ N __$_2]]$

While objective/accusative or dative case can plausibly be linked to *von* since these are the cases it normally assigns, this is not the case with genitive. Obviously, the case of the possessor must have a different source. Accounts which analyze possessive pronouns as adjectives because adjectives normally assign dative/accusative/objective case (e.g. Lindauer 1995) are confronted with the same problem.

40. Pronominal possessors appear in the objective form in Dutch, cf. de Vries (2006: 22, fn. 24):

(i) *hem/   *hij   zijn broer*
   he.OBJ   he.NOM   his brother
   'his brother'

41. As pointed out to me by Josef Bayer, the pre-nominal "possessor" cannot correspond to oblique verbal arguments. The following example only allows the agent interpretation:

(i) *dem   Hans seine Hilfe*
   the.DAT   John his   help
   'John's help'

The possessor, just like pre-nominal genitives in the standard language, cannot correspond to the internal dative object argument, i.e. the one who benefits from the help.

42. The same holds in West Flemish, cf. Alexiadou et al. (2007: 593, fn. 44). Strunk (2004: 195ff.) has no occurrences of non-agent arguments as pre-nominal possessors in his corpus (apart from genuine possessors, of course). It is certainly correct that there is a tendency for patients to occur post-nominally, but I do not take this to be a grammatical effect.

(63) a. *em   Edison sini Erfindig   vo de Glüelampe*
          the.DAT Edison his discovery of the light.bulb

          'Edison's discovery of the light bulb'   agent

      b. *Em   Hans sini Abwaal hät ali   überrascht.*
          the.DAT John his recall   has everyone surprised

          'John's recall surprised everyone.'   patient

These roles can also be realized post-nominally by means of a PP:

(64) a. *d Erfindig   vom   Edison*
          the discovery of.the Edison

          'the discovery by Edison'   agent

      b. *d Abwaal vom   Hans*
          the recall of.the John

          'the recall of John'   patient

These facts clearly show that the type of case assigned in the Swiss German DP depends on the structural position, not on the semantic role. This is, of course, characteristic of structural case (cf. also Sternefeld 2006: 222). Typologically more distant languages with possessor doubling also allow various kinds of theta-roles on the "possessor", cf. the following example from Turkish:

(65) *mahkeme-nin bu   karar-ı*
      court-GEN   this decision-3s.POS

      'the decision of this court'   (Lewis 1967)

If several arguments of N are projected, they are ordered according to the following hierarchy: Possessor > Agent > Theme (cf. Alexiadou et al. 2007: 585f.):

(66) a. *em   Presidänt sini Begrüessig vo de Gescht*
          the.DAT president his welcoming of the guests
          'the president's welcoming of the guests.'
                                          Agent > Theme; *Theme > Agent

      b. **de   Gescht iri Begrüessig vom   Presidänt*
           the.DAT guests their welcoming of.the president

           lit.: 'the guests' welcoming by the present.'
                                          Theme > Agent; *Agent > Theme

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43. Inanimate pre-nominal possessors are strongly dispreferred, cf. Weber (1964: 214); cf. also Weiss (1998: 77, fn. 59) on Bavarian and Strunk (2004/2005) on Low Saxon.

c. *em   Hans sis Bild   vom   Picasso*
    the.DAT John his painting of.the Picasso

'John's painting of Picasso'

                              Possessor > Agent/Theme; Agent > Theme
                              *Theme > Agent/Possessor
                              *Agent > Possessor

This does not argue against the structural case approach, but rather simply follows from locality: The agent/possessor is base-generated above the theme so that it is closer to Spec, DP (and FP, cf. below) and will therefore be attracted. We basically get the same ordering as with subjects and objects, cf. Lindauer (1998). A pre-nominal patient with a post-nominal agent is marginally possible if the agent is introduced by the preposition *dur* 'through'. Since it is generated as an adjunct it does not block movement of the theme:

(67) ?*em   Hans sini Verhaftig dur   d   Polizei*
       the.DAT John his arrestation through the police

      'John's arrestation by the police'

A further argument for treating the pre-nominal dative as structural is the fact that it is assigned by a functional element, namely the possessive pronoun, which we treat as an agreement marker. Evidence for this comes from the fact that dative is not licensed by normal determiners:[44]

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44. Interestingly, Fischer (1960: 323, fn.) claims for Lucerne German that next to the regular construction with possessive pronoun one does find examples with definite determiners, especially if the DP additionally contains an adjective:

(i) *em   Peter **de** (lieb) Vatter*
    the.DAT Peter the nice father

I cannot assess how widespread such examples are/were. Brandstetter (1904: 75), who also describes Lucerne German, gives an example, and Stalder (1819: 82) gives one even without definite article. In similar vein, according to Stalder (1819: 81), genitive possessors as in fn. 38 can occur without the possessive pronoun. I have never come across such constructions in ZG, but since there were (residual) genitive possessors in earlier stages of the dialect (Weber 1964), it cannot be ruled out that such patterns were more widespread in Zurich and also Swiss German in general. Should such constructions turn out to be more frequent they would have important implications for the analysis of case assignment: For all these cases without possessive pronoun one either has to assume (with Weiss 2008) that D assigns dative/genitive case or one might want to adopt a silent F head to capture the parallelism with the possessor doubling construction (see the next subsection). I will leave this for further research.

(68) **em   Peter s/es   Huus*
        the.DAT Peter the/a house

Additionally, the dative case-feature on the possessive pronoun has to be checked. This accounts for the following asymmetry concerning PP-possessors:[45]

(69) a. **vom   Peter sis Huus*
            of.the Peter his house
            'Peter's house'

      b. **sis Huus vom   Peter*
            his house of.the Peter
            'lit.: his house of Peter'

      c. *vom   Peter s   Huus*
            of.the Peter the house
            'Peter's house'

A PP-possessor cannot co-occur with a possessive pronoun, because this would leave the case-feature on the possessive unchecked: Even though the possessive pronoun has an EPP-feature that could potentially attract the PP-possessor, its case feature cannot be discharged/assigned in such a configuration. Co-occurrence of a definite article with a PP-possessor, however, is possible because the article does not have any case-features that have to be discharged/assigned. Fronting of a PP-possessor as in (69)c is possible under certain information structural conditions (and is arguably triggered by an edge-feature on D). We can therefore conclude that the possessive pronoun assigns structural case to the possessor and

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45. (69)b argues against the proposal in Weiss (2008: 390) that *von* is the spell-out of an Agr-head. On his analysis of possessive constructions, possessor and possessum start out inside a small clause. In the analysis of postnominal possessors, the possessum moves to Spec, AgrP while the possessor remains inside the small clause (governed by *von*). To derive (69)b, one would have to move a non-maximal projection (Agr') to Spec, DP, which I take to be undesirable:

(i) D $[_{AGRP}$ Possessum$_1$ Agr(*von*) $[_{SC}$ Possessor __$_1$]] = 'The house of John'

As Peter Gallmann has pointed out to me, this construction is subject to curious restrictions. It seems possible only when the entire DP occupies the subject or direct object position or occurs as a predicate. As a complement of a preposition or as an oblique argument (dative/genitive), however, it is ruled out. This may suggest that its syntax is actually more complex.

attracts it to its specifier. This abstract case is sometimes referred to as POSS (e.g. Weiss 2008). A cross-linguistically consistent realizational rule within Germanic then specifies that POSS is expressed by the most oblique morphological case of the language.[46,47]

2.5.   The structure of the possessor doubling construction

The previous subsections have prepared the ground for the derivation of the possessor doubling construction in Zurich German. I will start with the NP-layer:

1. The possessor (both proper possessors and those realizing arguments of a relational noun) originates within the projection of N. This holds for overt dative possessors, those realized by means of *pro*, as well as oblique possessors realized by means of PPs. I will further assume that

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46. Whether the post-nominal 'of'-"possessor" is also assigned structural case is a question I will leave open here, as much depends on how grammatical prepositions are handled in Minimalist Syntax, a question beyond the scope of this paper. If it is taken to be structural, an additional functional category above N (but below the landing site of the possessum) may be necessary, cf. Lindauer (1998) and Weiss (2008).

47. Possessor datives are therefore different from at least some verbal datives/ genitives where the morphological case is to a large extent tied to a particular theta-role. There has been a long discussion on whether verbal datives should be treated as structural/inherent, cf. e.g. Gallmann (1992). It is clear that all dative objects are different from structural accusative objects in some respects. At the same time, there is evidence that not all datives are equally "inherent". Whether this should lead to a classification into inherent and structural datives is a question I will not pursue here.

   Given the requirement on overt realization of oblique morphological case (cf. 1.2.2) it is surprising that the dative case can remain unrealized when the possessor is a *pro*. This does not seem to be a quirk of ZG, though, but rather a general fact about *pro*: Even if the governor assigns oblique case, the argument can remain zero as long as its content can be recovered through agreement. And this is certainly the case in the possessor doubling construction. The constraint on the realization of oblique case can thus bet met in different ways: through overt realization by means of morphological case, via matching in relative clauses (cf. Salzmann 2006a/b) and via agreement. It is therefore best thought of as a recoverability requirement. Quirky-PRO in Icelandic is another example of a silent pronominal element with oblique case (cf. Bianchi 2004: 110, fn. 66). The licensing conditions will be different, though. Additionally, as far as I know, the requirement to realize oblique case cannot be directly transferred to Icelandic.

possessors and external arguments of the noun are base-generated in Spec, NP (cf. Lindauer 1998: 119, Sternefeld 2006: 588) and internal arguments of N in its complement. In the case of dative possessors, the binding facts from 2.3.1 have already shown that dative possessors asymmetrically c-command the other NP-internal constituents. For oblique possessors, the same is shown by the following variable binding facts:

(70) d *Angscht vo jedem*$_i$ *Star voor   sim*$_i$ *Abstieg*
      the fear   of every   star before his   decline
      'Every star's$_i$ fear of his$_i$ decline'

Here, *jedem Star* 'every star' binds *sim Abstieg* 'his decline' and consequently must c-command it. The surface order follows if N moves across the possessor to some higher functional head, e.g. little n:[48,49]

(71) $[_{DP}$ d $[_{nP}$ $[Angscht]_1 + n$ $[_{NP}$ *vo jedem Star* $[_{N'}$ ___$_1$ *voor sim Abstieg*$]]]]$

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48. For plain possessors, base-generation in an N-complement position (Delsing 1998, de Vries 2006) or a small-clause analysis (den Dikken 1998, Weiss 2006/2008; cf. Alexiadou et al. 2007: 563f. for further references) would also work. However, once several arguments of N or an argument of N plus a possessor are involved, this is no longer sufficient to derive the ordering restrictions described in 2.4.

   The same holds for the proposal in de Vries (2006: 21, fn. 20), who explicitly argues against base-generating anything in spec, NP, but suggests instead a double-object construction within NP for cases like (70) and more generally when 2 DP-internal constituents are involved. If the objects were projected on a right branch of NP:

   (i) $[_{Np}$ $[_{N'}$ N Ag] Th]

   then movement of the agent to some functional specifier would be necessary so that it can c-command the theme. This might work for dative possessors as far as the linear order is concerned, but the ordering restrictions noted in 2.4 would remain mysterious, one would rather expect the opposite ordering since the theme asymmetrically c-commands the agent in the base. For PP-agents as in (70), movement of N next to movement of the agent would be necessary to derive the correct order. Such a derivation would not only be less economical than the one proposed in the text, it would also incorrectly predict wrong ordering restrictions, since post-verbal arguments of N are also subject to the ordering restrictions described in 2.4. If, finally, the DP-internal constituents would be generated as objects on the left branch of N:

   (ii) $[_{Np}$ Ag $[_{N'}$ Th N]]

2. The dative possessor moves out of NP and lands in the specifier of the possessive pronoun. It is clear that the possessive pronoun occupies D at the end of the derivation (this is necessary to account for the complementary distribution with determiners, cf. 2.2.3.3). What is less clear is whether the pronoun starts out in D (e.g. de Vries 2006, Weiss 2008) or in some intermediate functional head like e.g. Pos (e.g. Delsing 1998: 92), I (Haegeman 2004) or Agr (Alexiadou et al. 2007: 611) between D and little n (in our view, IP/AgrP are preferable labels because we assume that the possessor role is assigned inside NP so that the function of the possessive pronoun is just to check agreement with the possessor). In the first case, the pronoun agrees with the possessor, assigns case to it and attracts it to its specifier (Spec, DP).

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the correct ordering would follow, but movement of N would be necessary in any case (for pre- as well as postnominal agents). On the present account, on the other hand, movement of N to n is not necessary to derive the examples with dative possessors as in (63) and (66).

Additional movement of N is also needed in accounts that base-generate the possessor/agent in Spec, nP (thereby treating possessors/agents like external arguments of verbs that are introduced by little (v): To derive cases like (70), N would not only have to move to n, but even higher so that it ends up preceding the PP agent. Such solutions are thus more complex than the one in the text and are therefore to be dispreferred unless one assumes that a designated functional projection is necessary to assign the possessor and agent interpretation. Cf. Alexiadou et al. (2007: 552ff.) for detailed discussion of the various options concerning possessors and Alexiadou et al. (2007: 477–541) for an overview over the projection of arguments in derived nominals.

49. This presupposes that the possessor does not intervene even though it c-commands N. This is arguably linked to the fact that we are dealing with head movement, but since this touches on the controversial status of head movement in Minimalism, it is not a priori clear why exactly this should be the case. One possibility consists in saying that n attracts a head of category N. Since the N of the possessor is embedded within the PP no intervention occurs. Alternatively, the proposal in Matushansky (2006: 82) would work where attraction of/agreement with a head is analyzed as some form of c-selection that always gets precedence over phrasal movement. As another alternative, one can assume that the possessor does not intervene because the features of N percolate to NP and are thus closer to n than those of the possessor. Finally, and this is probably the most appealing solution, one could adopt reprojection of N as in Georgi & Müller (2010): The head N reprojects,

In the second case, the pronoun agrees with the possessor, assigns case to it and attracts it to its specifier, viz. Spec, PosP/IP. Subsequently, the pronoun undergoes head movement to D to check its definiteness feature. The possessor finally moves to Spec, DP for reasons of EPP (cf. Delsing 1998: 95). The two possible derivations then look as follows (the intermediate functional layer will henceforth be labeled FP; head-movement of the possessum as in (70) is not necessary with dative possessors):

(72) a. $[_{DP}$ possessor$_1$ $[_{D'}$ pos.pron$_3$ $[_{FP}$ __$_1$ $[_{F'}$ __$_3$ $[_{NP}$ __$_1$ $[_{N'}$ possessum $]]]]]]$

   b. $[_{DP}$ possessor$_1$ $[_{D'}$ pos.pron $[_{NP}$ __$_1$ $[_{N'}$ possessum $]]]]$

It is difficult to come up with solid Zurich German-internal evidence in favor of an intermediate functional projection because of the complementary distribution between determiners and possessive elements. Other languages allow the co-occurrence of a determiner with a possessive element; a well-known case is Italian where determiners (definite and indefinite) co-occur with possessive adjectives. Definiteness and possession are thus distributed over two elements.[50] Similarly, Hungarian allows the co-occurrence of a determiner and a pre-nominal possessor in Spec, FP. The agreement marker on the noun indicates N-to-F movement (Delsing 1998: 104):

(73) a. *il   mio libro*
        the my   book
        'my book'   (Italian)

    b. *az en   vendeg-em*
        the I.NOM book-POS.1s
        'my book'   (Hungarian)

---

i.e. moves out of its own projection and takes the NP as its complement. Since reprojection is triggered by structure building features that need to be checked under c-command (so-called Münchhausen features) – N has to move out to c-command the possessor and no intervention issue arises. Since the controversy about head movement is far from settled, I will not choose between these options, but will simply assume that one of the solutions mentioned will guarantee that there is no intervention.

50. Cf. Lyons (1999) for the distinction between determiner-genitive and adjectival-genitive languages.

Within varieties of German and Germanic more generally, there is some
evidence for an intermediate position. Weiss (2008: 386) presents an exam-
ple from Bavarian with a dative possessor co-occurring both with an
indefinite determiner and a possessive adjective (unfortunately, it is not
clear in what sense or if at all such DPs are indefinite):

(74) *am   Schlossbauern a seinige Tochta*
      the.DAT S.DAT   a his   daughter

The co-occurrence between determiner and possessive element is also
found in the following construction with a possessive adjective and an
elided possessum that is attested in Bavarian (Weiss 1998: 82f.), West
Flemish (Haegeman 2004: 214), varieties of Dutch (Corver & van Koppen
2010), and Colloquial German (according to Weiss 2008: 391, fn. 17).
Unfortunately, the construction is impossible in Zurich German as it
does not have possessive adjectives (but for other dialects see Idiotikon
VII: 1017):

(75) a. *am   Hans des sei*
          the.DAT Hans the his

          'John's'   (Bav.)

      b. *Da   zyn Valère de zyne.*
          these are V.   the his

          'These are Valère's.'   (WF)

      c. *dem   Hans das seine*
          the.DAT John the his

          'John's'   (Coll. G)

Both constructions can be accommodated by assuming that the possessive
adjective occupies F as in Italian. The adjective then assigns case to the
possessor and attracts it to its specifier, viz. Spec, FP. Subsequently, the
possessor moves on to Spec, DP (for reasons of EPP).[51] De Vries' (2006:
24) claim that such an intermediate position is unnecessary for Germanic
may thus be too strong. For ZG though, such a layer does not seem to be

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51. Weiss (2008: 386f.) argues instead that examples like (74) provide evidence
    that the case is not linked to the possessive pronoun, but rather is assigned in
    Spec, DP. But data like (68), which I take to be ungrammatical in Bavarian,
    show that the presence of a possessive element is crucial. Whether this is a
    possessive pronoun or a possessive adjective is apparently not relevant.

necessary. To some extent the issue also depends on the solution to the <mark>double agreement</mark> issue:

3. As shown in 2.2.2, the possessive pronoun agrees both with the possessum and the possessor. Importantly, one has to assume two sets of features as the possessor and the possessum do not have to agree in features. In the following example (repeated from 2.2.2 above), the possessor is masculine singular while the possessum is feminine plural:

(76) *em*   *Maa* **sin-i**   *Töchter*
      the.MSC.SG man MSC.SG.P'OR-FEM.PL.P'SUM daughter.FEM.PL

This was considered a problem for treating the pronoun as the head of the DP, cf. Olsen (1989). On a simplistic view of features, this indeed seems to be a problem. A lexical item can only be specified for one value of a given feature. Conflicting values are ruled out. Löbel (1996) and Sternefeld (2006) argue that we are dealing with two fundamentally different types of features: On the one hand, the pronoun has syntactic features that express agreement with the possessum. On the other hand, it has inherent/ anaphoric/semantic features (that refer to a possessor). Only the syntactic features percolate to the maximal projection. This distinction is motivated on the basis of the Standard German construction where there is no overt possessor. But once the doubling construction is taken into account, it is no longer clear whether this distinction is warranted. We will instead assume that there really is double agreement: there are two sets of agree-ment features, one for the possessor and one for the possessum, the first optionally licensing a small *pro*. What has to be explained, though, is the fact that only the features that express agreement with the possessum project, but not those of the possessor:[52]

(77) [*de*   *Mäitli* *ir-es*   *Säil*] **isch**/***sind** *rot*
      the.DAT girl.**PL** FEM.**PL**.P'OR.-FEM.**SG**.P'SUM rope is/are   red
      'the girls' rope is red'

There are at least two possible solutions conceivable among which I will not choose: On the one hand, – similar to work in posit non-derivational frameworks such as HPSG (Sag & Wasow 1999, see also Demske 2001: 180ff., Strunk 2004: 74ff.) – one could posit a distinction between head-

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52. It was for this reason that Olsen (1989) base-generates the stem of the posses-sive pronoun in Spec, DP and its inflectional ending in D.

features that project to the maximal projection and selectional features
that check agreement with complements and specifiers and are only pro-
jected until they are satisfied. In the case at hand, the complement features
of D will be identical to the head-features while the specifier features will
depend on those of the possessor.

In more conventional Minimalist terms, one possibility, effectively close
to Sternefeld's proposal, consists in adopting two sets of agreement fea-
tures on the possessive pronoun. It will undergo agreement with both the
possessum and the possessor. This is possible without a PosP:

(78) $[_{DP}$ possessor$_1$ $[_{D'}$ pos.pron $[_{NP}$ ___$_1$ $[_{N'}$ possessum]]]]

Agree D – NP
Agree D – DP$_{Poss'or}$
Move DP$_{Poss'or}$
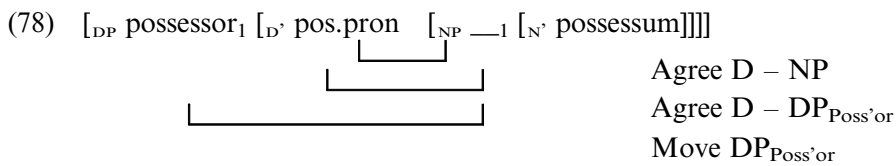
As with the N-to-n-movement above, the derivation is not without
problems. Agreement between D and NP is unproblematic. Agreement
between D and the possessor, however, presupposes that NP does not
intervene. Since NPs case feature will not be valued until an external
case-assigning probe is merged (v/T), NP may still count as active and
therefore block Agree. I will provisionally assume that Agree between
D and the possessor is possible because it is sensitive to the category
(D instead of N) of the goal so that there is no intervention. To make
sure that dative case is assigned to the possessor and not to the possessum,
the case feature has to be linked to the D-feature.

But why do we get the agreement pattern in (77)? Adapting a sugges-
tion from Erik Schoorlemmer (p.c.): The crucial difference between the
two sets of agreement features on the possessive pronoun is that those
agreeing with N have an unvalued case-feature which is not valued until
agreement is established with a DP-external probe (v/T). The features
agreeing with the possessor, however, will all be valued. This is why only
the phi-features agreeing with N will remain active and visible for an
external probe so that we get the pattern in (77).[53]

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53. An alternative way of handling the double agreement problem is to take
the morphological complexity of the possessive pronoun seriously and base-
generate its parts in different head positions: the stem in F and the ending in
D. The two agreement processes will thus take place independently, and this
will guarantee that only the features agreeing with the possessum end up on
DP (the stem finally incorporates into D). Otherwise, the derivation is almost
the same. As in the previous derivations, non-trivial configurations occur with

The derivation for the examples in (74)–(75) is very similar: The possessive adjective has two sets of agreement features; it is merged in F, agrees with N and attracts the possessor. Thereafter, D is merged, attracts F and then the possessor (for reasons of EPP), thus essentially as in (72)a. If one wants to adopt an F-layer for regular possessor doubling, the derivation is also as in (72)a.[54]

respect to intervention: F has to establish agreement with and attract the possessor across the possessum (i). This may be possible if Agree is sensitive to syntactic category (D instead of N) (cf. the discussion in the main text). The ending in D will have to establish agreement with the possessum across the possessor (ii), which is possible since the possessor does not have any unvalued features anymore. The resulting representation is shown in (iii):

(i) $[_{DP} [_{D'}$ -$D_{ending} [_{FP} [_{F'}$ Pos$_{stem}$ $[_{NP}$ possessor $[_{N'}$ possessum $]]]]]]$ Agree

(ii) $[_{DP} [_{D'}$ -$D_{ending} [_{FP}$ possessor$_1 [_{F'}$ Pos$_{stem} [_{NP}$ __$_1 [_{N'}$ possessum $]]]]]]$

(iii) $[_{DP}$ possessor$_2 [_{D'}$ Pos$_{stem2+}$ -$D_{ending} [_{FP}$ __$_1 [_{F'}$ __$_2 [_{NP}$ __$_1$
$[_{N'}$ possessum $]]]]]]$ Agree

See Heck & Müller (2007) for a similar approach.

Note that under an Agree approach movement of the possessor to an intermediate position like Spec, PosP as in this derivation or in (72)a is no longer necessary since c-command suffices for case assignment.

Doreen Georgi (p.c.) has pointed out to me that in a reprojection approach no difficulties arise with respect to projecting the right features because N is the head of the noun phrase while the pronoun is just a specifier of N.

54. It is surprising that the double agreement issue is not addressed explicitly in many recent approaches as e.g. in Delsing (1998), Haegeman (2003/2004), de Vries (2006), and Weiss (2006/2008) even though the double agreement pattern also occurs in languages other than German (e.g. Norwegian, cf. Delsing 1998: 95, or West Flemish, cf. Haegeman 2004: 216).

The agreement facts remain completely mysterious under de Vries' (2006) approach (recall the derivation from fn. 39):

(i) D $[_{NP}$ N $[_{PP}$ P DP$]] \rightarrow [_{DP} [_{PP}$ __$_1$ DP$]_2$ P$_1$ + D $[_{NP}$ N __$_2]]$

While agreement between D and the possessum (i.e. D's complement) seems straightforward, I fail to see how the preposition could trigger agreement with the possessor: Prepositions do not agree with their complements or specifiers in German. Additionally, the agreement is dependent on incorporation of P into D (as no agreement occurs with post-nominal possessors), but nothing in de Vries' account derives these facts.

2.6.   The syntax of possessor relativization

The analysis of the possessor doubling construction proposed above has important consequences for the analysis of certain parts of the Swiss German resumption system. Since Spec, DP of the possessor construction can host either a full DP or a *pro*, there are in principle also two possible analyses of possessor relativization: Either there is extraction of a relative operator from Spec, DP or the operator is base-generated instead and binds the *pro* in Spec, DP of the possessive phrase. I will therefore test whether a movement or a base-generation analysis is preferable.

2.6.1.   *Reconstruction and Strong Crossover effects*

Like all other relatives, possessor relativization shows certain movement effects such as reconstruction and SCO effects irrespective of whether the possessive phrase is located in a transparent domain or inside an island. The first pair illustrates reconstruction, the second one SCO effects:[55]

(79) a. *d* [*Fründin   vo **sim**$_i$ Soon*], *wo **jede   Vatter**$_i$ iri*
          the girlfriend of his son   C every father her

          Bekanntschaft wett   mache
          acquaintance wants make

          'the girlfriend of his$_i$ son whose parents every father$_i$ wants to
          get to know'

The same applies to the analysis in Weiss (2006/2008: 389ff.) where the possessive pronoun results from incorporation of an agr-head into D:

(i) [$_{DP}$ Possessor$_1$ D + Agr$_3$ (possessive) [$_{AGRP}$ possessum$_2$ __$_3$ [$_{SC}$ __$_1$ __$_2$]]]

Agreement with the possessum is plausible as it always moves to Spec, AgrP on Weiss' analysis, cf. also fn. 45. However, it remains unclear to me how agreement with the possessor is established. On Weiss' analysis, Spec, DP can be occupied by pre-nominal genitives as well as dative possessors, but there is agreement only in the second case. But in both cases, Agr incorporates into D so that the difference is unexpected. Furthermore, I do not see how it can be ensured that the features expressing agreement with the possessum end up on the DP in such a system – if D is responsible for agreement with the possessor, one would expect these features to project, not those of the incorporated Agr.

A very different analysis of the possessor doubling construction is proposed in Georgi & Salzmann (2010).

55. It is very difficult to come up with naturally sounding examples. Most speakers will therefore find these examples rather awkward.

b.   *d*   [*Frau*   *vo* **sine**$_i$ *Träum*], *wo* **jede** **Maa**$_i$ *stolz*
the woman of his   dreams C every man   proudly

   <*s*   *Album, wo* <u>*ires*</u> *Porträt drin*   *isch*> *zäiget*
   the album   C   her portrait shows is   shows

   lit.: 'the woman of his$_i$ dreams that every man$_i$ proudly shows
   the album in which her portrait is'

(80)   a.   *de   [**Bueb**]$_i$, *won* **er**$_i$ <u>*sini*</u>$_i$ *Mueter gern hät*
     the boy   C   he his   mother likes
     lit.: 'the boy$_i$ whose$_i$ mother he$_i$ likes'

   b.   *de   [**Bueb**]$_i$, *won* **er**$_i$ *de Maa, wo* <u>*sini*</u>$_i$ *Mueter küsst hät,*
     the boy   C   he the man C   his   mother kissed has

     nöd chan uusschtaa
     not can   stand

     lit.: 'the boy$_i$ whose$_i$ mother he$_i$ can't stand the man that
     kissed'

As discussed in 1.3.4 above, these facts do not necessarily argue in favor of
movement, but are in principle also compatible with base-generation.

2.6.2.   Locality

As in resumptive relatives, a movement analysis for ZG possessor relatives
runs into difficulties once locality is taken into account: Even though
possessor extraction from a predicate is marginally possible (cf. 2.3.2), it
is ungrammatical in all other contexts. Possessor relativization, however,
is fully grammatical across the board. Consider the following contrast:

(81)   a.   *Das deet isch de Schüeler, wo de Peter geschter* **sin**
     that there is   the student   C   the Peter yesterday his

     Vatter käne gleert   *hät.*
     father got.to.know has

     'Over there is the student whose father Peter met yesterday.'

   b.   ??[*Wem*]$_1$ *hät de Peter geschter*   [__$_1$ *sin Vatter*] *käne gleert?*
     who.DAT has the Peter yesterday   his father got.to.know

     'Whose father did Peter meet yesterday?'

In relativization, the possessive DP can also be more deeply embedded,
e.g. within another possessor, in a PP or even within a CNPC island:

(82) a. *Das deet isch de Schüeler, won i geschter*
          that there is   the student   C   I yesterday

   <sim Vatter sis Auto> bewundered han.
    his father his car   admired   have

   'Over there is the student whose father's car I admired yesterday.'

   b. *Das deet isch de Schüeler, won i geschter*
          that there is   the student   C   I yesterday

   <mit sim Vatter> gredt han.
    with his father   talked have

   'Over there is the student with whose father I spoke yesterday.'

   c. *de Autor, wo d Ursi <jedes Buech, wo sini*
          the author C the Ursi   every book   C his

   Kritiker verriissed>, chaufft
    critics tear.apart buys

   lit.: 'the author that Ursi buys every book that his critics
   tear apart'

2.6.3.   *Resumption involves base-generation*

In the discussion about the derivation of resumptive relatives in 1.3 above
I dismissed most movement approaches because of the locality facts. The
only possibility I did not fully reject was the PF-theory of locality as in
Pesetsky (1998): Movement out of islands is possible because the tail of
the chain is overt thanks to the resumptive. The overtness of resumptives
would then be the crucial factor that makes movement out of islands
possible. The facts from possessor relativization strongly argue against
this since there is no overt resumptive even though the putative extraction
site is within an opaque domain.[56] In fact, adding an overt possessor
resumptive leads to degradation:

(83) *Das deet isch de Schüeler, wo de Peter geschter (?im)*
        that there is   the student   C the Peter yesterday he.DAT

   sin Vatter käne gleert   hät.
    his father got.to.know has

   'Over there is the student whose father Peter met yesterday.'

---

56. It is incoherent to claim that the possessive pronoun is the resumptive given
    that it has been analyzed as a pure agreement marker in the possessor dou-
    bling construction. Cf. also Haegeman (2003: 253, fn. 15).

Overtness of the tail of a movement chain thus cannot explain why possessor relativization is insensitive to locality. The only explanation that remains is that possessor relativization involves base-generation: An operator in Spec, CP binds the *pro* in Spec, DP of the possessive phrase.[57] We are thus dealing with an empty resumptive pronoun as in languages with rich(er) agreement like e.g. Irish (Mc Closkey 1990), Welsh (Willis 2000) or <mark>Palauan</mark> (Georgopoulos 1985: 69):

(84) *a buik el k-ʔillebed-ii* [*a ʔobok-ul* pro] *a seʔel-ik*
       boy C ɪʀ.1s-ᴘғ.hit-3s older.brother-3s friend-1s

      'The boy whose brother I hit is my friend.'

To complete the argument, let me present independent evidence that silent resumptives are a possibility in ZG and can void island constraints.[58] When the subject is 2nd person singular it can be zero (perhaps because 2nd person singular is expressed very clearly by verb morphology). In V-final sentences (including relative clauses) the complementizer additionally takes an agreement marker, arguably because 2nd person singular must be realized on C. I will assume that a *pro* is licensed whenever the

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57. One cannot attribute the lack of an overt resumptive to the structural case of the possessor. As shown in (2) above, overt resumptives are necessary for structural cases as well once they occur inside islands.

    The same goes for accounts that relate the impossibility of an overt resumptive to the fact that it would be a strong pronoun in possessor relativization (like in (26)) rather than a weak/clitic one as in other areas of relativization in ZG. There is reason to believe that there is no general ban against strong resumptives in Zurich German as the following example shows where an object of comparison is relativized on:

    (i) *de äinzig Bueb i de Klass, won i gröösser bin als ëër/*er*
        the only boy in the class C I taller am than he/he

       'the only boy in my class that I am taller than'

    Relatives are thus parallel to regular comparative expressions involving *als* 'than':

    (ii) *Ich bi grösser als ëër/*er*.
         I am taller than him

        'I am taller than him.'

    Even if such explanations for the silence of the resumptive could be upheld, they would still be in conflict with the PF-theory of locality: The insensitivity to islands would remain mysterious.

58. I am grateful to Werner Frey for discussion of this point.

verb is 2nd person singular. An overt subject pronoun can be optionally used as well (e.g. for emphasis):[59]

(85) . . . *wo-t   em   **pro**/**du** das gsäit häsch*
           when-AGR he.DAT pro/you that said have.2s

      'when you said this to him'

Crucially, when a second person singular is relativized, there is a strong preference for (resumptive) *pro,* even if the variable is inside an island; relativizing pronouns is awkward):[60]

(86) *du, won ich glaube, dass es* <*niemert git, wo-t   em*
       you C   I   believe that it   no.one is C-AGR he.DAT

        pro/*??**du** wettsch   hälffe>*
               you would.like.2s help

      'you, such that I believe that there is no one who you would like
      to help'

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59. As pointed out to me by Peter Gallmann, there is some indication that we are
    perhaps not dealing with complementizer agreement but rather with clitic
    doubling: The marker *-t* not only occurs after elements in C but also after
    elements in Spec, CP such as *wh*-adverbials:

(i) *Ich verschtaa   nöd, warum=t em   (du) nöd ghulffe häsch.*
    I   understand not why=2s he.DAT you not helped have.2s

    'I don't understand why you didn't help him.'

    For such cases one would have to assume that an empty C is inflected, which
    is rather unexpected from a morphological point of view.

        A clitic doubling analysis must, however, explain why no clitic appears
    under V2:

(ii) *Warum häsch-(*t) em   du   ghulffe?*
     why   have-2s   he.DAT you helped

     'Why did you help him?'

    As pointed out to me by Peter Gallmann, there is good reason to believe that
    the *-t* falls victim to a general phonological rule of the language that deletes *-t*
    after *-sch*. The rule is stated explicitly in Weber (1964: 174). It applies to verb
    forms (there used to be a *-t* in the second person singular, cf. the standard lan-
    guage), but also more generally to monosyllables like *fascht > fasch* 'almost'
    and also to the verb-clitic sequence in (ii).
60. The fact that a silent resumptive is preferred over an overt one in (83) and (86)
    can be subsumed under the Avoid Pronoun Principle (Chomsky 1982), which
    prefers silent over overt pronouns (unless overt pronouns are independently
    required), cf. Salzmann (2009a: 46ff.) for detailed discussion.

We can thus conclude that resumption can involve silent elements in ZG. Since silent resumptives can occur inside islands, it is no longer possible to claim as in Pesetsky (1998) that overtness of the tail of an A'-dependency makes movement out of islands possible. Instead, the island-voiding nature of resumption can only be attributed to base-generation. Since base-generation is necessary to account for possessor relativization it is most economical to assume the same for the other instances of resumption in ZG. While a base-generation analysis as such is straightforward, it raises a number of technical issues regarding economy that I will address in the following section.[61]

3.   Analysis

3.1.   The syntax of base-generation

My implementation of base-generation is very simple: As in traditional analyses, an operator is base-generated, i.e. directly merged, in an operator position. The resumptive, i.e. a regular pronoun, is merged in an argument position. Finally, the operator binds the pronoun, creating an operator variable dependency. As a consequence, the operator must be unmarked for case. If it had a case-feature, there would be no way for it to be checked/valued in this configuration. The operator thus only has an iOp-feature that values the corresponding uOp feature on C[62] while the resumptive is involved in Agree with v/T.

In addition to the operator unmarked for case, there also is a (silent) case-marked operator. If that operator is chosen, a movement derivation occurs as it can value both uPhi of v/T and uOp of C. The two derivations schematically look as follows:

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61. The analysis is thus eventually similar in spirit to van Riemsdijk (1989), but crucially differs from it in assuming that SU/DO-relatives involve movement rather than base-generation plus deletion of the resumptive. See Salzmann (2009a/2009b: 143ff./2009c) for arguments that SU/DO-relatives must involve movement. For general discussion of van Riemsdijk's approach, cf. Salzmann (2006b: 368ff.). This difference will become rather crucial below where the definition of the reference set is discussed.

62. This assumption may be somewhat non-standard. It is often assumed that uninterpretable/unvalued features of a probe can only be checked via internal merge, cf. McCloskey (2002: 204), Alexopoulou (2006: 80, 88). If one wants to uphold this restriction, one can assume that C does not have an Op-feature, but only an EPP-feature, or even no feature at all. In the last case, Merge of the operator would be purely semantically-driven.

(87)   a.   [$_{CP}$ Op$_i$ C   [$_{vP}$ [$_{vP}$ pron$_i$ V] v]]

                 iOp[x] uOp[x] uCase[acc]]

                       EPP uPhi[z] uPhi[z]   base-generation

      b.   [$_{CP}$ Op   C   [$_{vP}$ [$_{vP}$ ~~Op~~ V] v]]

                 iOp[x] uOp[x] iOp[x]

                 uCase[acc] EPP uCase[acc]

                                iPhi[z] uPhi[z]   movement

3.2.   The distribution of movement and base-generation

3.2.1.   *Resumptive derivations succeed when movement derivations fail*

I have argued above that resumption is a last resort in ZG, occurring only when a gap-derivation fails. This happens when the extraction site is an indirect object or is located inside an island. In both cases, only the base-generation derivation with resumptives will converge, albeit for different reasons: In the case of the indirect object, a gap derivation will lead to a representation where the oblique case remains unexpressed in violation of the constraint discussed in 1.2.2. above. If the extraction site is within an island, the gap derivation crashes since movement out of islands violates locality. In these configurations there will thus be no competition between movement and base-generation.

3.2.2.   *Gap derivations are more economical*

Now that we have concluded that base-generation is a possibility in ZG, the following question arises: What blocks resumption when subjects or direct objects (or predicates in non-oblique positions, cf. (6)) are relativized? Given the reasoning above, resumption is blocked because it is not necessary. In other words, gap derivations are taken to be more economical.

While easily stated in prose, it is quite difficult to implement this technically, at least in a Minimalist setting where Economy computations require that the derivations that are compared belong to the same candidate/ reference set. There are several options to determine the reference set (see Sternefeld 1997 for discussion). The original and possibly still most widely held assumption is that the reference set is based on the lexical material used in a derivation: Derivations belong to the same reference set if they are built from the same numeration, i.e. if they are made up of the same set of lexical (and possibly functional) elements.

3.2.2.1.   Should the numeration determine the reference set?

Aoun et al. (2001: 393ff.) adopt this definition of the reference set for their analysis of resumption. If gap/movement and resumptive/base-generation derivations compete, they have to be built from the same numeration, which implies that the resumptive cannot be part of the numeration; rather it must be generated during the derivation. The derivation proceeds as follows: First an operator is merged in the thematic position. When it is attracted by a C it will attempt to move to the specifier of that head. If there is no island, the operator will do so, the result being a gap derivation. If, however, the operator is inside an island, it cannot move out. Then, Aoun et al. (2001) argue, an operation termed *Bind* applies: The operator is demerged from the phrase marker and remerged in the operator position, and a resumptive pronoun is substituted for the demerged expression in the thematic position. Importantly, both derivations can in principle apply when the operator is in a transparent domain. However, the base-generation derivation is less economical because it involves more operations than the movement derivation (additionally, the pronominalization operation is interpreted as a violation of representational economy, cf. Aoun et al. 2001: 398):

(88)   a.   movement: Copy + Merge

b.   base-generation: Demerge (Copy + Delete) + Merge + Pronominalize

We are thus dealing with a trans-derivational economy constraint that blocks base-generation if there is a converging movement derivation. In the case of datives and non-transparent domains, the movement derivation fails so that the converging derivation involving Bind – even though it is less economical – results as the only grammatical possibility.

There are a number of problems with such an approach if applied to ZG that make it worthwhile to think about alternative ways of determining the reference set. First, a constraint in terms of trans-derivational economy (perhaps subsumable under Fewest Steps) goes against the trend of the last decade to do away with such constraints, cf. Müller & Sternefeld (2001).

Second, the resumptive always appears more or less (i.e. modulo pronoun fronting) in the thematic position. But in case the operator first undergoes A'-movement before it encounters an island, one would expect the resumptive in higher positions, contrary to fact:

(89) $[_{CP}$ C$_{+wh}$ $[_{ISLAND}$ $[_{CP}$ Op$_i$ $[_{CP}$ ~~Op$_i$~~ ... ~~Op$_i$~~]]]].

$$\Downarrow$$

res

Here the operator has first moved to Spec, CP of the lowest clause, then to an intermediate Spec, CP. Then, when it attempts to move to the matrix Spec, CP, it encounters an island. As a consequence, this is where the operator would have to be replaced by a resumptive. But resumptives normally do not occur in intermediate positions. They certainly do not in ZG, but this fact holds more generally, perhaps with the exception of Hebrew (cf. e.g. Demirdache 1991).[63]

Third, it is rather unclear to me how such an approach could be implemented in the more recent versions of the Minimalist Program of strongly-derivational character, e.g. Chomsky (2001): In such approaches, the ultimate C-probe often will not have been merged when the operator, i.e. the goal, would have to be de-merged. Demerging would have to apply pre-emptively (a form of look-ahead), and it is unclear what one would do with the copy resulting from it. It would have to be kept in storage somewhere until the relevant probe is merged, but how this should be done is by no means obvious (cf. Heck & Müller 2000: 35 for similar discussion).

Fourth, the shape of the pronoun that is substituted for the demerged operator phrase depends on the syntactic context: With possessors it is a null-resumptive, in most other cases it is a weak overt pronoun and after the comparative particle it is a strong pronoun, cf. fn. 57. It is questionable whether this could be taken care of by the pronominalization rule

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63. Perhaps the remerger theory of movement would help, cf. the discussion in Aoun et al. (2001: 399, fn. 31). Alternatively, one could argue that a derivation as in (89) is possible but generally blocked by a base-generation derivation that substitutes the pronoun at the very beginning. The latter derivation would arguably be more economical as it would involve fewer movement steps. This means that for the trans-derivational constraint to work, we would need another one. This is certainly not a very satisfactory solution. And since successive-cyclic *wh*-movement is often analyzed as counting just as one operation (one instance of Form Chain, cf. Müller & Sternefeld 2001: 12), not even this may work.

involved in Bind. It is not per se impossible, but such an operation would be undesirably powerful.[64]

Fifth, all overt resumptives that are not governed by prepositions undergo weak pronoun fronting in ZG. This fact is even more fatal for Aoun et al's (2001) base-generation approach than for movement approaches involving spell-out (cf. 1.3.4.2 above): It is unclear how such a movement should be possible given Aoun et al.'s assumptions: At the point where the pronoun is substituted, the derivation has already proceeded too far for pronoun fronting to apply, in fact the operator has been remerged in the final landing site so that the derivation is basically finished. Subsequent pronoun fronting, targeting a position inside the lowest CP, would then be ruled out by Cyclicity. Furthermore, if pronoun fronting is triggered by a syntactic feature, it is unclear how the pronoun that is substituted during the derivation could have such a feature.[65]

It is save to conclude, then, that an approach that adheres to numerations as the basis of the reference set is very undesirable when movement and base-generation compete. Quite apart from these technical problems, I follow Heck et al. (2002) in assuming that it is generally undesirable to base the candidate/reference set on the input: The more complex a sentence becomes, the more structured the numeration will have to be, often reaching a complexity that is almost identical to that of the sentence to be derived. As a consequence, an input-free definition of the reference set is called for.

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64. To be fair, Aoun et al. (2001: 396) actually implement the pronominalization operation in a somewhat different and rather perplexing way: The pronoun that is substituted is not the resumptive that can be seen on the surface but rather an additional empty resumptive pronoun. This is arguably necessary within their approach because Lebanese Arabic also features strong pronouns and epithets as resumptives, which cannot so easily be analyzed as the pronominalization of a DP. Furthermore, due to their distinction between true and apparent resumption (cf. 1.3.2), an overt resumptive is never indicative of base-generation so that an additional empty one has to be assumed for base-generation. I find this rather unattractive and certainly unnecessary for the ZG facts.

Alternatively, one could argue that what is substituted are just pronominal features. The exact shape of the pronoun would then be determined post-syntactically on the basis of the syntactic context – basically as in spell-out approaches to movement. Since pronoun fronting depends on the weakness of the pronoun, it will have to take place after vocabulary insertion, certainly not an innocuous requirement.

65. The only way out, it seems, would be to assume that pronoun fronting is phonological, cf. Salzmann (2006b: 304) for discussion.

3.2.2.2.   The LF determines the reference set

If the numeration cannot be the decisive factor that determines the reference set, we have to resort to other options. In the present context, there remain three options: Either, the derivations have to have the same semantic interpretation, the same S-Structure or the same LF.

Basing the definition of the reference set on the semantic interpretation has been shown to be undesirable (cf. Sternefeld 1997: 89ff.) because this would rule out all movement operations that do not lead to a truth-functional difference with respect to the base structure: Topicalization and scrambling should always be blocked by a non-movement derivation. Furthermore, paraphrases of all kinds should no longer be possible. Using the S-Structure (the structure at Spell-out) as a criterion also does not work in the case at hand because there are substantial differences between a movement and a base-generation derivation:

(90)   a. $[_{CP}$ Op . . .   __]   movement

       b. $[_{CP}$ Op . . .   pron]   base-generation

Clearly, the two derivations differ too much on the surface to belong to the same reference set. Identical LFs as a criterion, however, fares better, given certain assumptions: Intermediate traces will have been deleted, and the bottom copy of the movement derivation is converted into a variable. Furthermore, through binding by the operator the resumptive pronoun will also function as a variable:

(91)   a. $[_{CP}$ Op_i . . . x_i] $\rightarrow \lambda x$ . . . x   movement

       b. $[_{CP}$ Op_i . . . $pron_i$] $\rightarrow \lambda x$ . . . x   base-generation

I will consequently take the LFs of movement and base-generation derivations to be sufficiently similar for both to be part of the same reference set.[66,67]

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66. More evidence suggesting that the definition of the reference set should be based on identical LFs can be found in Sternefeld (1997), Broekhuis & Dekkers (2000) and Broekhuis & Klooster (2007).
67. It is a well-known fact that resumptive pronouns impose semantic restrictions on the external head. More precisely, they require it to be specific and block scope reconstruction, cf. Doron (1982), Suñer (1998), Sharvit (1999), Boeckx (2003), Bianchi (2004/2008), Guilliot (2007). In that case, there will be competition with movement derivations whose lowest copy is interpreted as a definite description. Importantly, however, the copy of movement can also be

Suppose then that both a gap and a movement derivation converge in the relativization of a subject or a direct object. What blocks the resumptive derivation? The established (trans-derivational) Economy constraints Shortest Path or Fewest Steps (e.g. Chomsky 1995) are not easily applicable because the two derivations are syntactically quite different. Furthermore, Sternefeld (1997) showed that they can be replaced by derivational or representational constraints thereby strongly reducing the number of trans-derivational competitions. In the case at hand, however, there must be competition, since no principle of grammar rules out base-generation once we take it to be in principle available in a language.[68]

But why exactly is movement more economical in this case? The issue is far from trivial. For my present concerns it is sufficient to adopt a representational constraint that simply penalizes resumptives (cf. also Salzmann 2008, section 5.1):[69]

(92) *Resumptive

    Resumptive pronouns are not allowed.

This translocal constraint will block base-generation in favor of movement if both derivations converge. It would, of course, be desirable to derive

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interpreted as an indefinite description and then allows for scope reconstruction (cf. Guilliot 2007, Bianchi 2008). In that case, there will be no competition between movement and base-generation. The impact of scope for the definition of the reference set is discussed in detail in Salzmann (2009a/2009c).

68. Given what was said in 1.2 above this may sound like a contradiction. It was claimed that, in principle, there seem to be two types of languages with resumption. One where resumption is freely available and coexists next to movement and one where it is just a last resort. Saying that base-generation is freely available may give the impression that resumption in Zurich German is in fact not a last resort but rather similar to Irish or Hebrew. But this is not correct. It depends on the level where this free availability holds. In Irish or Hebrew, the optionality holds at the surface, i.e. both gap and resumptive derivations not only converge they are also both grammatical. In ZG, however, the optionality only holds as far as convergence goes. Since movement is taken to be more economical than base-generation, only one of them will be grammatical, the movement derivation. See also fn. 72.

69. Constraints referring to overtness like Silent Trace in Pesetsky (1998) or the Avoid Pronoun Principle in Chomsky (1982: 63f.), van Riemsdijk (1989), Heck & Müller (2000: 44), and probably the interpretation in Müller & Sternefeld (2001: 60) are therefore inadequate. Willis (2000) analyses resumption in Welsh, which has the same distribution of resumptives in main clauses. He does not refer to economy, but rather makes a proposal in terms of A'-disjointness. See Salzmann (2009a, 2009c, to appear) for detailed discussion of this issue.

the preference for movement over base-generation from more primitive notions. Since a detailed discussion of this issue is essentially orthogonal to my main interests, I will leave it at this here.[70,71,72]

4.   The wh/relativization asymmetry

The attentive reader will have noticed that the ungrammaticality of (81)b is actually quite puzzling: Since possessor relativization involves a small *pro,* one expects the same possibility for wh-movement, thereby making it possible to relate the wh-pronoun to a position inside an island. Interestingly, however, this is not possible. The restriction holds more generally, wh-movement (and also topicalization) is incompatible with resumption throughout Zurich German, cf. (5). I will briefly discuss two possibilities to account for this wh-movement/relativization asymmetry.

4.1.   Semantic factors

One rather obvious explanation would relate the asymmetry to semantic differences between the two constructions. It seems to be the case that cross-linguistically resumption is more widespread with relativization than with *wh*-movement (cf. e.g. Boeckx 2003, Bianchi 2004). Whether this is really due to semantic reasons, is, however, unclear. For some languages, this seems to be correct. In Hebrew (cf. e.g. Sharvit 1999: 591)

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70. In Salzmann (2009a/2009c) I relate the ban against resumption/base-generation to a general ban against External Merge. Cf. also Salzmann (2008: section 5.1/to appear) for discussion.

71. This type of constraint is reminiscent of Optimality-theoretic syntax. See Salzmann (2008/2009a/2009b/to appear) and Salzmann & Seiler (2010) for arguments that some aspects of OT and MP should be combined to attain descriptive adequacy. Given my assumption that the reference set should be based on identical LFs rather than identical numerations, an approach that penalizes resumption by means of faithfulness constraints like FILL by Légendre et al. (1998) is automatically ruled out.

72. Once it is assumed that movement and base-generation compete, the question arises why some languages, e.g. Hebrew and Irish, allow both gap and resumptive structures in certain grammatical relations such as in the relativization of matrix direct object. Given what has been said so far, one would expect both derivations to compete, and only the gap-derivation should emerge as grammatical. In Salzmann (2009a/2009c) I argue that economy constraints such as *Resumptive do not hold universally, but rather interact with other constraints, so that different patterns of interaction between movement and base-generation become possible, just like the optionality in Irish/Hebrew.

for instance, resumption is possible with D-linked wh-operators but not with non-D-linked ones, suggesting that resumption requires a – in a sense yet to be made precise – specific operator:[73]

(93) a. ***Mi* *nifgašta* *ito?***
          who met.you with.him
          'Who did you meet with?'

      b. ***Eyze* *student* *nifgašta* *ito?***
          which student met.you with.him
          'Which student did you meet with?'

This explanation does not work for Zurich German, though, as there is no such effect: Resumption with wh-possessors is equally unacceptable with simplex and D-linked wh-operators:

(94) ??[*Wem*]$_i$ / [*Welem   Schüeler*]$_i$ *häsch   geschter*
       who.DAT which.DAT student   have.2s yesterday

      [pro$_i$ *sin Vatter*] *käne gleert?*
            his father   got.to.know
      'Whose/Which student's father did you meet yesterday?'

4.2.   The case of the operator

Consider again the asymmetry in (81), repeated here in slightly adapted form:

(95) a. *de Schüeler,* Op$_i$ *wo de Peter geschter*
          the student   C the Peter yesterday
          [pro$_i$ *sin Vatter*] *käne gleert   hät*
                his father   got.to.know has
          'the student whose father Peter met yesterday'

      b. ??[*Wem*]$_i$ *hät de Peter geschter*
          who.DAT has the Peter yesterday
          [pro$_i$ *sin Vatter*] *käne gleert?*
                his father   got.to.know
          'Whose father did Peter meet yesterday?'

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73. See Hoekstra (1991: 71f.) who observes that resumption in Frisian is restricted to definite wh-phrases.

There is one obvious difference between the two examples: In the wh-example, the operator is overt and case-marked while in relativization it is zero and, as proposed in 3.1, unmarked for case. Base-generation is only possible with operators unmarked for case because otherwise their case feature cannot be checked/valued. In (95)b, the operator is case-marked and thus cannot be directly inserted into the operator position.

While this may seem like a stipulation at this point, I believe that there is good reason to believe that a constraint along these lines is operative in many languages: Merchant (2004: ex. 24) makes the same claim for Greek. Resumption is possible with *that*-relatives but not with phrasal *wh*-relatives and generally impossible with *wh*-movement, which also involves a phrasal antecedent:[74]

(96) a. *o andras **tou opiou**   (***tou***) edhosa ta klidhia mou*
          the man   the which.GEN him.GEN gave.1sg the keys.ACC mine

          'the man to whom I gave my keys'

     b. *o andras pou (**tou**)   edhosa ta klidhia mou*
          the man   that him.GEN gave.1sg the keys.ACC mine

          'the man that I gave my keys to'

Here, the asymmetry is not between different types of A'-movement but within a given type, clearly suggesting that semantic factors cannot be decisive (both relatives are restrictive).

Additionally, there is independent evidence internal to Zurich German: First, the only other A'-movement construction that allows resumptives in local movement is comparative deletion, as shown in (4). Crucially, the operator is also zero, so that it is possible that it is unmarked for case. Secondly, next to regular wh-movement that leaves gaps, Zurich German also has a construction which I have termed A'-splits in Salzmann (2006a). In that construction, the wh-phrase (and, for some speakers, a topic) occurs unmarked for case in Spec, CP while the putative extraction site is occupied by a resumptive pronoun (and, if PPs are involved, the preposi-

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74. According to Alexopoulou (2006: 69ff.) things are more complex in Greek. While this asymmetry is correct for restrictive relatives, it is not observed in non-restrictives where resumptives are claimed to be compatible with both *that*- and *wh*-relatives. Interestingly though, she mentions (2006: 86) that in non-restrictives the relative pronoun may appear in the nominative irrespective of the position relativized on. This may, of course, be an indication of base-generation, as in the A'-splits to be discussed below.

tion; interestingly, the dative resumptive is also obligatory for speakers who can drop them in local relativization; A'-splits thus pattern with long-distance relativization, recall fn. 4):

(97) a. **Wele Maa**$_i$ *häsch   behauptet, dass t   *(**em**$_i$)*
          which man have.2s claimed   that you he.DAT

          es Buech ggëë   häsch?
          a book   given have.2s

          'To which man did you claim that you had given a book?'

      b. **Weli Frau**$_i$ *häsch   behauptet, dass t   i   d*
          which woman have.2s claimed   that you in the

          Schuel bisch **mit**   *(**ere**$_i$)?
          school are   with her

          'With which woman did you claim that you went to school?'

The wh-pronouns formally bear the direct case – recall that ZG only distinguishes direct case and one oblique case, dative –, but since the direct case is formally unmarked in Zurich German, it seems plausible to analyze these operators as appearing in a default form not carrying a case feature. Therefore, these examples are amenable to a base-generation analysis as well. Importantly, such A'-splits are also possible with possessors (thus showing insensitivity to locality):

(98) **Wele Maa**$_i$ *häsch   gsäit, dass geschter*
      which man have.2s said   that yesterday

      [pro$_i$ *siis Huus*] *abbrännt   isch?*
          his house burned.down is

      'Which man's house did you say burned down yesterday?'

Obviously, the base-generated operator is unmarked for case, therefore making binding of the case-marked *pro* possible, in contrast with (95)b. Given the possibility of A'-splits, one expects the A'-split version of (95)b to be grammatical as there is no case problem anymore. However, this prediction is not borne out (wh-pronouns for nominative/accusative are identical):

(99) *[*Wëër*]$_i$ *hät de Peter geschter*   [pro$_i$ *sin Vatter*] *käne gleert?*
      who   has the Peter yesterday   his father got.to.know

      'Whose father did Peter meet yesterday?'

The restriction is more general: A'-splits are limited to cross-clausal dependencies, i.e. the resumptive may not occur within the same CP as its binder:

(100)   *__Wele Maa__$_i$ *häsch* __em__$_i$ *es Buech ggee?*
        which man   have.2s he.DAT a book given
        'To which man did you give a book?'

Thus while relativization and wh-movement do not differ with respect to the availability of resumption as such, they do differ with respect to local resumption.

    Intriguingly, West Flemish, which has also a very similar construction at least with possessors, is subject to exactly the same restriction (Haegeman 2003: 223; wh-pronouns are never case-marked overtly in West Flemish, possessor extraction is impossible even out of predicates):

(101)   a.   __Wekken verpleegster__ *zei-je   gie dan-ze   gisteren*
             which   nurse   said-you you that-they yesterday

             __eur us__   *verkocht een?*
             her house sold   have
             'Which nurse's house did you say that they sold yesterday?'

        b.   ??__Wien__ *was da doa gisteren* __zenen__ *oto?*
              who was that there yesterday his   car
              'Whose car was that yesterday?'

Given the logic so far, a simple solution suggests itself: Base-generation is blocked because the more economical movement derivation is available. Since both derivations converge and since both have the same LF, they compete. For cases like (100), this is straightforward, the A'-split version will be blocked by the movement derivation in (5)a due to the economy constraint in (92). The possessor cases are more interesting: I repeat the relevant examples for convenience:

(102)   a.   *[*Wem*]$_1$ *hät de Peter geschter* [__1 *sin Vatter*] *käne gleert?*
             who.DAT has the Peter yesterday   his father got.to.know
             'Whose brother did Peter get to know yesterday?'

        b.   *[*Wëër*]$_i$ *hät de Peter geschter* [pro$_i$ *sin Vatter*] *käne gleert?*
             who   has the Peter yesterday   his father got.to.know
             'Whose father did Peter meet yesterday?'

c. [*Wem   sin Vatter*]₁ *hät de Peter geschter __₁ käne gleert?*
   who.DAT his father   has the Peter yesterday   got.to.know

   'Whose father did Peter get to know yesterday?'

(102)a is impossible under a movement analysis because there is no possessor extraction in Zurich German. It is also ruled out under base-generation because the wh-operator would end up with an unvalued case-feature. Consequently, there simply is no converging derivation for (102)a. (102)b, however, would then be expected to be possible under base-generation: Since the operator is unmarked for case, it would be licensed in Spec, CP, like the operators in (97)–(98). Obviously, base-generation is blocked again by the more economical movement derivation in (102)c. Even though the two sentences seem to be very different on the surface, their corresponding LFs will be identical: Pied-piped material in (102)c will be reconstructed into the base-position with only the operator remaining in Spec, CP. (92) then singles out (102)c as grammatical.

To conclude this section, let me point out that while in wh-movement movement derivations always block resumptive derivations in local dependencies, this is not the case in relativization. There is a simple explanation for this asymmetry: There is no overt relative pronoun that would make movement derivations involving oblique relations (datives and PPs) possible while in wh-movement (and topicalization) there are such pronouns.[75,76,77]

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75. Interesting questions remain concerning possessor extraction from predicates (cf. (50)) where both possessor extraction and pied-piping are possible. Since both have the same LF, they must compete. But since both are grammatical this also implies that they are equally economical.

76. There is one aspect of this proposal that remains problematic: Next to the A'-splits in (97), it is of course possible to have regular long-distance A'-movement (generally without resumption, even though there is some speaker variation):

(i) [*Welem   Maa*]₁ *häsch   behauptet, dass t   __₁/*
    which.DAT man   have.2s claimed   that you

    ??em   es Buech   ggëë   häsch?
      he.DAT   a   book   given   has.2s

    'To which man did you claim that you had given a book?'

Long-distance movement and the A'-splits in (97) arguably have the same LFs. As a consequence, one would expect the base-generation derivations to be blocked by the economy constraint in (92), contrary to fact: Both movement and base-generation are possible. I will have to leave this for further research.

5.   The derivation of relative clauses

To complete the description of ZG relativization, let me briefly elucidate my assumptions about how the relative clause is related to the head noun. Since reconstruction effects were shown to occur in both movement and base-generation derivations, they will either result from interpreting the lower copy of a movement chain or from semantic reconstruction/NP ellipsis.

There is one aspect of reconstruction, however, that requires special attention. As discussed in detail in Salzmann (2006b), while reconstruction effects are generally very robust in ZG relativization, there is no reconstruction for Principle C, neither in gap nor in resumptive relatives:

(103)   a.   *d* [*Naaforschige über de Peter$_i$*], *won er$_i$*
the investigations about the Peter   C   he

mer __ *lieber verschwige het*
me.DAT   prefer conceal   had.SUBJ

'the investigations about Peter$_i$ that he$_i$ would have rather concealed from me'

b.   *s* [*Buech über de Peter$_i$*], *won er em*
the book   about the Peter   C   he he.DAT

jede Wert abgsproche hät
every value denied   has

'the book about himself$_i$ that Peter$_i$ denied any value'

No such optionality if found in relativization where resumptives appear across the board in long-distance relativization. In Bayer & Salzmann (in prep.) we relate this to Improper Movement resulting from movement of specific relative operators to the spec of the complementizer *dass*, which is only compatible with contrastive elements such as wh-operators, but crucially not relative operators.

77. Much of this analysis can probably be extended to West Flemish. The major difference between West Flemish and Zurich German seems to be that while there is a fully fledged resumptive system in ZG, resumption in West Flemish is limited to possessors. Resumptives for subjects and objects in transparent positions do not exist; overt resumptives are only found inside islands. I do not know whether these are regular resumptives or rather intrusive pronouns as in English. The discussion in Haegeman (2003: 237, 239) seems to suggest the latter.

I have interpreted these facts as arguing in favor of a Matching Analysis of relative clauses (cf. e.g. Citko 2001, Sauerland 2003) where the relative operator (or rather: its NP-complement) is deleted under identity with the external head (outline indicates PF-deletion):[78]

(104)   *s*   [***Buech***]$_j$ [$_{CP}$ [Op [***Buech***]$_j$]$_1$ *wo   de   Peter   __$_1$ gern hät*]
        the book   book   C   the Peter   likes

        'the book Peter likes'

Since an ellipsis operation is involved, we also expect special properties of ellipsis to emerge. Vehicle Change, the possibility to turn an R-expression into a pronoun, is such an effect:

(105)   a.   *John likes **Mary**$_i$, and she$_i$ does (**like her**$_i$), too.

        b.   John likes **Mary**$_i$, and she$_i$ knows that I do (**like her**$_i$), too.

In the first example, Vehicle Change does not lead to an improvement as there is still a Principle B violation. In the second one, however, with an additional level of embedding, the sentence is well-formed. Since relative clauses also involve an ellipsis operation under the matching analysis, Vehicle Change also takes place and turns an R-expression into a pronoun, thereby voiding the Condition C violation. A sentence like (103)a will therefore receive the following LF (strikethrough indicates LF-deletion, the operator is converted into a variable in the lower copy):

(106)   a.   *d*   [*Naaforschige über   de **Peter**$_i$*]$_j$,
             the investigations about the Peter

             [$_{CP}$ [Op [~~***Naaforschige über in***~~$_i$]$_j$]$_1$ *won*
                    investigations about him C

        b.   *er*$_i$ *mer*   [*x* [***Naaforschige über   in***$_i$]$_j$]$_1$
             he   me.DAT investigations   about him

             lieber verschwige het
             prefer conceal   had.SUBJ

The relative clause is therefore just as grammatical as the following simple clause:

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78. For sake of concreteness, I adopt the traditional NP-adjunction approach, but the data are fully compatible with approaches based on complementation as e.g. Sternefeld (2006), where the external determiner takes the head noun as its sister and the relative clause as its right-hand specifier.

(107) **Er**ᵢ *het mer   die   Naaforschige über **in**ᵢ lieber verschwige.*
       he   has me.DAT these investigations about him prefer concealed

       'He would have preferred to conceal these investigations about
       him from me.'

Importantly, the matching analysis (including possible Vehicle Change)
also applies under base-generation so that the semantic content of the
(complement of the) operator and not that of the external head is copied
into the reconstruction site. This means that the relative operator is just
a D-element taking a case-unmarked NP-complement. A sentence like
(103)b will thus have the following representation, which explains the
absence of a Condition C effect:[79]

(108) *s* [*Buech über   de   **Peter**ᵢ*]ⱼ, [$_{CP}$ [Op [**Buech über in**ᵢ]ⱼ]] *won*
       the book   about the Peter   book about him   C

       *er*ᵢ [$_{DP}$ em   [**Buech über   in**ᵢ]ⱼ] *jede Wert abgsproche hät*
       he   the.DAT book   about him every value denied   has

The meaning is thus equivalent to the following simple clause:

(109) **Er**ᵢ *hät em   Buech über **in**ᵢ jede Wert abgsproche.*
       he   has the.dat book about him every value denied

       'He denied the book about him every value.'

6.   Conclusion

Resumptive relatives in Zurich German relatives show mixed results with
respect to movement properties. On the one hand they are insensitive to
locality, on the other they show movement effects like reconstruction and
SCO effects. While the latter effects are directly compatible with move-
ment, the locality facts argue in favor of base-generation. Recent ap-
proaches have shown that there are ways of handling reconstruction under

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79. Principle C effects do not re-emerge if reconstruction is independently required
    for positive binding conditions such as for variable binding, as has been
    observed e.g. by Citko (2001), Sauerland (2002), Guilliot & Malkawi (2006),
    Guilliot (2007), and Rouveret (2008). This is a general property of relatives
    in (Swiss) German, cf. Salzmann (2006b). It shows that the absence of Con-
    dition C effects cannot be explained by assuming that reconstruction only
    takes place if necessary. Rather, absence of Condition C effects in Zurich
    German is the result of systematic Vehicle Change.

base-generation, but it is still very unclear whether movement approaches can explain why resumption voids locality violations. After dismissing most movement approaches, we finally entertained the possibility that it is simply the overtness of the tail of the movement chain that makes movement out of islands possible, e.g. as in Pesetsky (1998). While resumptives are mostly overt in ZG and are thus basically compatible with this approach, possessive relatives provide crucial evidence against this position: Since the underlying possessive construction can involve a small *pro* in the position of the possessor and since possessive relatives are insensitive to locality constraints without there being an overt resumptive for the possessor, there must be an empty resumptive pronoun. As a consequence, only base-generation is a possibility for possessive relatives. It is then most economical to adopt a base-generation analysis for all the other resumptive relatives.

Resumptives are analyzed as a last resort when gap derivations fail: They either occur to make oblique case visible (dative resumptives) or to amnesty locality violations (resumptives inside islands). On the other hand, resumption must be blocked for subjects and direct objects. For this to be possible, gap and resumptive relatives must belong to the same reference set. We have argued that competition in ZG relatives provides evidence that the reference set should be determined on the basis of identical LFs, contrary to what is often assumed in the literature. Resumptives are penalized by a general representational economy constraint *Resumptive so that movement derivations emerge as grammatical.

Finally, there is an intriguing wh-movement/relativization asymmetry with respect to resumption in ZG. It was argued that the limited availability of resumption with wh-movement is due to case-marking: Base-generated case-marked wh-operators are not licensed, therefore ruling out resumption in most cases. Only an alternative wh-construction (so-called A'-splits) involving operators unmarked for case is compatible with resumption.

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