

# Different notions of variation and their reflexes in Swiss German relativization\*

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**Abstract.** Dative relativization in the Swiss German language area is subject to a lot of variation, but does not show clear geographical patterns. Rather, there is widespread inter- and intra-speaker variation. I discuss the importance of various sources in variation research and propose an account that models the variation by means of realizational constraints that interact in Optimality-theoretic fashion.

## 1. Introduction

In this paper I discuss different notions of variation and how they are manifested in Swiss German dative relativization. After the methodological preliminaries in Section 2 I will present the basic facts about Swiss German relativization in Section 3. Section 4 analyzes the syntax of resumption in Swiss German. Section 5 deals with the various types of variation. Section 6 discusses analyses of variation and Section 7 concludes the paper.

## 2. Methodology

The data used for this paper are partly based on intuitions of native speakers. In descriptive and much variationist work, such data are considered problematic, naturalistic production data are usually preferred. However (cf. Henry 2005: 110–111), such a methodology often reaches its limits when used for syntactic variation because specific syntactic constructions are very infrequent in production data. This problem becomes virtually insurmountable when inter- or even intra-speaker variation with respect to a specific syntactic phenomenon are investigated because this would require enormous amounts of data. Furthermore, production data do not contain any negative evidence, but this is exactly what modern grammatical theory (of whatever theoretical persuasion) requires: In order to be able to model a native speaker's grammatical competence, one also needs to know explicitly what kinds of structure are ungrammatical.

These methodological concerns also apply to the phenomenon studied in the present paper – Swiss German relatives: Relative clauses are generally infrequent in spoken language. Even worse, relativization of datives, which constitutes the area of variation, is even less frequent. As Fleischer (2006: 219) points out, this also holds for dialect texts. Fleischer (2006) therefore resorts to grammatical descriptions of dialects. As he acknowledges himself, despite the large number of traditional sources, it is still difficult to find (enough) information on relative clauses because many – practically all old sources – concentrate on phonology and morphology. A chapter on syntax is only found in more modern descriptions where, however, relativization of indirect objects is not always dealt with explicitly.

Dialect grammars are problematic for other reasons: First, dialect grammars often tend to be rather prescriptive; some of them even proclaim themselves to be ‘ein Wegweiser zur guten Mundart’, i.e. ‘a guide to good vernacular’ (Weber 1964). Therefore they are not likely to discuss inter- or even intra-speaker variation – unless the author feels a need to point out divergent patterns as ‘bad dialect’. Second, traditional grammars, having gone largely unaffected by the developments in modern linguistics in the last fifty years, often just give one sentence without discussing potentially interesting questions that a theoretician might ask in a particular context. For example: Are all datives relativized the same? A case in point are case matching phenomena which, as suspected in Fleischer (2006), are probably quite pervasive, but are not always explicitly addressed by the authors themselves, even though they can be discovered in some of the data. Finally and in a similar vein, traditional grammars normally do not contain any negative evidence, which, however, is often necessary for a balanced analysis of a given phenomenon.

It is for these reasons that in addition to traditional grammatical descriptions and dictionaries this paper relies on intuitions of native speakers. As the data were originally collected for a somewhat different purpose, a precise syntactic description of Zurich German relatives (Salzmann 2006), the set is not ideal for a study of variation within Swiss German as a whole because there are relatively few speakers from certain dialect areas. However, the data do allow us to draw certain interesting conclusions for linguistic theory which I believe would be unaffected by a more complete set of data.

The data are based on four questionnaires with judgment and production tasks sent to thirty-four informants. The linguistic background of those speakers (how many years they spent in which area, which dialects their parents speak etc.) was meticulously registered to rule out possible language contact.

Three questionnaires only included judgment tasks, whereas the last one also included a production task (the translation of a Standard German sentence

into Swiss German). In the judgment tasks, speakers were usually presented with several variants of one construction, e.g. a relative clause with or without resumptive pronoun, and they were asked to mark degrees of acceptability (using the traditional symbols “\*\*”, “?”). In other cases the choice was just binary between acceptable/unacceptable. Speakers were always asked to indicate possible preferences if more than one variant was judged acceptable. They were also encouraged to note observations of any kind such as alternative formulations.

As we will see, the methodology used in this study proves very fruitful. Not only does it lead to a more fine-grained picture of relativization in Swiss German than that presented in traditional descriptions and previous studies, it also has important implications for grammatical theory.

### 3. Swiss German relativization: the basic facts

I will illustrate Swiss German relativization on the basis of Zurich German data, but in principle any dialect would have served the same purpose.

Zurich German relatives are postnominal and head external. More interestingly, there are no relative pronouns (except for certain adverbial relations),<sup>1</sup> but 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 those resumptives behave like weak personal pronouns and tend to be fronted to the Wackernagel position or, in the case of oblique relations, cliticize onto the preposition.

The distribution of resumptives in local relativization<sup>2</sup> nicely follows Comrie and Keenan’s (1977) Noun Phrase Accessibility Hierarchy: According to Weber (1964) and van Riemsdijk (1989: 343, 345), all relations from the dative object on downwards require resumptives while subjects and direct objects do not.<sup>3, 4, 5</sup>

- (1) a. *d Frau, wo (\*st) immer z spaat chunt*  
the woman C (she) always too late comes  
‘the woman who is always late’ (subject)
- b. *es Bild, wo niemert (\*s) cha zale*  
a picture C nobody (it) can pay  
‘a picture that nobody can afford’ (direct object)
- 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)

- d. *d Frau, won i von \*(ere) es Buech überchoo*  
 the woman C I from (she.DAT) a book got  
*han*  
 have.1SG  
 'the woman from whom I got a book' (prepositional object)

For the time being, I will take this to illustrate the *communis opinio* about relativization in Swiss German. However, as will be discussed below, things are more complex.

#### 4. The syntax of resumption in Swiss German relatives

##### 4.1 The distribution of resumptives

The distribution of resumptives in Swiss German relatives is governed by two factors: On the one hand, they occur to amnesty locality violations, on the other, they make oblique case visible. In both cases they are a last resort device, i.e., they come into play when gap derivations fail (cf. e.g. Shlonsky 1992 for the notion last resort in resumption).

##### 4.1.1 Resumptives amnesty locality violations

Next to the contexts in (1), resumptives also occur in positions from where extraction is impossible. The following pair contrasts relativization and *wh*-movement of a direct object from a temporal adjunct clause (Salzmann 2006: 331, Salzmann to appear; a resumptive would not improve *wh*-extraction):

- (2) a. *de [Sänger], won i mi fröi,* <*wänn i \*(en)*  
 the singer C I me be.happy.1SG when I him  
*gsee>*  
 see.1SG  
 'the singer such that I am happy when I see him'  
 b. \**[Wele Sänge]₁ fröisch.dī,* <*wänn t \_1 gseesch >?*  
 which singer be.happy.2SG when you see.2SG  
 lit.: 'Which singer are you happy when you see?'

Resumptives thus occur to amnesty a locality violation. This immediately accounts for resumptives after prepositions as in (1d) since prepositional phrases are strong islands in German and its varieties.

This amnesty function is not to be understood in a processing sense: Resumptives inside islands are perfectly grammatical in Swiss German. They do not have the faintest repair flavor as e.g. intrusive pronouns in English, cf. Chao and Sells (1983).

##### 4.1.2 Resumptives make oblique case visible

The occurrence of dative resumptives can be motivated on the basis of a language-internal constraint that requires the overt realization of oblique case. Dative as the only remaining oblique case in the Swiss German case system requires special morphological licensing. Bayer *et al.* (2001) discuss a number of contexts for Standard German where this constraint becomes relevant. I will repeat two of them in what follows. First, complement clauses in German cannot directly fill the slot of a dative argument (Bayer *et al.* 2001: 471):

- (3) a. *Wir bestritten, ACC[dass wir verreisen wollten].*  
 we denied that we travel.away wanted  
 'We denied that we wanted to go on a trip.'  
 b. *Wir widersprachen \*(der Behauptung) [dass wir verreisen*  
 we objected the.DAT claim that we travel.away  
*wollten].*  
 wanted  
 'We objected to the claim that we wanted to go on a trip.'

Since complementizer phrases cannot realize morphological case in German a determiner phrase has to be inserted to rescue the example. The direct cases nominative and accusative do not require this extra licensing. Second, Topic Drop is only possible with nominatives and accusatives, but not with datives, cf. Bayer *et al.* (2001: 489):

- (4) 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).'

These observations hold for Zurich German as well (and other varieties of German in general). The fact that the dative is also special in Zurich German relativization thus comes as no surprise, it is simply another instance where morphological licensing requires an overt form, and resumptives are the means to

make oblique case visible. The fact that there are no resumptives for subjects and direct objects follows automatically: They are not oblique cases and therefore do not require any special morphological licensing.<sup>6, 7, 8</sup>

#### 4.1.3 Against previous approaches

One important aspect of the previous subsection is that dative resumptives are related to an interface constraint that crucially refers to morphological, not syntactic properties: *Oblique* refers to certain positions in a morphological paradigm. For the discussion on variation below it is important to show that this is indeed the correct notion and that approaches that have tied dative resumptives and resumptives after prepositions to purely syntactic notions fail.

On the one hand, there are approaches like e.g. Boeckx (2003) which relate dative resumptives (and those in prepositional relations) to *inherent case* (without precisely specifying what is meant by that). On the other hand, there are approaches that reanalyze datives as prepositional phrases as e.g. van Riemsdijk (1989) and Bayer *et al.* (2001). Both types of approaches share the intuition that datives are less active syntactically and morphologically more marked than nominatives and accusatives, the morphology being an iconic reflex of syntactic inertness in many languages. I will show in what follows that form and function must be strictly separated for a proper understanding of Swiss German resumption.

The notion of inherent case is quite controversial in German, especially when it comes to datives (cf. Gallmann 1992). While datives generally differ from accusatives/direct objects in a number of syntactic properties it has been proposed that at least certain datives are structural, namely dative objects of ditransitive verbs with dative-accusative base order and datives of unaccusative verbs with dative-nominative base order. Dative objects of monotransitive verbs like *helffe* 'help', on the other hand, are considered inherent. Crucially, the distribution of dative resumptives does not follow the (putative) structural inherent divide: Resumptives readily occur with ditransitive and monotransitive verbs.<sup>9</sup>

One might argue at this point that this simply shows that all datives are inherent cases and therefore require resumptives. But this cannot be correct because there are non-oblique inherent cases that do not require resumptives, namely a small class of inherent accusatives. One member of that class, the verb *frööge* 'ask', takes two accusative objects. Only the first one is structural as shown by the passivization facts:

- (5) a. *Ich ha di öppis gfröögt.*  
I have you.ACC something.ACC asked  
'I asked you something.'

- b. *Du bisch vo mir öppis gfröögt worde.*  
You are by me.DAT something.ACC asked become  
'You were asked something by me.'

- c. *\*Öppis isch dich vo mir gfröögt worde.*  
Something is you.ACC by me.DAT asked become  
lit.: 'Something was asked you by me.'

Crucially, if the inherent accusative object is relativized, a resumptive is impossible:

- (6) *di vile Sache, won er (\*si) mi di ganz Ziit fröögt*  
the many things C he them me.ACC the whole time asks  
'the many things that he asks me all the time'

This clearly shows that the syntactic notion of inherent case is inadequate here. Rather, morphological obliqueness is the crucial criterion.<sup>10</sup>

Van Riemsdijk (1989) relates dative resumptives to recoverability by treating them as hidden prepositional phrases. He presents a base-generation approach where an operator in Spec,CP always binds a resumptive pronoun, even for subjects and direct objects. The resumptives then undergo obligatory cliticization, those governed by prepositions as in (1d) cliticize onto the preposition, subject and direct object resumptives move close to Spec,CP and obligatorily undergo deletion, which van Riemsdijk derives from the Avoid Pronoun Principle. With dative resumptives, deletion is argued to be impossible because they are actually amalgamations of a locative preposition *a* plus a dative pronoun; deletion would violate recoverability.

Even though attractive at first sight, this explanation fails for empirical reasons (see Salzmann 2006: 369–371 for detailed discussion). There is compelling evidence against the prepositional phrase-status of dative resumptives: First, many Swiss German dialects feature what is called prepositional dative marking (PDM): Dative determiner phrases are (or can be) expressed with the additional help of a preposition-like element *a* 'at' or *i* 'in', cf. Seiler (2003):

- (7) *Ich han s Buech i/a de Muetter ggë.*  
I have.1sg the book PRP the.DAT mother given  
'I gave the book to the mother.'

For these dialects, which do not differ with respect to dative resumption from dialects where there is no prepositional dative marking, it is highly unlikely that the dative pronoun also contains a preposition – it is hard to motivate two dummy prepositions.<sup>11</sup> Second, when a dative pronoun is governed by a preposition,

van Riemsdijk has to assume that it actually governs a dummy preposition. Interestingly, this is exactly what happens to be impossible with prepositional dative marking: The dummy dative preposition is impossible, only the dative pronoun occurs, cf. Seiler (2003: 128):

- (8) [mit [<sup>\*</sup>i(a) de Frau]]  
with PRP the.DAT woman  
'with the woman'

Third, if the dative pronoun were, e.g., a + personal pronoun, the personal pronoun would arguably be a clitic (as it amalgamates with the preposition). However, Seiler (2003: 128) shows that the attested dummy preposition requires the strong version of the pronoun, the weak/clitic one is out:

- (9) *héd=mer=em=s* *gsëid?* vs. *\*héd=mer=i=em=s* *gsëid?*  
has=one=he.DAT=it told *héd=mer=s* *i* *imm* *gsëid?*  
has=one=it PRP he.DAT told  
'Did they tell it to him?' (dialect of Lucerne)

Finally, as opposed to real prepositional phrases, the dative resumptive cannot be extraposed:

- (10) *de Bueb, wo mer es Velo kauft* *händ \*em* *für en*  
the boy C we a bike bought have he.DAT for him  
'the boy we bought a bike (for)'

It is safe to conclude then that dative resumptives are not prepositional phrases and that an explanation for the occurrence of dative resumptives should refer to the morphological notion oblique case. A unification with resumptives after prepositions is descriptively inadequate. The variation facts to be discussed below will show that this is a welcome result as the variation is limited to dative resumption.

#### 4.2 A base-generation analysis

I will adopt a base-generation approach to Zurich German resumptive relatives mainly because they are insensitive to locality as shown in (2) above. There have been a number of proposals in recent years such as e.g. Boeckx (2003) that have argued in favor of a movement analysis of resumption (this was also the position in Salzmann 2006). The major motivation for movement comes from movement effects such as Strong Crossover Effects and reconstruction effects. Such effects

can indeed be found in many languages with resumption, and they are also found quite systematically in Swiss German resumptive relatives, cf. Salzmann (2006, 2008, to appear). Resumption thus presents the linguist with a paradox with respect to the usual movement diagnostics. I opt for base-generation here not because it easily solves the paradox but because I think it is eventually confronted with fewer difficulties. While locality is quite well understood at a descriptive level, this is less true of reconstruction effects, which can also be found in structures that do not obviously involve a movement relationship between the reconstructee and the reconstruction site (e.g. pseudoclefts). See Salzmann (2008, to appear) for detailed discussion.

Concretely, I will make the following minimal assumptions about resumption (cf. Salzmann 2008, to appear for details): A silent operator is base-generated in operator position and binds a pronoun in argument position. As a consequence, this operator must not have a case feature that needs to be checked. If it did, the case feature would remain unchecked/unvalued as it is not in a local configuration with a potential case-checker/probe such as *v*. The operator thus only has an operator feature that is checked against/valued by *C*. The case feature of *v* or *P* is then checked by the resumptive:

- (11) [<sub>cp</sub> Op<sub>i</sub> C [<sub>vp</sub> pron<sub>i</sub> V] *v* ]  
[<sub>op</sub>] [<sub>ease</sub>]

For relativization of subjects and direct objects, which involves gaps, I will adopt a movement approach with a silent operator that bears a case feature. It will originate in the thematic position, then checks the case feature of *v*/*P*/*T* and moves to the operator position to check the operator feature of *C*:

- (12) [<sub>cp</sub> Op C [<sub>vp</sub>  $\bar{\Phi}$ P-V] *v* ]  
[<sub>op/ease</sub>] [<sub>op/ease</sub>]

#### 4.2.1 Differences from van Riemsdijk (1989)

This analysis thus differs from van Riemsdijk (1989) in a number of aspects, the most important one being that I posit movement for relativization of subjects and direct objects, while van Riemsdijk (as described in the previous subsection) assumes base-generation with subsequent deletion of the resumptives. There is convincing evidence that gap relatives are not based on resumption: First, as in many other languages (cf. e.g. Boeckx 2003), resumption blocks scope reconstruction, as shown by the following example (Salzmann 2006: 361):

- (13) *di [zwäi Mäitli], won ene jede Bueb en*  
 the two girls C they.DAT every boy a  
*Struuss muess bringe* 2 > V; \*V > 2  
 bunch.of.flowers must bring  
 'the two girls that every boy must bring a bunch of flowers'

If direct object relatives were based on resumption one would expect scope reconstruction to be blocked as well since the deletion of the resumptive would only affect the phonological component, but not LF. However, this prediction is not borne out, scope reconstruction is possible:

- (14) *di [zwäi Mäitli], wo jede Bueb muess\_\_ sueche*  
 the two girls C every boy must look.for  
 'the two girls that every boy must look for' 2 > V; V > 2

Further evidence against the resumptive basis of gap relatives comes from relativization of non-individual denoting types: For some of these, especially amounts, there is no compatible proform. Consider the following example involving relativization of an amount:

- (15) *di zwäi Wüche, won er\_\_ i de Ferie gsii isch*  
 the two weeks C he in the vacation been is  
 'the two weeks he was on vacation'

Regular personal pronouns are not compatible with amounts, there is in fact no proper proform, the only way of referring to amounts would involve an expression like *so lang* 'this long' as in the following example involving left-dislocation of an amount:

- (16) *zwäi Wüche, so lang/\*si isch er nie i de Ferie*  
 two weeks that long/them is he never in the vacation  
*gsii*  
 been  
 'two weeks he has never been on vacation'

Even if something like *so lang* were at the basis of (15) it would still be far from clear how it could get deleted because according to van Riemsdijk the deletion of the resumptive depends on the fronting of the pronoun. While this is unproblematic with the weak personal pronouns that van Riemsdijk posits for (1a) and (1b), an expression as complex as *so lang* certainly cannot target the Wackernagel position and thus could not be deleted according to van Riemsdijk.

I therefore conclude that relativization of subjects and direct objects as well as relativization of non-individual denoting types like amounts or predicates (see Salzmann 2006, 2008, to appear for more examples) involves a movement derivation.

#### 4.2.2 The implementation

There are three scenarios to be considered: relativization into islands, relativization of datives and gap relatives (subjects, direct objects, non-individual denoting types).<sup>12</sup>

Relativization into islands is straightforward under a Principles and Parameters or broadly Minimalist approach (Chomsky 1995): A movement derivation crashes as movement out of an island would violate locality constraints on movement. As a consequence, only the base-generation derivation with resumption converges. Resumption thus acts as a last resort.

The data in (3) and (4) show that one needs an interface constraint such as RealizeObl (cf. e.g. Pesetsky 1998) that requires the phonetic realization of oblique case. I take this to be a representational PF-constraint. A movement derivation for datives does not violate any syntactic constraints, but it violates RealizeObl at PF, the derivation thus crashes. Base-generation, however, satisfies RealizeObl and thus converges. Again, resumption is a last resort.

Gap relativization is different. I have argued above that there are no resumptives for subjects and direct objects because there simply is no need for them. A gap derivation is thus taken to be more economical because it involves less structure. Structural economy has not played much of a role in recent Minimalist work so that there is no well-established constraint I could refer to; for simplicity's sake I will assume a translocal economy constraint SilentVariable, a variant of the Avoid Pronoun Principle (which prefers silent over overt pronouns). It compares converging representations and prefers the one with silent variables over the one with overt variables (the A'-bound resumptive is an overt variable, the trace/copy left behind by movement a silent variable). Both gap and resumptive derivations thus converge, but gap derivations are selected as grammatical because they are more economical with respect to SilentVariable.<sup>13, 14</sup>

## 5. Variation data

In this section I will discuss several types of variation that can be found in Swiss German (or rather Alemannic) resumptive relatives. Here the importance of using different types of evidence becomes paramount. While most of the traditional descriptions give a very homogeneous picture, one dictionary and

especially the empirical work with informants lead to a significant reappraisal of the facts.

### 5.1 Dialectal variation

If one studies the available grammatical descriptions and dictionaries of Swiss German or, more generally, Alemannic dialects, one gets the impression that things are very straightforward. There is very little variation, the dialects basically conform to the pattern described in (1). In fact the only variation that there is concerns dative relatives. While almost all dialects are claimed to use dative resumptives exceptionlessly, there are two dialects where dative relativization apparently involves gaps.

#### 5.1.1 *With dative resumptives*

The following grammatical descriptions, most of them traditional dialect grammars, claim that dative relatives involve resumptives: Bossard (1962: 141) for Zugovian, Fischer (1989: 429) for Lucerne, Hodler (1969: 246) and Marti (1985) for Bernese, Sonderregger and Gadner (1999) for Appenzell, Binz (1888: 61) and Suter (1992: 183) for Basel, and Weber (1964: 299) for Zurich German.

A study of dialect dictionaries (old and new) reveals the same facts: Dative relatives involve resumption. For reasons of space, I will mention only a few sources: Seiler (1879: 317–318) on Basel, Hunziker (1877: 300) on Argovian, Tobler (1837: 449) on Appenzell, von Greyerz (1976: 249) on Bernese, and Weber and Bächtold (1961: 256) on Zurich German.

#### 5.1.2 *Without dative resumptives*

There are only two sources that give gap relatives for dative relativization. The first one is a grammar of the Low Alemannic dialect spoken in Oberrotweil (German), which otherwise has the same resumptive system as the Swiss German varieties. Here are data involving direct objects, indirect objects and oblique objects (Noth 1993: 418–420):

- (17) a. *Alli, wun em — hab wellá machá, sí mr*  
 All C he.DAT have wanted make are me.DAT  
*vrgroodá.*  
 failed  
 ‘Of those that I tried to make for him, all turned out badly.’  
 (direct object)

- b. *Wá mr sála gfrogd háddá, wu dr Agger —DAT*  
 If we the.one asked had C the field  
*ghäärd...*  
 belongs.to  
 ‘If we had asked the one to whom the field belongs...’  
 (indirect object)

c. *Dr áinzig, wu sí vřhandlá míd em, isch dr*  
 the only.one C they negotiate with him is the  
*Agffärer.*  
 leader

‘The only one with whom they negotiate is the leader.’  
 (oblique object)

The same is found in Glarus German, cf. Bábler (1949: 59–60):

- (18) a. *e Hund, wo — bilt*  
 a dog C — barks  
 ‘A dog that barks’ (subject)
- b. *de Uussicht, wo me — uf em Tödi het*  
 the view C one — on the Tödi has  
 ‘the view one has on mount Tödi’ (direct object)
- c. *Känntscht du der Bueb, wo me —DAT de es Bremit*  
 know.2SG you the boy C one then a prize  
*gih het?*  
 given has  
 ‘Do you know the boy to whom they then gave a prize?’  
 (indirect object)
- d. *... dr Gade, wo es Schwii und zwi Geiss drmit*  
 the barn C a pig and two goats it.with  
*verbrunne sind*  
 burned are  
 ‘the barn that a pig and two goats burned to death with’  
 (oblique object)

#### 5.1.3 *Interpretation of the facts*

Importantly, the absence of dative resumptives in the dialects of Oberrotweil and Glarus cannot be related to the types of verbs used in these examples. Both Noth and Bábler list examples with datives of various types all of which are claimed to require resumptives in the other Swiss varieties. It is also not the case that

dative has a different status in these varieties. It is formally differentiated and the realizational constraint operative in (3) and (4) holds for these varieties as well. In other words, the variation is real.

It is difficult to make sense of this type of variation. It is definitely not a clear geographical pattern as the canton of Glarus is located in Central Switzerland. It is rather unexpected that two non-adjacent dialects converge with respect to dative relativization. As the following subsections will show, variation is in fact much more pervasive than suggested by the simplistic label dialect variation.

## 5.2 Inter-speaker variation

While traditional grammatical descriptions seem to suggest that some dialects require dative resumptives while others do not, a few other sources point in a different direction.

The first important source in this context is the *Idiotikon* (1999, XV, 13–14), a comprehensive dictionary of Swiss German dialects. The entry of the relative particle *wo* contains quite a few examples with datives relatives, some of which are constructed with a resumptive and some without. The examples belong to different dialects and are all taken from careful written sources such as textbooks, grammatical descriptions, dialect literature etc. Crucially, there is no perfect correlation with the claims by the traditional descriptions concerning dative resumptives: The examples without dative resumptives belong to Bernese, Appenzell, Glarus and Wallis German, respectively. At least for Bernese and Appenzell German, this clashes with the traditional descriptions mentioned above. The examples with dative resumptives come from the following dialects: Basel, Bernese, Zugovian and Lucerne German, which is in accordance with the traditional descriptions. For Appenzell and Bernese German we thus have evidence for gap and resumptive relatives. What the data from the *Idiotikon* show is that we are certainly not dealing with large-scale dialectal differences. Since dialect areas are sometimes very small it is of course possible that there are subdivisions within larger dialect areas with respect to dative relativization. But why this should be limited to the dialects of Appenzell and Bern is by no means obvious. Again, the geographical distribution does not make much sense.

The only publications where both variants are explicitly mentioned are Dalcher (1963: 127), citing examples from the *Idiotikon*, and Hodler (1969: 246) on Bernese. Both regard gaps for datives as the exception, but do not comment any further on this issue, i.e., whether this is an instance of variation or whether there are grammatical factors at work. Again, the issue of variation is not allotted much prominence.

This is where the empirical work with informants becomes important. The many questionnaires that I received from my informants suggest that there is a lot of inter-speaker variation concerning dative resumptives, but no variation concerning subjects, direct objects and prepositional relations. It is e.g. certainly not true that a speaker of Zurich German invariably uses a dative resumptive. Several patterns can be observed: There are speakers who use dative resumptives very frequently; other speakers use them rather rarely. Probably the majority of speakers allow both options to more or less the same degree. Within these options, there is possibly a large number of additional patterns with resumptives being used with varying degrees of preference. The same range of variation is also found with speakers of other dialects. The small sample that I have does not provide any evidence for a dialect area where the gap or the resumptive variant is used categorically (neither does the larger sample in Salzmann and Seiler in prep.). Instead, the same range of variation is found in other dialects as well (but see Salzmann and Seiler in prep. for an East-West contrast with respect to preferences). Importantly, the variation cannot be reduced to grammatical factors, i.e., it is not the case that speakers are consistent, but use gaps and resumptives depending on the environment (see 5.4 for one environment preferring gaps); rather, there is variation in the same grammatical context. The variation also cannot be related to sociolinguistic factors such as age, sex, education etc. It is not the case that, for instance, younger people fail to use dative resumptives. Dative resumptives are well attested both within my data as well as on internet pages such as chat-rooms most likely frequented by younger people. Conversely, some of the sources in the *Idiotikon* mentioned above without dative resumptives are fifty to hundred years old. Finally, it is also highly unlikely that the variation is simply due to processing factors, e.g. that the resumptive is dropped in sloppy speech or inversely that a resumptive is inserted as a repair to improve understanding. As discussed above gaps and resumptives are found in very careful sources where performance errors would be rather unexpected; the same holds, of course, for questionnaires.

## 5.3 Intra-speaker variation

Since most speakers allow more than one variant (in the same context), often with varying preferences, we are also dealing with intra-speaker variation. In fact, this actually seems to be the prevailing pattern. In other words, the use of dative resumptives is essentially optional.<sup>15</sup>

Such a state of affairs is often explained away as an instance of performance. Of course, no linguistic action is free of performance effects and there will



certainly be production/processing factors that can lead to a preference for one or the other variant. But the important point is that there are environments where both variants are grammatical. Given that both gap as well as resumptive relatives are a possibility in the grammar of most speakers of an Alemannic variety, it is unlikely that speakers who use gaps next to resumptives for dative relatives make performance errors when they use one of the variants. In my questionnaires, most informants explicitly marked both the gap and the resumptive variant as grammatical and sometimes used both variants in their written translations. Finally, an account reducing intra-speaker variation to performance errors would have to assume that one of the variants, the gap or the resumptive, is the basic variant while the other one is the result of a performance error. Given that both variants are well attested in very careful sources, both variants are equally good candidates for being the basic variant. Choosing between the two seems not only arbitrary, but simply wrong. To conclude, intra-speaker variation is a fact, both gap and resumptive are grammatical variants for dative relatives.<sup>16</sup>

#### 5.4 Conditioned variation

While the use of a resumptive is essentially optional for many speakers in most contexts, there is one environment which clearly increases the acceptability of the gap variant for all speakers, namely matching, i.e. when the head noun of the relative clause bears dative case as well (Salzmann 2006: 349–355):<sup>17</sup>

- (19) *Ich han em Bueb, [wo t (??em) es Buech*  
 I have.1SG the.DAT boy C you (he.DAT) a book  
*versproche häsch], es schööns Exemplar ggää.*  
 promised have.2SG a beautiful copy given  
 'I gave the boy who you promised a book a beautiful copy.'

Since this type of variation depends on grammatical factors rather than geographical ones I will follow Seiler (2004) in referring to these cases as instances of *conditioned variation*.<sup>18</sup>

### 6. Modeling variation

An account of the variation facts described in this paper should include at least the following: It should provide a correct description of the facts, that is, it has to allow for optionality between resumptive and gap relatives in a single grammar, and should also express the fact that the matching context leads to a preference

for the gap variant. Additionally, it should explain why the variation is limited to datives.

#### 6.1 Solutions within the Minimalist Program

The Minimalist approach I have sketched in 4.2 is confronted with one severe problem: As long as there is the constraint *RealizeObl* a gap-derivation for dative relatives will invariably crash since constraints in the Minimalist Program are taken to be inviolable. One cannot simply dispense with *RealizeObl* because it is still required to account for the contexts in (3) and (4). One could, of course, reformulate *RealizeObl* to the effect that it does not apply to relative clauses; this would allow gap-derivations for datives and would be sufficient to explain variation between speakers that do have dative resumptives and those that do not. However, this would amount to a reformulation of the descriptive facts. Intra-speaker variation is more serious; suppose we use the weakened version of *RealizeObl* that does not apply to relative clauses. It is then possible for the grammar to generate grammatical gap and resumptive structures for datives. However, due to *SilentVariable*, which is independently needed to rule out resumptives for subjects and direct objects (cf. 4.2.2), the resumptive derivation would always be filtered out as less economical.

Adger (2006) has recently proposed a way to handle intra-speaker variation within the Minimalist program that is based on the lexical variation theory. He proposes that intra-speaker variation arises if the grammar contains two featurally different but semantically identical elements which due to their feature difference are realized differently in the morphology. Depending on which element is chosen one gets either variant a or b. Applied to the case at hand this might involve a case-marked and a case-unmarked operator for datives. Depending on which one is chosen we either get a movement or a gap derivation. But even this will still not do because given our assumptions about the definition of the Reference Set (see note 14) the two derivations would have the same LF and would thus compete with each other. But if they do, the resumptive variant would be filtered out as less economical with respect to *SilentVariable*. It must be concluded therefore, that a Minimalist approach cannot model the variation. The variation we find in Swiss German dative relativization cannot be related to differences in the inventory of lexical items, rather, it must be related to the Interface constraints *RealizeObl* and *SilentVariable*. However, since they are both necessarily inviolable and do not interact in any way in a Minimalist conception there is no way to handle the variation.<sup>19</sup>

## 6.2 Solutions within Optimality Theory

The problem of inviolability and lack of interaction mentioned in the previous subsection is exactly the advantage that an Optimality-theoretic approach has: All constraints are violable and they all potentially interact with each other. The variation we find in dative relativization can be straightforwardly expressed by the interaction between *SILENTVARIABLE*, which favors gap derivations, and *REALIZEOBL*, which favors resumptive derivations. By re-ranking the two constraints we can get grammars that either generate gap relatives or resumptive relatives (for datives): If *SILENTVARIABLE* outranks *REALIZEOBL* we get a gap derivation, under the reverse ranking we obtain a resumptive derivation:

- (20) a. *SILENTVARIABLE*  $\gg$  *REALIZEOBL*: gaps for datives  
 b. *REALIZEOBL*  $\gg$  *SILENTVARIABLE*: resumptives for datives

This is sufficient for dialectal/inter-speaker variation under the assumption that speakers consistently use only one of the variants. The advantage of an Optimality Theory approach is that one does not have to weaken *REALIZEOBL*. Rather, *REALIZEOBL* is active, which accounts for the data in (3)–(4). In case a speaker uses gaps for dative relatives, *REALIZEOBL* can be violated as it is outranked by *SILENTVARIABLE*. The ban against resumptives in the relativization of subjects and direct objects also follows straightforwardly: *SILENTVARIABLE* is violated in resumptive derivations while the movement derivations do not incur any (relevant) violations.

Intra-speaker variation can also be modeled quite easily by means of a tie between *SILENTVARIABLE* and *REALIZEOBL*.<sup>20</sup>

- (21) *SILENTVARIABLE*  $<>$  *REALIZEOBL*: gaps and resumptives

So far, an Optimality Theory approach is clearly superior at least in the sense that one can describe the variation facts. Another advantage of this Optimality Theory approach is that it predicts that there will be no language that always requires dative resumptives, but leaves dative unexpressed in the contexts (3)–(4). To my knowledge, this is correct. Once one starts formulating very specific filters as under the Minimalist approach sketched above (i.e. the weakened version of *RealizeObl*), however, it would in principle be easy to model such an unattested language.

There is, however, one central aspect that a simplistic Optimality Theory account like the one just sketched does not adequately address: Why variation is limited to dative relativization. Suppose one additionally uses a constraint like *LOCALITY* that penalizes movement out of islands (and thus favors base-

generation in such environments) to account for resumptives inside islands, cf. (2). *LOCALITY* then must outrank *SILENTVARIABLE* to get the right result. But since *LOCALITY* is just a constraint among others it should in principle be just as likely to get a language with the ranking *REALIZEOBL*  $\gg$  *SILENTVARIABLE*  $\gg$  *LOCALITY*. This language would have resumptives for datives, but not within islands. Such a language does not exist to my knowledge and it would be highly desirable to avoid such a result. It is obviously the case that the resumptives inside islands (and after prepositions) are really a consequence of the way the syntax works. They are due to syntactic constraints. Dative resumptives, however, as discussed at length in 4.1.2 and 4.1.3 are due to an interface constraint that regulates how syntactic information is mapped onto the morphological/phonological system. This is in accordance with much work that attributes (certain types of) syntactic variation to the interfaces, leaving the syntax as such mostly identical. If interface constraints are really at the heart of intra-speaker variation or microvariation in general, then it would be highly desirable to model the architecture of grammar accordingly.

Within an Optimality Theory approach, one could interpret locality as a part of the Generator so that the problem does not arise in the first place. But once such a step is taken the question arises as to which other aspects of grammar should also be built into the generator. A possible alternative would be the Derivations and Evaluations framework by Broekhuis (2008) which combines a restrictive Minimalist-like generator with an Optimality Theory-like evaluator that includes interface constraints and economy constraints (like *STAY*). This model echoes the dichotomy between core and periphery and perhaps has exactly the right architecture to describe (and perhaps: predict) the types of variation discussed in this paper.

## 6.3 Capturing the preferences under matching

A final aspect one would like to be able to capture is the fact that gaps become much more likely, in fact preferred, under matching. Under the rigid Minimalist conception one simply expects gaps to be the only possibility in matching contexts (under the assumption that *RealizeObl* is satisfied in that case), but this does not quite do justice to the facts. What one would like to be able to express is that the basic optionality between gap and resumptive is clearly shifted towards a preference for the gap variant in this particular environment, but since not even the basic optionality can be captured, I do not see a possibility to express this in a Minimalist approach.

Under a classical Optimality Theory-approach one could add another constraint, e.g. some structural economy constraint that punishes resumptives exactly under matching, on top of the tie SILENT VARIABLE <> REALIZE OBL. This would predict gaps to be the only option under matching (which is, as discussed above, not quite correct, though). Apart from the fact that this would amount to a reformulation of the descriptive facts, there may be undesirable consequences: Nothing in principle would prevent a ranking where this constraint is ranked below the crucial tie. This, however, is exactly what one wants to avoid: It is invariably the case that gaps become more likely under matching, but if the relevant constraint is ranked too low it will not have any influence.<sup>21</sup>

It should have become clear that capturing the rather simple observation that gap relatives become preferred in a matching environment is by no means trivial. What is particularly challenging is to do justice to the gradedness of the phenomenon, i.e. that gaps only become more likely under matching, but not obligatory. An attempt to do just this is undertaken in Salzmann and Seiler (in prep.) where various models of gradedness like Stochastic and Linear Optimality Theory are evaluated in detail.

## 7. Conclusion

Variation in Swiss German relativization is an interesting testing ground for linguistic theory because the range and type of variation require particular design features of a formal theory. It is also an important object of study for methodological reasons. If one were to only look at traditional descriptions one would get the impression that there is not much to be found. Dative resumptives are claimed to be the only option for most dialects, only two non-adjacent dialects apparently use gap relatives for datives instead. The very fact that there is no clear geographical pattern is an incentive to have a closer look. The data in the Idiotikon already suggest that there is more variation, and inspection of individual patterns reveals that at least in the Swiss German language area (and probably in large parts of Germany) it is incorrect to speak of dialectal variation given our current empirical knowledge. Rather, there is a large number of idiolectal patterns that mostly differ in their strategy for dative objects, many of them allowing both the gap and the resumptive variant, often with varying preferences.

This means that we are dealing with pervasive intra-speaker variation. There is good reason to believe that this variation is not just the result of performance; rather, the use of dative resumptives is basically optional.

I have argued that the use of dative resumptives is governed by interface constraints. The variation that we find is best accounted for if we assume that

these interface constraints are violable and interact. Such a state of affairs is incompatible with the assumptions of the Minimalist Program where constraints are inviolable and do not interact. It thus seems to favor an Optimality-theoretic analysis. An Optimality Theory analysis, however, cannot readily express the observation that (intra-speaker) variation is restricted to interface constraints. An interesting alternative is the Derivations and Evaluations model proposed by Broekhuis the architecture of which reflects the separation between core (syntactic constraints) and periphery (interface constraints) and thereby isolates the component (periphery) which seems to be largely responsible for (intra-speaker) variation.

The biggest challenge for any grammatical model is to express the fact that the gap variant becomes much more likely (but not obligatory) under matching, a task that was partially left for further research.

## Notes

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1. One does find relative pronouns in some of the dialect literature before 1900. Whether they are part of the dialect grammar or just the result of Standard German influence is contested, cf. the discussion in Dalcher (1963) and Hodler (1969: 240–245). In the modern language, they are never used for subjects, direct objects and datives, but occasionally occur in prepositional relations. To what extent these occurrences are representative of the dialect grammar is a question I intend to pursue in future research. Interestingly, Sonderegger and Gädner (1999) actually give one example of a prepositional relation with a relative pronoun next to one with a resumptive.
2. For long-distance relativization cf. Salzmann (2006). 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.

3. For the transcription see Salzmann (2006: 320, fn. 259).
4. For possessor relativization cf. Salzmann (to appear).
5. Resumptives also occur in comparatives, but not regularly in wh-movement and topicalization (only in a special construction called A'-splits, cf. Salzmann 2006: 376, fn. 297, and Salzmann to appear).
6. The matching effects to be discussed in 5.4 below provide additional evidence that dative resumption is related to the recoverability of oblique case.
7. The generalization by Bayer *et al.* (2001) runs into difficulties in a number of contexts, especially with bare plurals of nouns whose morphological exponent for dative plural is non-distinct from nominative/accusative plural, but still somehow manages to satisfy the realizational requirement, i.e., with nouns taking the *-(e)n* plural. Bayer *et al.* (2001: 481) argue from a historical perspective that these forms are still datives. While this may work for *-(e)n*-plurals where the morphological form is indeed still close to the Old High German dative plural form, it is unlikely that this explanation can be extended to *s*-plurals, which certainly do not derive from an older dative form:

- (i) *Oma-s kann man immer vertrauen.*  
 grandma-PL(DAT) can one always trust  
 'One can always trust grandmas.'

Since I have no evidence that plural resumptives are less systematic than singular resumptives, the realizational requirement for datives probably must be adjusted to the effect that it is satisfied as long as there is a morphological exponent different from the stem. If the paradigm only provides syncretic forms, such a form will have to do. Daniel Hole (p.c.) has pointed out that even such a weakening is insufficient because certain bare nouns can appear without any expression of dative case (Standard German):

- (ii) *Wein droht das Verkaufsverbot.*  
 wine(DAT) threatens the.NOM prohibition.of.sale  
 'Wine is threatened by the prohibition of sales.'

See Hole (to appear, chapter 10.2.3) for discussion of such cases and semantic argumentation. I have to leave a reanalysis of these facts for further research.

8. Fleischer (2004, 2006) shows that most varieties of German have a strategy to express dative case in relativization. While Alemannic varieties and Yiddish make use of resumptive pronouns, the others use case-marked relative pronouns. Interestingly, many varieties can use either particles or relative pronouns for subjects and direct objects, but once indirect objects are relativized, only the relative pronoun is acceptable, clearly showing that the realizational constraint is at work. Most of the varieties which do not seem to express dative case in relativization do so for principled reasons. In Low German dialects like Westphalian for instance accusative and dative have collapsed so that there is no oblique case anymore that needs to be expressed. As a consequence, it can remain unexpressed in relativization as well. In many more grammatical descriptions it seems at first sight that dative remains unexpressed, but as pointed out in Fleischer (2006: 226–228), many if not all of the Franconian and

Bavarian varieties in question do so only under matching, i.e., when the head of the relative clause bears dative case (a similar observation can be made for Swiss German varieties, cf. 5.4 below). This implies that the realizational requirement holds for these varieties as well. Another common pattern that one finds is some form of attractio inversa, i.e. a correlative structure where the head noun bears the dative case that should be expressed inside the relative clause. Here is an example from Swabian (Fischer 1904–1927, vol. 6: 912):

- (iii) *Denere Frau, wo DAT des Haus ghör, (die) hat s verkaufft.*  
 that.DAT woman C this house belongs.to she hat it sold  
 'The woman to whom this house belongs sold it.'

Among the German varieties in Fleischer's (2004, 2006) sample which have a separate dative case but nevertheless do not express it in relativization are certain Alemannic varieties and the dialect of Saarbrücken. The Alemannic varieties will be addressed in 5.1.2.

9. With certain verbs dative resumptives are degraded, partly for reasons of an animacy clash between the resumptive and the antecedent, cf. Salzmann (2006: 323–326) for discussion.
10. Toman (1998) describes resumption in Colloquial Czech, which displays the same direct/oblique contrast, but tries to analyze it in terms of inherent vs. structural case. Interestingly, he is puzzled by the fact that adverbial accusatives, clearly inherent cases, do not require resumptives (312–313). Under the present account this is little surprising because accusatives are not oblique cases. The morphological perspective advocated here is further supported by the observation (Toman 1998: 310) that animate masculines require resumptives for direct objects. What initially may sound contradictory actually makes perfect sense once it is recognized that the form of animate masculine singular nouns is identical to that of the genitive. Thus even though we are clearly dealing with a structural case it counts as oblique for the morphological system and therefore requires formal expression.
11. The variation in dative resumption to be discussed below does not correlate at all with the distribution of prepositional dative marking. It is simply not the case that dative resumption is restricted to dialects/idioms with prepositional dative marking. Rather, variation in dative resumption is much more pervasive.
12. The derivations are discussed in more (technical) detail in Salzmann (2008, to appear), where Minimalist and Optimality-theoretic approaches are compared. An important difference w.r.t. the present paper concerns the constraint that penalizes resumption. In the newer approaches, this is no longer the structural economy constraint SilentVariable, but rather a more general economy constraint \*Res.
13. Relativization of non-individual types works the same; since there probably is no proform for amounts, there will also be no resumptive derivation for those cases so that economy is irrelevant.
14. The fact that base-generation derivations compete with movement derivations implies that they belong to the same Reference Set. This in turn implies that the Reference Set cannot be based on the same numeration. In Salzmann (2008, to appear) it is

argued that the Reference Set should be based on the same LF; it is shown that this derives the correct result for the case at hand.

15. Importantly, the variation is restricted to datives in transparent contexts; within islands, dative resumptives are obligatory (cf. Salzmann 2008):

- (iv) *de Maa, won i kās <Buech, won \*(em) gib>, zruugg überchum*  
 the man C I no book C he.DAT give back get  
 lit.: 'the man who I don't get any book back that I give to'

16. The strongest argument against the performance argument normally comes from transparent geographical distribution, cf. e.g. Seiler (2004: 383). This is not the case in dative relativization and probably holds more generally for relativization strategies in the German language area, cf. Fleischer (2006: 233). But see Salzmann and Seiler (in prep.) who point out that there is a dialectal pattern, albeit one based on preferences rather than categorical differences.

17. Dalcher (1963: 127) and Hodler (1969: 247) were the first ones to point out the importance of matching contexts for dative resumptives in Swiss German.

18. Salzmann and Seiler (in prep.) discuss two additional factors that lead to a preference for gaps: the semantics of the head noun and scope reconstruction.

19. Cf. Henry (2005: 119) for more discussion of the difficulties which Minimalist approaches face when confronted with intra-speaker variation.

20. At first sight this may seem almost identical to the model advocated by Kroch (2000) where intra-speaker variation is assumed to be the result of syntactic diglossia: Speakers are claimed to possess parallel grammars with mutually incompatible specifications for certain parameters. Technically, a (global) tie in Optimality Theory indeed leads to a parallel grammar. But there are important differences: Apart from the fact that in the case at hand we are not dealing with incompatible parameter settings, but rather conflicting realizational constraints, we are certainly not dealing with syntactic diglossia because the variants are not taken from existing varieties (such as the standard language and the vernacular or different dialects) and because their choice is not dependent on extralinguistic factors like style or register. See Seiler (2004: 384) and Salzmann and Seiler (in prep.) for critical discussion of Kroch's approach. This holds, of course, only if a global and not a local tie is assumed. Under a local tie, lower-ranked constraints can become decisive. But even under a local tie it is easily possible that some other constraint will render the economy constraint irrelevant. Again, the fact that matching invariably leads to a preference for gaps cannot be expressed.

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